[Shoreline evaluations, 1989].

Volume 6

Chenega Island

Title supplied by cataloger. This title page is supplied by Alaska Resources Library and Information Services (ARLIS).
<table>
<thead>
<tr>
<th>ISLANDS (Locations)</th>
<th>GEOLOGIC SEDIMENT TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naked Is.</td>
<td>Boulder (&gt;256mm)  B</td>
</tr>
<tr>
<td>Peak Is.</td>
<td>Cobble (64-256)  C</td>
</tr>
<tr>
<td>Stoney Is.</td>
<td>Pebble (4-64)  P</td>
</tr>
<tr>
<td>Eleanor Is.</td>
<td>Granule (2-4)  G</td>
</tr>
<tr>
<td>Ingot Is.</td>
<td>Sand (0.06-2)  S</td>
</tr>
<tr>
<td>Block Is.</td>
<td>Mud (less 0.06)  M</td>
</tr>
<tr>
<td>Entrance Is.</td>
<td>Rock  R</td>
</tr>
<tr>
<td>Sphinx Is.</td>
<td></td>
</tr>
<tr>
<td>Disk Is.</td>
<td></td>
</tr>
<tr>
<td>Knight Is.</td>
<td></td>
</tr>
<tr>
<td>Smith Is.</td>
<td></td>
</tr>
<tr>
<td>Seal Is.</td>
<td></td>
</tr>
<tr>
<td>Applegate Is.</td>
<td></td>
</tr>
<tr>
<td>Green Is.</td>
<td></td>
</tr>
<tr>
<td>L. Green Is.</td>
<td></td>
</tr>
<tr>
<td>Agnes (Bass) Is.</td>
<td></td>
</tr>
<tr>
<td>L. Smith Is.</td>
<td></td>
</tr>
<tr>
<td>Gore Point</td>
<td></td>
</tr>
<tr>
<td>Montague Is.</td>
<td></td>
</tr>
<tr>
<td>Aguliak Is.</td>
<td></td>
</tr>
<tr>
<td>Squirrel Is.</td>
<td></td>
</tr>
<tr>
<td>New Year Is.</td>
<td></td>
</tr>
<tr>
<td>Murray Is.</td>
<td></td>
</tr>
<tr>
<td>Squire Is.</td>
<td></td>
</tr>
<tr>
<td>Crafton Is.</td>
<td></td>
</tr>
<tr>
<td>Pt. Nowell</td>
<td></td>
</tr>
<tr>
<td>Junction Is.</td>
<td></td>
</tr>
<tr>
<td>Chenega Is.</td>
<td></td>
</tr>
<tr>
<td>Pleiades Is.</td>
<td></td>
</tr>
<tr>
<td>Bainbridge Is.</td>
<td></td>
</tr>
<tr>
<td>Flemming Is.</td>
<td></td>
</tr>
<tr>
<td>Evans Is.</td>
<td></td>
</tr>
<tr>
<td>Elrington Is.</td>
<td></td>
</tr>
<tr>
<td>Latouche Is.</td>
<td></td>
</tr>
<tr>
<td>Danger Is.</td>
<td></td>
</tr>
</tbody>
</table>

** DEGREE OF OILING

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy</td>
<td>HV</td>
</tr>
<tr>
<td>Moderate</td>
<td>MD</td>
</tr>
<tr>
<td>Light</td>
<td>LT</td>
</tr>
<tr>
<td>No Oil</td>
<td>NO</td>
</tr>
<tr>
<td>Unobserved</td>
<td>UN</td>
</tr>
</tbody>
</table>

AREA OF BEACH IMPACT

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Supratidal (+SHWL)</td>
<td>SU</td>
</tr>
<tr>
<td>HWL to SHWL</td>
<td>SP</td>
</tr>
<tr>
<td>Upper 1/3 ITZ</td>
<td>H</td>
</tr>
<tr>
<td>Middle 1/3 ITZ</td>
<td>M</td>
</tr>
<tr>
<td>Lower 1/3 ITZ</td>
<td>L</td>
</tr>
</tbody>
</table>

ADEC IMPACT SURVEY

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy</td>
<td>HVY</td>
</tr>
<tr>
<td>Moderate</td>
<td>MOD</td>
</tr>
<tr>
<td>Light</td>
<td>LT</td>
</tr>
<tr>
<td>No Oil</td>
<td>NO</td>
</tr>
<tr>
<td>Unobserved</td>
<td>UNOBS</td>
</tr>
</tbody>
</table>

SHORELINE TYPE

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach</td>
<td>BEA</td>
</tr>
<tr>
<td>Cove</td>
<td>COV</td>
</tr>
<tr>
<td>High Angle</td>
<td>HANG</td>
</tr>
<tr>
<td>Low Angle</td>
<td>LANG</td>
</tr>
<tr>
<td>Vertical</td>
<td>VER</td>
</tr>
<tr>
<td>Headland</td>
<td>HLD</td>
</tr>
<tr>
<td>Spit</td>
<td>SPI</td>
</tr>
</tbody>
</table>

Comments:

* Multiple entry is acceptable, use decreasing order of type found.
  (ie. C/G/S where C is most predominant type and S is the least one.)

** Heavy (>6m wide and/or >1.0 cm thick)
  Moderate (3-6m wide and/or 0.2-1.0 cm thick)
  Light (0.1 -3m wide and/or <0.2 cm thick)
  No Oil (free of visible oil)
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Chenega Island Anadromous Stream Block

Includes Shoreline Segments: CH-1, CH-2

Submitted: 
(for Exxon) Date: 7/5/89

ISCC Approval: Date: 7-10-89

FOSC Approval: Date: 7/11/89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file
FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO
SHORELINE CLEANUP PROGRAM

DATE 7/4/89 SHORELINE SEGMENT CH-1

LOCATION: (see enclosed map) Chenega Island - Anadromous
stream at center of eastside

ADEC NO. ___________ SHORELINE ASSESSMENT DATE: 7/2/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus).
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.
- Manual removal of oil in areas adjacent to the stream (to be determined by RAT.)

Priorities Considerations:
Class 1: Heavy to light oil/time sensitive
A: Subsistence resources present

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. A cataloged anadromous stream is located within this segment. Contact ADF&G and RAT 48 hours prior to beginning cleanup activities in this segment. A bald eagle nest may be present. See advisory. Currently not active. Protect stream from sheens.

Archeological Constraints (from site survey):
No access to the forest zone is permitted during cleanup. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Date: July 4, 1989
State Historic Preservation Officer *

ISCC: Sherry K. Christopherson

EXXON: 

FOSC: C.E. Noll

Date: 7/10/89
Date: 7/11/89
Date: 7/12/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
CLEANUP SHORELINE OIL EVALUATION

Date: July 28, 1989  Time: 7:30 AM
Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION: East Central Chenega Is  SEGMENT NUMBER: CH-1

LENGTH OF SHORELINE SEGMENT: 780 m
ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI BEA COV HLD/STRT  Slope: LANG HANG VER
Wave Exposure: High/Med/Low
Sediment: B/10% / C/60% / P/20% / G/5% / S/5% / M-1% / R-1%
Drift Debris on Beach: Yes/No  Supra/Upper/Mid/Lower Type: Drift/Logs

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU / SP / H / M / L
Continuous: Y/N  % of Segment: 30%  Width of Band: 6 + m
Sporadic: Y/N  % of Segment: 30%  max observed

Est. Oil Thickness where > 1cm: — cm  Est. Oil Penetration: 25 cm
Pooled Oil: — %  "Free" Oil: 10%  Coated: H/50% / M/20% / L/20%
Fresh 5%  Mousse 20%  Tar Formation: 75%
Drift Debris Oiled? Yes/No  Supra/Upper/Mid/Lower Amount: H / M / L

Comments:

Moderate to heavy oiling restricted to beach north of stream. Exposed surface of rocks is covered with black tarry oil. At depth some mousse is present. In areas of heaviest concentration some oil was running in the sun. Hot water should be attempted; cold water will not prove effective.
For Key To Letter Codes, See Next Page.
A. 30 cm pit dug at HWL and MWL. No oil observed.

B. 30 cm pit dug at HWL. No oil observed.

C. Along high water line band of oiled sand patches. Up to 40 cm in diameter. 30 cm pit on sand patch. Penetration 10 cm. On mid tidal beach several stones are splattered with oil. Shaded area has an average concentration of 50 cm³ tar per square meter of beach. Photos #2 & #3 of oiled sand mats.

D. Band of tarry pine needles approx. 10 cm wide.

E. Band of oiled sand patches on large cobbles and small flat boulders. 30 cm pit. Penetration up to 10 cm. On mid tidal beach several stones are splattered with oil. Shaded area has an average concentration of 50 cm³ tar per square meter of beach.

F. Oiled drift debris. Along band of drift seaweed, 30 cm pit was dug, 5 cm penetration observed.

G. At base of alders behind storm berm, creosote treated log, photos 4 and 5.

H. Band over 6 meters wide of oiled flat cobbles. Penetration over 25 cm.

I. Band width decreases to 1 meter and becomes scarce.
ECOLOGICAL EVALUATION

LOCATION: Chenega Island  SITE:  OBSERVER: Crank
LOCATION PREFIX: CU  SEG. NO.: 1  LENGTH: 780 (M)
DATE: 07/02/89  TIME (HHMM): 0705  TIDE HT.: -2 ft (M)
OILED ZONE: Splash High Medium Low
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA
Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Dense continuous 1-2 m band South side of stream - Patchy: Sparse on North side

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Associated with boulders, intergravel bed adjacent to South side of stream

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Majority (70%) are small (less than 1cm wide)

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS:
- Ganneals, sanddust worms, clam shells, crab
- Moon snail shell, filamentous open algae, laminaria, gulf grass bed
- Six-ster: (Solaster, Pictor, Lavater, Star) / Pycnoder (enhanced, Red Mites

CLEANUP PRECAUTIONS:
- Anadromous Stream, Possible Eagle Nest (Scrub choked as ravens flew by, happenend twice) Contact Fish & Game 48 hrs prior to cleanup

MAMMALS: Otters Harbor Seals Sea Lions Whales Other

BIRDS: 24 Pigeon Guiltinants, 1 Murre, 2 Raven, 1 Arctic Loon, 1 Merganser
1 Hummingbird

GENERAL OBSERVATIONS:
- Beach on south side of stream light 1-2m band
- Beach on north side of stream moderate 3-6m band
- Stream did not flow below the High ITZ. Small lake ~100 yds behind storm berm.
CULTURAL RESOURCE EVALUATION

Date: July 2, 1989
Location: Chenega Island
Site: East Coast
Location Prefix: CH
Segment #: 1
Length: 780m

Survey Method:
Air: (A - indicate on map) Boat: (A - indicate on map)
Ground: x (G - indicate on map)

Known cultural resources (AHRS #): SEW-6
Data Source: de Laguna

Oil conditions/beach visibility: heavy oiling on part of beach

Width of beach zone surveyed: 30 m
Tree fringe surveyed: 20 m

Cultural resources observed in beach zone (AHRS code): none
Cultural resources observed in tree fringe (AHRS code): CHT's, CBN's

General observations justifying survey method and segment's site probability:
Shore Profile: 50 m wide gravel beach at stream mouth
Fresh Water Sources: anadromous stream
Sea Exposure: east exposure to Knight Island Passage
Access/Safety: easy access onto gravel beach

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5
Monitoring during cleanup needed: yes/no
Collection: yes/no

Photos:
Color Roll #: ___________ Frames: ___________
B/W Roll #: SL-5 Frames: 9-13

Observer(s): Ludwig

Time survey started: 07/15
Time survey ended: 09/15

Cultural resource considerations/restraints:
usual constraints
S.C.A.T Team 5
Greg Chaney
Segment: CH-1
Date: July 2 1999
Time: 7:15 AM
Tide: - 1 (ft)
Location: E. Chugach Island
Base Map: Seward 22
Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus), free oil and patches of mousse.
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 1: Heavy to light oil/time sensitive
A: Subsistence resources present

Ecological Constraints (from site survey): Work at minus tide to clean contaminated lower intertidal zone. Take appropriate measures to protect Laminaria bed at South end of segment. A cataloged anadromous stream is located within this segment. Contact ADF&G and RAT 48 hours prior to beginning cleanup activities in this segment. Minimize activities in marsh grass adjacent to stream.

Archeological Constraints (from site survey): If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *

ISCC: ____________________________  Date: __________________

EXXON: ____________________________  Date: __________________

FOSC: ____________________________  Date: __________________

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
SHORELINE CLEANUP PROGRAM

DATE 7/4/89  SHORELINE SEGMENT CH-2

LOCATION: (see enclosed map) Chenega Island - Anadromous
stream on northeast side

ADEC NO. ___________ SHORELINE ASSESSMENT DATE: 7/2/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus), free oil and
  patches of mousse.
- Flood/flush with warm to hot water (up to 140 F) on low angle
  beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 1: Heavy to light oil/time sensitive
A: Subsistence resources present

Ecological Constraints (from site survey): Work at minus tide to
clean contaminated lower intertidal zone. Take appropriate measures
to protect Laminaria bed at South end of segment. A cataloged
anadromous stream is located within this segment. Contact ADF&G and
RAT 48 hours prior to beginning cleanup activities in this segment.
Minimize activities in marsh grass adjacent to stream.

AFTER JULY 10, NO MECHANICAL CLEANUP ADJACENT TO STREAM, SEE
ATTACHED PERMIT. PROTECT STREAM FROM SHEEN WITH CONTAINMENT BOOM
OR OTHER EFFECTIVE MEASURES.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during
cleanup, contact Exxon's Archeological Field Director and take
actions prescribed in the Operational Guidelines for Shoreline
Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *
Date: July 4, 1989

ISCC: Shean K Christopher
Date: 7-10-89

EXXON: 
Date: 7/18/89

FOSC: 
Date: 7/12/89

* Signature required to satisfy stipulations in Alaska DNR
  land use permits for tide and submerged lands.
CLEANUP SHORELINE OIL EVALUATION

Date: July 20
Time: 9:59 AM
Observer: Greg Chaney

Surveyed From: Boat/Plane
Weather: Cloud/Rain/Snow/Fog

LOCATION
N.W. Chenega Island
SEGMENT NUMBER

LENGTH OF SHORELINE SEGMENT: 1010 m
ACCESS: Foot/Vehicle/Boat/Barge/Plane

SHORELINE:
Shoreline Type: SPI/BC/CH/HL/STRT
Slope: HANG/VER
Wave Exposure: High/Med/Low
Sediment: B/45% / C/20% / P/5% / G/5% / S/5% / M/5% / R/25%

Drift Debris on Beach: Yes/No
Supra/Upper/Mid/Lower Type: Seaweed

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU/SP/H/M/L
Continuous: Y/N
% of Segment: 70%
Width of Band: 6 m
Sporadic: Y/N
% of Segment: 30%

Est. Oil Thickness where > 1 cm: ___ cm
Est. Oil Penetration: 25 cm

Pooled Oil: 0 % "Free" Oil: 10 % Coated: H/60% / M/20% / L/10 %

Fresh: 10% Mousse: 20% Tar Formation: 70%

Drift Debris Oiled? Yes/No
Supra/Upper/Mid/Lower Amount: N/A/1/L

Comments:

Heaviest oil concentration is along north shore of cove.
Near stream mouth band of oil is roughly 20 m wide
but average width is closer to 6 m along steeper
boulder beach. One sheet of plywood was located in grass
marsh which was covered with oiled seaweed. 2 workers should
remove this & access should be restricted so grass is not
trampled.
For key to letter codes, see next page.
A. Behind bedrock outcrops patches of oil are on smaller grained deposits. In lower intertidal zone (ITZ) one 7 meter wide band of oil is located. Photograph #8.

B. Oiled band at base of cliff in large boulders.

C. At 2 ft. tide level sporadic oil on boulders, heavy at times. Sheen was observed on the water adjacent to the beach.

D. Oil band widens to 10 meters but is very thin and sporadic. Some fucus is effected.

E. Large boulder. Logo at base with orange spray paint dot. Oil band becomes more concentrated.

F. Oil band thins to 1 meter wide.

G. Grassy Salt marsh. Plywood driftwood covered with oiled drift debris. Should be removed by 2 crew members. Restrict access to this area to avoid trampling. Several patches of oiled drift debris are located in this area. Photograph #9.

H. Oiled drift seaweed. In this region oil band is up to 20 meters wide. A pit 30 cm. deep was dug.
Concentrated mousse and gooy oil was observed to a depth of 25 cm.

Pit 20 cm deep was dug. Oil penetration observed to 15 cm. Photo #10

J. Large grained boulder beach. Boulders are rough and up to 1 meter wide. Oil band is over 6 meters wide in specific locations. Cliff is behind boulder beach but rarely is higher than 15 ft.

Boulder beach gives way to sheer cliff 10 to 15 ft. high. Distinct black oil band is visible along this rock face. Small island at "K" has a few mature spruce trees on the top.
ECOLOGICAL EVALUATION

LOCATION: Chennega Island  SITE:  OBSERVER: Cranke
LOCATION PREFIX: CU  SEG. NO.: 2  LENGTH: 1610 (M)
DATE: 07/2/89  TIME (HHMM): 0957  TIDE HT.: + 3.4 (M)
OILED ZONE: Splash High Medium Low
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

*Fucus* (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

*Mytilus* (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

*Balanus* (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

*Littorina* (Limpets): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Laminaria Bed at south end, numerous filamentous green algae.

Sea Stars: Leather Star, Anemones, Dscoparia, Anadromous Stream Marsh grass

CLEANUP PRECAUTIONS: Suggest working at minus tide and with support, take precautions to protect Laminaria Bed from contamination, Notify Fish and Game 48 hrs prior to cleanup

MAMMALS: Otters Harbor Seals Sea Lions Whales Minke

BIRDS: Gulls

GENERAL OBSERVATIONS: Fresh sheen on water surface
CULTURAL RESOURCE EVALUATION

Date: July 2, 1989  Location: Clingera Island  Site: Northeast Corner

Location Prefix: CH  Segment #: 2  Length: 0.02

Survey Method:

Air: (A - indicate on map)  Boat: X (A - indicate on map)

Ground: X (G - indicate on map)

Known cultural resources (AHRS #): none  Data Source: 

Oil conditions/beach visibility: heavy oiling on sections of beach

Width of beach zone surveyed: 30 m  Tree fringe surveyed: 20 m

Cultural resources observed in beach zone (AHRS code):

Cultural resources observed in tree fringe (AHRS code): NMT's

General observations justifying survey method and segment's site probability:

Shore Profile: wide beach at mouth of stream at head of bay

Fresh Water Sources: anadromous stream

Sea Exposure: northeast exposure to Knight Island Passage

Access/Safety: easy access at head of bay

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5

Monitoring during cleanup needed: yes/no  Collection: yes/no

Photos:

Color Roll #:  Frames: 

B/W Roll #: 2-L-5  Frames: 14

Observer(s): Ludwig

Time survey started: 1000  Time survey ended: 1130

Cultural resource considerations/restraints:

usual constraints


SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment
- Hot water wash
- Warm water wash
- Water deluge
- Mechanical
- Non-mechanical
- Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: TREATMENT OF SEGMENT CH-2 IS COMPLETE, READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEG.

Signature: [Signature]
Date: 8/1/89 Time: 02:30
Printed Name: Gus Garcia

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Degree of Oiling</td>
</tr>
<tr>
<td>0</td>
<td>Heavy</td>
</tr>
<tr>
<td>10</td>
<td>Medium</td>
</tr>
<tr>
<td>15</td>
<td>Light</td>
</tr>
<tr>
<td>10</td>
<td>Very Light</td>
</tr>
<tr>
<td>75</td>
<td>None</td>
</tr>
</tbody>
</table>

Reassessment
- Yes - necessary
- No - not necessary unless re-oiled

ADEC rep Comments: None available.

Signature: [Signature]
Date: 8/1/89 Time: [Time]
Printed Name: [Printed Name]

FOSC rep Comments: Light oil around base of large boulders - hot washed.

Signature: [Signature]
Date: 8/1/89 Time: 21:00
Printed Name: V. PShevldzky, PSC

COPY: EXXON ADEC FOSC
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Chenega Island East Block

Includes Shoreline Segments: CH-3, CH-4, CH-5, CH-6, CH-7, CH-8

Submitted: [Signature] Date: 7/15/89

ISCC Approval: [Signature] Date: 7/19/89

FOSC Approval: [Signature] Date: 7/21/89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:

- Exxon Shoreline Coordinator
- Exxon Shoreline Supervisor
- Exxon SCAT file
- FOSC
- CDFU
- NOAA
- EPA
- USDA (FS)
- USFW
- A. DEC
- A. FG
- A. DNR
- CAC
- PWSCA
- USFS
- SHPO
SHORELINE CLEANUP PROGRAM

DATE 7/11/89

SHORELINE SEGMENT CH-3

LOCATION: (see enclosed map) Shingle Beach North of Anadromous Fish Stream: East Central Chenega Island.

ADEC NO. SHORELINE ASSESSMENT DATE: 7/2/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus).
- Flood/flush with hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 2: Heavily oiled.
B: Resources absent.

Ecological Constraints (from site survey):
Work at mid tide and/or take appropriate measures to protect lower intertidal zone and kelp beds.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer

EXXON:
FOSC:

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.

Date: July 12, 1989

Date: 7/19/89

Date: 8/2-07-99

Date: 7/21/89
CLEANUP SHORELINE OIL EVALUATION

Date: July 2 89 Time: 8:35 PM
Surveyed From: Foot/Boat/Helio/Plane
Observer: Greg Chaney
Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION East Chenega Island SEGMENT NUMBER CH-3
LENGTH OF SHORELINE SEGMENT: 1120 m
ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI BEA/COV/HLD/STRT
Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Flat shingle rocks on beach
Sediment: B40% / C40% / P10% / G5% / SS5% / M1% / R-

Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type logs seaweed

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L
Continuous: Y/N % of Segment 20% Width of Band: 10+ m
Sporadic: Y/N % of Segment 80% max observed
Est. Oil Thickness where > 1 cm: ___ cm Est. Oil Penetration: 25 cm

Pooled Oil: 0 % "Free" Oil: 0 % Coated: H:20% / M:50% / L:30%
Fresh 0% Mousse 0% Tar Formation: 100%

Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

As indicated on sketch map, Northern 1/4 of segment has heavy oiling. Asphalt pavement is beginning to form in some areas. Majority of oil is discontinuous patches. These areas should be scouted by cleanup crew for heavier localized patches. At high tide Omni Boom Barge might be deployed but beach should be scouted to insure enough draft is available.
SKETCH MAP CH-3

Large Boulder Beach
3 meter band tar
*4' piling driven in beach, covered at 2 ft tide
Discontinuous tar
Bedrock outcrop on beach
Large Uprooted Tree Laying On Beach
Tar Band ~ 8 meters wide
25 cm penetration observed in storm berms and high inter tidal zone
Continuous tar pavement forming
10 meter band continuous tar
15 cm penetration observed
3 meter band continuous tar
Patchy Discontinuous Tar Deposits
35 cm. pit in storm berms, no oil observed
Patchy Discontinuous Tar Deposits

Photo #13:
Uprooted Trees Laying On Beach
Photo #12
Discontinuous Tar Band

Penetration 15 cm observed
Rough Band Discontinuous Tar Approx. 5 meters wide
Lint (Survey Monument)
LOCATION: Chenega Island  SITE:  OBSERVER:  
LOCATION PREFIX: CH  SEG. NO.: 3  LENGTH: 1010 (M)
DATE: 7/23/89  TIME (HHMM):  2030  TIDE HT:  +4 FT
OILED ZONE: Splash  High  Medium  Low
SUBSTRATUM: Rocks  Boulder  Cobble  Gravel  Sand  Mud

LIVE BIOTA

Fucus (algae): Patchy  Y/N  Contin.  Y/N  Dense  Y/N  Sparse  Y/N  None  Y/N

Mytilus (Mussels): Patchy  Y/N  Contin.  Y/N  Dense  Y/N  Sparse  Y/N  None  Y/N

Balanus (Barnacles): Patchy  Y/N  Contin.  Y/N  Dense  Y/N  Sparse  Y/N  None  Y/N
Continues to spread varying in cover up to 15.

Littorina
Patchy  Y/N  Contin.  Y/N  Dense  Y/N  Sparse  Y/N  None  Y/N

Limpets: Patchy  Y/N  Contin.  Y/N  Dense  Y/N  Sparse  Y/N  None  Y/N

OTHER OBSERVATIONS: 3.6 m was the active - G water level.

CLEANUP PRECAUTIONS: Use appropriate measures to prevent further spread, paying particular attention to limpets (kezi) first.

MAMMALS: Otters  ___  Harbor Seals  ___  Sea Lions  ___  Whales  ___

OTHER  

BIRDS: (white bellied  seagulls)  ___  (smallest  ___)  ___  (oth  ___)

GENERAL OBSERVATIONS: Dense  Starfish  present  in lower 3.
### CULTURAL RESOURCE EVALUATION

**Date:** July 2, '89  
**Location:** Chenega Island Site East Coast

<table>
<thead>
<tr>
<th>Location Prefix</th>
<th>Segment</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH</td>
<td>3</td>
<td>1010 m</td>
</tr>
</tbody>
</table>

**Survey Method:**

- **Air** (A - indicate on map)  
- **Boat** (A - indicate on map)  
- **Ground** (G - indicate on map)

**Known cultural resources (AHRS #)**: none  
**Data Source**: 

**Oil conditions/beach visibility**: Heavy in areas

**Width of beach zone surveyed**: 20 m  
**Tree fringe surveyed**: 0

**Cultural resources observed in beach zone (AHRS code)**: none

**Cultural resources observed in tree fringe (AHRS code)**: none

**General observations justifying survey method and segment's site probability:**

- **Shore Profile**: Narrow gravel beach and steep hillside
- **Fresh Water Sources**: none
- **Sea Exposure**: Open exposure to Knight Island Passage
- **Access/Safety**: Easy access in calm conditions

**Probability of undiscovered sites in beach zone (circle one)**: 1 2 3 4 5

**Monitoring during cleanup needed**: yes/no  
**Collection**: yes/no

**Photos:**
- **Color Roll**:  
- **B/W Roll**:  

**Observer(s)**: Ludwig

**Time survey started**: 2030  
**Time survey ended**: 2145

**Cultural resource considerations/restraints:**

**Usual constraints**
S.C.A.T. Team 5
Greg Chaney
Segment: CH-3
Date: July 2 1989
Time: 8:30 PM
Tide: 4.5 (ft)
Location: East Chenega Is.
Base Map: Seward 83

Chop
Cabins
Int

56°
SHORELINE CLEANUP PROGRAM

DATE  7/11/89  SHORELINE SEGMENT  CH-4

LOCATION: (see enclosed map) Boulder Based Cliffs North East
Chenega Island.

ADEC NO. _______ SHORELINE ASSESSMENT DATE:  7/3/89

Recommended Cleanup Activity(ies):
- Use moderate to high pressure hot water washing on rock and oiled logs. May be good area for OMNI boom.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 3: Moderate oil.
B: Resources absent.

Ecological Constraints (from site survey):
Work at mid tide and/or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Date: July 12, 1989

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
CLEANUP SHORELINE OIL EVALUATION

Date: July 3, 1989  Time: 7:40 AM  Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION  N W Chenega Island  SEGMENT NUMBER  CH 4
LENGTH OF SHORELINE SEGMENT: 1450 m
ACCESS: Foot/ Vehicle/ Boat/ Barge/ Helio/ Float Plane  Fair weather only

SHORELINE:
Shoreline Type: SPI/ BEA/ COV/ HLD/ STRT  Slope: LANG/HANG/VER
Wave Exposure: High/ Med/ Low
Sediment: B 50% / C 5% / P - % / G - % / S - % / M - % / R 5%  
Drift Debris on Beach: Yes/ No  Supra/ Upper/ Mid/ Lower  Type  A few drift logs

OIL
Degree of Oiling: Heavy/ Moderate/ Light/ No Oil/ Unobserved
Area of Beach Impact: SU / SP / O / M / L
Continuous: Y/N % of Segment 20% Width of Band: 5 m
Sporadic: Y/N % of Segment 80% Estimate
Est. Oil Thickness where > 1cm: ___ cm  Est. Oil Penetration: ____ cm
Pooled Oil: ___ %  "Free" Oil: ___ %  Coated: H 20 % / M 50 % / L 30 %
Fresh ___ %  Mousse ___ %  Tar Formation: ___ %
Drift Debris Oiled? Yes/ No  Supra/ Upper/ Mid/ Lower  Amount: H/ M / L

Comments:
Segment consists of cliffs with boulders at the base. Where cliff reaches below HWL, oil band narrows to 1 meter - 1 to 2 mm thick. Where boulders reach above high tide line, a rough band 5 meters wide of tarry oil is located at HWL. Very difficult to see oil from offshore due to black bedrock. Omni Boom Barge would be the best way to treat these boulder bands.
At highest tide line along boulder beaches - a rough band at base of cliff in boulders 5 meters wide.

Along cliff faces - 1 meter band oily tar oil difficult to see offshore due to black rock. Omnip Barge recommended.
ECOLOGICAL EVALUATION

SITE:  OBSERVER:  4  453 (M)  07/03/89  1455-2257  25 ft - 5 ft  Splash High Medium Low Rocks Boulder Cobble Gravel Sand Mud
LIVE BIOTA
Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Littorina
Limpets
CLEANUP PRECAUTIONS: Take appropriate measures to protect Lower ITZ

MAMMALS: Otters Harbor Seals Sea Lions Whales Other

VARIETY OF MARINE LIFE OBSERVED: Marine life observed: Bladed Valves, Worms, Detritus, Limpets, Canyon.
CULTURAL RESOURCE EVALUATION

Date: July 3, 1989  Location: Chanege Is.  Site: East coast
Location Prefix: CH  Segment #: 4  Length: 1450m

Survey Method:
Air: (A - indicate on map)  Boat: (A - indicate on map)
Ground: (G - indicate on map)

Known cultural resources (AHRS #): None  Data Source: ______________

Oil conditions/beach visibility: Moderate oiling in sections

Width of beach zone surveyed: 20 m  Tree fringe surveyed: 0

Cultural resources observed in beach zone (AHRS code): None

Cultural resources observed in tree fringe (AHRS code): None

General observations justifying survey method and segment's site probability:
Shore Profile:
Fresh Water Sources: None
Sea Exposure: Open exposure to Knight Island Passage
Access/Safety: Good access in calm conditions

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5

Monitoring during cleanup needed: Yes/No  Collection: Yes/No

Photos:  Color Roll #: ___________  Frames: ___________

B/W Roll #: ___________  Frames: ___________

Observer(s): Ludwig

Time survey started: 07:35  Time survey ended: 09:15

Cultural resource considerations/restraints:

Usual constraints

_________________________
Time: 7:40 AM
Tide: -2.0 ft

S.C.A.T Team 5
Greg Chaney
Segment: CH-4
Date: June 3 89
Location: East Chenga Island
Base Map: Seward-B3
SHORELINE CLEANUP PROGRAM

DATE 7/11/89  SHORELINE SEGMENT CH-5

LOCATION: (see enclosed map) Boulder/Cobble beach at northeast side of Chenega Island.

ADEC NO. __________ SHORELINE ASSESSMENT DATE: 7/3/89

Recommended Cleanup Activity(ies):
- Flood/flush with warm to hot water (up to 140°F) on low angle beaches.
- Use moderate to high pressure washing on rocks and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 4: Light oil.
B: Resources absent.

Ecological Constraints (from site survey):
Work at mid tide and/or take appropriate measures to protect lower intertidal zone. Advise ADFC 48 hours prior to cleanup that a possible Bald Eagle nesting site is located in this segment. NOT ACTIVE NEST.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
CLEANUP SHORELINE OIL EVALUATION

Date: July 3, 1989  Time: 9:40 AM  Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane
Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION  North East Chenega Is  SEGMENT NUMBER  CH5

LENGTH OF SHORELINE SEGMENT: 900 m
ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane
Fair weather only

SHORELINE:
Shoreline Type: SPI/BEA/COV/HLD/STRT  Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B50% / C35% / P5% / G5% / S-% / M-% / R5%
Drift Debris on Beach: Yes/No  Supra/Upper/Mid/Lower Type

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU / SP / H / M / L
Continuous: Y/N  % of Segment  10%  Width of Band: _ m
Sporadic: Y/N  % of Segment  90%
Est. Oil Thickness where > 1 cm: — cm  Est. Oil Penetration: _ cm
Pooled Oil: —% "Free" Oil: —% Coated: H/10% / M/30% / L/70%
Fresh —%  Mousse  _%  Tar Formation: _%
Drift Debris Oiled? Yes/No  Supra/Upper/Mid/Lower Amount: H/M/L

Comments:
Entire tide range is lightly splattered with tar.
Coverage rarely exceeds 25% of stone surface.
On underside of stones, mousse is present but concentration is not high.
Very light sheen observed coming off rocks at 0 ft. tidal.
Oil band is continuous at south end of segment but becomes discontinuous toward the north.
ECOLOGICAL EVALUATION

LOCATION: [Illegible]  SITE: [Illegible]  OBSERVER: [Illegible]

LOCATION PREFIX:  SEG. NO.: 5  LENGTH: 60 (M)

DATE: 07/02/89  TIME (HHMM): 12:00-18:00  TIDE HT.: -5 + 5 (M)

OILED ZONE: Splash  High  Medium  Low

SUBSTRATUM: Rocks  Boulder  Cobble  Gravel  Sand  Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Mytilus (Mussels): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Balanus (Barnacles): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Littorina

Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Limpeta: Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

OTHER OBSERVATIONS: Sea stars were dense, Pricklebacks intense, Limpets null at high tide, and of sequential

CLEANUP PRECAUTIONS: Take appropriate measures to prevent further contamination. Contact [Illegible] for sample of oil prior to cleaning.  Do not use this testing site for disposal.

MAMMALS: Otters  Harbor Seals  Sea Lions  Whales  Other

BIRDS: 10 Eagles  Herring Gulls  Seabirds  [Log entry]

GENERAL OBSERVATIONS: [Log entry]
(version of 6/27/89)

**ROCKLAND CULTURAL RESOURCE EVALUATION**

**Date:** July 3, 1989  **Location:** Chenega Tr.  **Site:** east coast

**Location Prefix:** CH  **Segment #:** 5  **Length:** 900

**Survey Method:**

Air (A - indicate on map)  Boat (A - indicate on map)  Ground (G - indicate on map)

**Known cultural resources (AHRS #:)** none  **Data Source:**

**Oil conditions/beach visibility:** band of mod. oil in upper intertidal

**Width of beach zone surveyed:** 30 m  **Tree fringe surveyed:** 0-5 m

**Cultural resources observed in beach zone (AHRS code):** none

**Cultural resources observed in tree fringe (AHRS code):** none

**General observations justifying survey method and segment's site probability:**

- **Shore Profile:** 30-50 m wide beaches at base of steep hillside
- **Fresh Water Sources:** 2 small trickles of water
- **Sea Exposure:** open exposure to Knight Island Passage
- **Access/Safety:** easy access in calm weather

**Probability of undiscovered sites in beach zone (circle one):** 1 2 3 4 5

**Monitoring during cleanup needed:** yes/no  **Collection:** yes/no

**Photos:**  Color Roll:  Frames  

**Observer(s):** Ludwig

**Time survey started:** 09:20  **Time survey ended:** 11:30

**Cultural resource considerations/restraints:** Usual constraints
SHORELINE CLEANUP PROGRAM

DATE 7/11/89

SHORELINE SEGMENT CH-6

LOCATION: (see enclosed map) Northeast Chenega Island.

ADEC NO. SHORELINE ASSESSMENT DATE: 7/3/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus).
- Flood/flush with warm to hot water (up to 140°F) on beach at north end of segment.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 4: Light oil.
B: Resources absent.

Ecological Constraints (from site survey):
Work at mid tide and/or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *

EXXON: 

FOSC: 

Date: July 12, 1989

Date: 7/19/89

Date: 7/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
POST-CLEANUP SHORELINE OIL EVALUATION

Date: July 3'89  Time: 19:20  Observer: Greg Cheney
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION
LOCATION NE Chenega Island  SEGMENT NUMBER CHG
LENGTH OF SHORELINE SEGMENT: 560 m  Fair weather only
ACCESS: Foot/Vehicle/Boat/Sarge/Helio/Float Plane

SHORELINE:
Shoreline Type: SPI.SEA.COV.HLD.BRT  Slope: LANG/HANG/VERT
Wave Exposure: High/Med/Low
Sediment: B50% / C5% / P5% / G- / S- / M- / R40%
Drift Debris on Beach: Yes/No  Supra/Upper/Mid/Lower Type seaweed

OIL
Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU/SP/H/M/L Max.
Continuous: Y/N  % of Segment 60% Width of Band: 2 m
Sporadic: Y/N  % of Segment 40%
Est. Oil Thickness where > 1cm: ___ cm  Est. Oil Penetration: 5 cm
Pooled Oil: ___%  "Free" Oil: ___% Coated: H10% / M20% / L70%
Fresh ______%  Mousse ______%  Tar Formation: ___%
Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:
Oil is mostly in the form of weathered tar. Heaviest concentration on boulders near cliff as indicated on map.
Northern portion of segment has increased splattering of rocks in lower intertidal zone.
Start (Survey Monument)

- Random tar splatters on beach, lower ITZ
- Boulders up to 2 meters
- Tar band narrows to 5 cm

- Band of tar 80 cm wide on rock face
- 2-meter band of tarred boulders
- Old dead trees fallen on beach
- Little evidence of tar

- Tar band difficult to locate in boulders

- Tar band 5 cm wide on rock outcrops and boulders along an old high tide line

- Photo #26

- 60 cm tar band on back of rock
ECOLOGICAL EVALUATION

LOCATION: Chereqal Island  SITE:  OBSERVER:  
LOCATION PREFIX:  SEG. NO.:  LENGTH:  5162 (M)  
DATE: 10/3/89  TIME (HHMM):  TIDE HT.:  +4 (M)  
OILED ZONE: Splash High Medium Low  
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud  

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N  

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N  

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N  

Littorina  

Limpets:  

OTHER OBSERVATIONS:  

CLEANUP PRECAUTIONS:  

MAMMALS: Otters Harbor Seals Sea Lions Whales  

BIRDS: Hummingbird  

GENERAL OBSERVATIONS:  

--------------------------
(version of 6/27/89)

**PORT-OF-BAY CULTURAL RESOURCE EVALUATION**

Date July 3 '89  Location Chenega Is  Site east coast

Location Prefix CH  Segment 6  Length________

Survey Method:

Air__________  (A - indicate on map)  Boat__________  (A - indicate on map)

Ground  (G - indicate on map)

Known cultural resources (AHRS #) ______ Data Source__

Oil conditions/beach visibility moderate in sections

Width of beach zone surveyed 30m  Tree fringe surveyed 25m

Cultural resources observed in beach zone (AHRS code) CMT

Cultural resources observed in tree fringe (AHRS code) CMT's

General observations justifying survey method and segment's site probability:

Shore Profile 20-50m wide beaches, steep cliffs with limited access to forest

Fresh Water Sources several water seeps

Sea Exposure open exposure to Knight Island Passage

Access/Safety easy access onto beachlo in calm weather

Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 5

Monitoring during cleanup needed yes/no  Collection yes/no

Photos:  Color Roll #________ Frames________

B/W Roll # SL-5  Frames 15

Observer(s) Ludwig

Time survey started 1900  Time survey ended 2045

Cultural resource considerations/restraints:

usual constraints
S.C.A.T Team 5
Greg Chaney
Segment: CH-6
Date: July 3, 89
Time: 19:20
Tide: 0 (ft)
Location: NW Chenega Is
Base Map: Seward 83
SHORELINE CLEANUP PROGRAM

DATE 7/11/89  SHORELINE SEGMENT CH-7

LOCATION: (see enclosed map) Northeast Chenega Island.

ADEC NO. SHORELINE ASSESSMENT DATE: 7/3/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus).
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 2: Heavy oil.
B: Resources absent.

Ecological Constraints (from site survey):
Work at mid tide and/or take appropriate measures to protect lower intertidal zone and eelgrass beds. Limit foot traffic on intergravel/cobble mussel beds.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *

Date: July 12, 1989

SSC: Shawn K Christopher

Date: 7/19/89

EXXON:

Date: 8/9-7-89

FOSC:

Date: 7/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
**POST-CLEANUP SHORELINE OIL EVALUATION**

**Date:** July 3, 1989  **Time:** 20:30  
**Observer:** Greg Chaney  
**Weather:** Sun/Cloud/Rain/Snow/Fog

**LOCATION**

**LOCATION** NW Chenega Is.  
**SEGMENT NUMBER** CH-7

**LENGTH OF SHORELINE SEGMENT:** 450 m

**ACCESS:** Foot/Boat/Helio/Plane

**SHORELINE:**

- Shoreline Type: SPI/BEACH/COVERED/HLD/STRT
- Slope: LANG/HANGOVER
- Wave Exposure: High/Med/Low
- Sediment: B25%/C20%/P20%/G10%/S5%/M-30%

**Drift Debris on Beach:** Yes/No  
**Supra:** Upper/Mid/Lower  
**Type:** seaweed

**Degree of Oiling:** Heavy/Moderate/Light/No Oil/Unobserved

**Area of Beach Impact:** SU/SP/H/M/L  
**Continuous:** Y/N  
**% of Segment:** 80%  
**Width of Band:** 6+ m  
**Sporadic:** Y/N  
**% of Segment:** 20%

**Est. Oil Thickness where > 1 cm:** — cm  
**Est. Oil Penetration:** — cm

**Pooled Oil:** — %  
**"Free" Oil:** — %  
**Coated:** H60%/M30%/L10%

**Fresh:** — %  
**Mousse:** — %  
**Tar Formation:** 100 %

**Drift Debris Oiled?** Yes/No
**Supra:** Upper/Mid/Lower  
**Amount:** H/M/L

**Comments:**

Cove could only be entered at high tide. Although oil is wide and continuous, penetration is not extreme due to flat shale on beach. It may be difficult to get a skimmer into cove with large barge. Cove should be scouted by someone with specific barge dimensions. Tar is very weathered and will require hot water to mobilize. Thin sheen observed along shoreline.
ECOLOGICAL EVALUATION

LOCATION: Irene Island  SITE:  OBSERVER: Cranik
LOCATION PREFIX: 24  SEG. NO.: 7  LENGTH: 450 (M)
DATE: 07/03/89  TIME (HHMM): 2025  TIDE HT.: 3 (M)
OILED ZONE: Splash High Medium Low
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

**Fucus** (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Mytilus** (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Balanus** (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Littorina**
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Limpets**: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Elgrass bed in cove, clam shells, sea urchin

CLEANUP PRECAUTIONS: Limit traffic on intergravel/cobble mussel beds. Take appropriate measures to protect intertidal zone and elgrass beds.

MAMMALS: Otters Harbor Seals Sea Lions Whales Other

BIRDS:

GENERAL OBSERVATIONS: Heavy amount of drift Fucus at report site.
M/V CLEANUP CULTURAL RESOURCE EVALUATION

Date July 3 1989 Location Chenega Is Site east coast
Location Prefix CH Segment # 7 Length

Survey Method:
Air (A - indicate on map) Boat (A - indicate on map)
Ground (G - indicate on map)

Known cultural resources (AHRS #) none Data Source

Oil conditions/beach visibility heavy in places

Width of beach zone surveyed 50 m Tree fringe surveyed 20 m

Cultural resources observed in beach zone (AHRS code) none

Cultural resources observed in tree fringe (AHRS code) CH 15's

General observations justifying survey method and segment's site probability:

Shore Profile low energy wave

Fresh Water Sources water seeps

Sea Exposure protected area that opens to Knight Island Passage

Access/Safety easy access with boat or helicopter

Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 5

Monitoring during cleanup needed yes no Collection yes no

Photos: Color Roll # Frames

B/W Roll # SL-5 Frames 16-18

Observer(s) Ludwig

Time survey started 2045 Time survey ended 2145

Cultural resource considerations/restraints:
usual constraints
SHORELINE CLEANUP PROGRAM

DATE 7/11/89  SHORELINE SEGMENT CH-8

LOCATION: (see enclosed map) Northeast Chenega Island

ADEC NO. __________ SHORELINE ASSESSMENT DATE: 7/4/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated driftwood and fucus.
- Flood/flush with hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 2: Heavy oil.
B: Resources absent.

Ecological Constraints (from site survey):
Work at mid tide and/or take appropriate measures to protect lower intertidal zone. Avoid disturbing seal haulout site (noted on map).

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *  
ISCC:  
EXXON:  
FOSC:  

Date: July 12, 1989  
Date: 7/19/89  
Date: 7/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
POST-CLEANUP SHORELINE OIL EVALUATION

Date: July 4th  Time: 8:00 AM  Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION  N.W. Chenega Is.  SEGMENT NUMBER  CH-8

LENGTH OF SHORELINE SEGMENT: 120 m

ACCESS: Foot/Vehicle/Boat/Sarge/Helio/Float Plane  Fair Weather

SHORELINE:
Shoreline Type: SP/BED/COV/HLD/STRT  Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B 30% / C 10% / P 10% / G 10% / S 20% / M - 1 / R 20%
Drift Debris on Beach: Yes/No  Supra/Upper/Mid/Lower Type  seaweed

OIL
Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L:
Continuous: Yes  % of Segment  80%  Width of Band: 200 m
Sporadic: Yes  % of Segment  20%  Max. Observed

Est. Oil Thickness where > 1 cm: ___ cm  Est. Oil Penetration: ___ cm

Pooled Oil: ___  "Free" Oil: Trace  Coated: H 40% / M 20% / L 40%
Fresh: ___  Mousse: ___  Tar Formation: ___

Drift Debris Oiled?: Yes/No  Supra/Upper/Mid/Lower Amount: H / M / L /

Comments:
Headlands and rock faces are typically coated with a 1-2 meter band tar. Pocket beaches are coated with tar bands up to 20 meters wide. Penetration is usually highest at storm break and thins to the lower intertidal zone. Light sheen observed where water contacted beach.
CH-8

Fishing Marker

North End CH-8

"Seal Rock"
Not Surveyed Due To Seals

Pocket Beach Oiled Zone ~20 meters wide
Penetration 20 cm High Intertidal Thins to 0 in Low Intertidal
~1 meter band on bedrock face
~20 foot cliff

Photo #34

Rock Terrace

8 Meter Band Tar Focus and Boulders
Tar
2 Meter Band Boulder Bases
Tar Splatters on Boulders

Photo #33

Photo Band 15-20 cm
Penetration surface tar

25 cm penetration

50% surface

Photo #31

Penetration Observed 10 cm, Unable to dig deeper
Tar Band Poorly Defined

Photo #32

Saturated Sedi-

nent

Bedrock Outcrop

2 Meter Pocket of Pebbles
Freeoil Running off on Local Rocks

Pocket Boulder Beach

Tar Band
~60 cm Wide
on Bedrock
Face, Thin Coat

Spruce Trees

South End CH-8
ECOLOGICAL EVALUATION

LOCATION: [illegible] SITE: [illegible] OBSERVER: [illegible]

LOCATION PREFIX: CH SEG. NO.: 9 LENGTH: 1120 (M)

DATE: 02/04/89 TIME (HHMM): 0720 TIDE HT.: -0.5 ft (F)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS:

CLEANUP PRECAUTIONS:

MAMMALS: Otters Harbor Seals Sea Lions Whales

BIRDS: Hummingbird

GENERAL OBSERVATIONS:
(version of 6/27/89)

**CULTURAL RESOURCE EVALUATION**

<table>
<thead>
<tr>
<th>Date</th>
<th>July 4/89</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Chenega Is. site east coast</td>
</tr>
<tr>
<td>Location Prefix</td>
<td>CH</td>
</tr>
<tr>
<td>Segment</td>
<td>8</td>
</tr>
<tr>
<td>Length</td>
<td></td>
</tr>
</tbody>
</table>

**Survey Method:**

| Air | (A - indicate on map) |
|     | Boat                  |
|     | (A - indicate on map) |
| Ground | (G - indicate on map) |

**Known cultural resources (AHRS #)**

- None

**Data Source**

- Data

**Oil conditions/beach visibility**

- Heavy to moderate in areas

**Width of beach zone surveyed**

- 80 m

**Tree fringe surveyed**

- 20 m

**Cultural resources observed in beach zone (AHRS code)**

- 0

**Cultural resources observed in tree fringe (AHRS code)**

- CH'T's

**General observations justifying survey method and segment's site probability:**

- **Shore Profile:** 50 to 80 m wide beaches separated by rocky headlands
- **Fresh Water Sources:** Water seeps
- **Sea Exposure:** Open exposure to Knight Island Passage
- **Access/Safety:** Good access in calm conditions

**Probability of undiscovered sites in beach zone (circle one)**

1 2 3 4 5

**Monitoring during cleanup needed**

- Yes

**Collection**

- Yes

**Photos:**

<table>
<thead>
<tr>
<th>Color Roll</th>
<th>Frames</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B/W Roll</th>
<th>Frames</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>19,20</td>
</tr>
</tbody>
</table>

**Observer(s):**

- Ludwig

**Time survey started:**

- 07:15

**Time survey ended:**

- 10:10

**Cultural resource considerations/restraints:**

- Usual constraints
S.C.A.T. Team 5
Greg Chaney
Segment: CH-8
Date: July 4, 1989
Time: 8:00 AM
Tide: 1.0 ft
Location: N.W. Chenega Is.
Base Map: Seward B.3
SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [ ] Mechanical
- [X] Non-mechanical
- [X] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: TREATMENT OF THIS SEGMENT IS COMPLETE. READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT.

Signature: LEO HUNT
Date: 8/3/89
Time: 9:15
Printed Name: GOG-GARCIA LEONARD HERBST, EXXON 3

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Degree of Oiling</td>
</tr>
<tr>
<td></td>
<td>Heavy</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
</tr>
<tr>
<td>77%</td>
<td>Light</td>
</tr>
<tr>
<td>85%</td>
<td>Very Light</td>
</tr>
<tr>
<td>82%</td>
<td>None</td>
</tr>
<tr>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments: REASSESSMENT AT A LATER DATE RECOMMEND

Signature: DAVE GARVER
Date: 8/3/89
Time: 9:25
Printed Name: DAVE GARVER

FOSC rep

Demobilization approved/disapproved

Comments: DEMOBILIZATION WILL OCCUR SLIGHTLY AS WAVES WORK OFF.

Signature: THOMAS D. JOHNSON
Date: 8/3/89
Time: 19:32
Printed Name: THOMAS D. JOHNSON

COPY: EXXON ADEC FOSC ISCC
SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- Hot water wash
- Warm water wash
- Water deluge
- Mechanical
- Non-mechanical
- Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: Treatment of Segment CH-4 is complete.

Exxon

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Degree of Oiling</td>
</tr>
<tr>
<td>0</td>
<td>Heavy</td>
</tr>
<tr>
<td>5</td>
<td>Medium</td>
</tr>
<tr>
<td>10</td>
<td>Light</td>
</tr>
<tr>
<td>15</td>
<td>Very Light</td>
</tr>
<tr>
<td>70</td>
<td>None</td>
</tr>
<tr>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Reassessment

- Yes - necessary
- No - not necessary unless re-oiled

ADEC rep

Comments: New available.

FOSC rep

Demobilization approved/disapproved

Comments: Small, 1-2 meter wide, band of light oil at base of cliff.

Signature: Date: Time:

Printed Name: V. SHEVLOVSKY, PSC

COPY: EXXON ADEC FOSC ISCC
Shoreline Treatment Process(es) Completed for this Segment

- [ ] Hot water wash
- [X] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [X] Non-mechanical

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: "TREATMENT OF SEGMENT CH-5 IS COMPLETE. READY FOR DEPLOYMENT TO A NEW SEGMENT."

Signature:

Date: 8/1 Time: 20:30
Printed Name: GOS GARCIA

Existing Shoreline Condition as Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Degree of Oiling</td>
</tr>
<tr>
<td>0</td>
<td>Heavy</td>
</tr>
<tr>
<td>0</td>
<td>Medium</td>
</tr>
<tr>
<td>0</td>
<td>Light</td>
</tr>
<tr>
<td>0</td>
<td>Very Light</td>
</tr>
<tr>
<td>0</td>
<td>None</td>
</tr>
</tbody>
</table>

100%

Reassessment
- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep
Comments: None available

Signature
Date: 11 Time:
Printed Name

FOSC rep
Comments: Demobilization approved/disapproved

Signature
Date: 8/1 Time: 2100
Printed Name: V. PSHEVLOZKY
SEGMENT
DATE 1 AUG 89

INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- Hot water wash
- Warm water wash
- Water deluge
- Mechanical
- Non-mechanical
- Other DEBRIS REMOVAL

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: Treatment of segment CH 6 is complete. Ready to demobilize and deploy to a new segment.

Signature: [Signature]
Date: 8/1/89 Time: 20:20

Printed Name: GUS GARCIA

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

<table>
<thead>
<tr>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Heavy</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Light</td>
</tr>
<tr>
<td></td>
<td>Very Light</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

100%

Reassessment

- Yes - necessary
- No - not necessary unless re-oiled

ADEC rep
Comments: None available

Signature
Date:  / / Time: 

Printed Name

FOSC rep
Comments: Demobilization approved/disapproved

Signature: [Signature]
Date: 08/10/89 Time: 21:00

Printed Name: V. PSHEVLOKYY
SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- Hot water wash
- Warm water wash
- Water deluge

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: TREATMENT OF SEGMENT CH-7 IS COMPLETE.

REASSESSMENT

- Heavy
- Medium
- Light
- Very Light
- None

100%

Reassessment

- Yes - necessary
- No - not necessary unless re-oiled

ADEC rep

Comments: None available.

Signature: Date: Time:

Printed Name

FOSC rep

Demobilization

Comments: Rocky shoreline cervices with light/moderate oil.

Signature: Date: Time:

Printed Name: V. PSHEVICH, PSC

COPY: EXXON ADEC FOSC ISCO

Date: 8/5/82
SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- Hot water wash
- Warm water wash
- Water deluge

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: TREATMENT OF THIS SEGMENT IS COMPLETE.

READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature: Leonard Hunter
Date: 8/3/89
Time: 19:15

Printed Name: EG GARCIA
LEONARD HERBST

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Degree of Oiling</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>Yes</td>
</tr>
<tr>
<td>Heavy</td>
<td>Medium</td>
</tr>
<tr>
<td>Medium</td>
<td>Light</td>
</tr>
<tr>
<td>Light</td>
<td>Very Light</td>
</tr>
<tr>
<td>Very Light</td>
<td>None</td>
</tr>
<tr>
<td>None</td>
<td>100%</td>
</tr>
</tbody>
</table>

Reassessment

- Yes - necessary
- No - not necessary unless re-oiled

ADEC rep
Comments: OIL IMPACT SEVERE ENOUGH FOR SEGMENT TO NEED ANOTHER ASSESSMENT AT A LATER DATE

Signature: Dale Gardner
Date: 8/3/89
Time: 19:25

Printed Name: DALE GARDNER

FOSC rep
Comments: Demobilization approved/disapproved

Signature: Thomas D. Weaver
Date: 8/3/89
Time: 19:35

Printed Name: THOMAS D. WEAVER LT USCG

COPY: EXXON  ADEC  FOSC  ISCC
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): CHENEGA ISLAND NORTHEAST BLOCK

Includes Shoreline Segments: CH-9, CH-10, CH-11

Submitted: [Signature] Date: 7-8-89
(for Exxon)

ISCC Approval: [Signature] Date: 7-12-89

FOSC Approval: [Signature] Date: 7-13-89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file
FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
(version 6/14/89)

SHORELINE CLEANUP PROGRAM

DATE_ 7/08/89_ SHORELINE SEGMENT_ CH-9_
LOCATION: (see enclosed map) _CHENEGA ISLAND-NORTHEAST SIDE_

ADEC NO. ___________ SHORELINE ASSESSMENT DATE: 7/04/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus) and free oil.
  Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
  Use moderate to high pressure washing on rock.
  Use other approved methods as appropriate.

Priorities Considerations:
  Class 2: Heavy oil.
  Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide +
or take appropriate measures to protect lower intertidal zone.
Restrict access to grassy knolls. Avoid walking on inter-gravel mussel beds in northern portion of segment (lagoon and marsh areas). Use appropriate measures to protect lagoon.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *
ISCC: _______________________________ Date: ______________
EXXON: _______________________________ Date: ______________
FOSC: _______________________________ Date: ______________

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
CLEANUP SHORELINE OIL EVALUATION

Date: July 4, 1989  Time: 10:30 AM  Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION  N. W. Cheonega Island  SEGMENT NUMBER  CH 9

LENGTH OF SHORELINE SEGMENT: 940 m

ACCESS:  Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT  Slope: LANG/HANG/VER
Wave Exposure:  High/Med/Low
Sediment:  B25% / C25% / P10% / G3% / S2% / M10% / R25%
Drift Debris on Beach:  Yes/No  Supra/Upper/Mid/Lower Type Seaweed

OIL

Degree of Oiling:  Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact:  SU / SP / H / M / L
  Continuous:  Y/N  % of Segment 60%  Width of Band:  up to 20 m
  Sporadic:  Y/N  % of Segment 40%  Max. Observed
Est. Oil Thickness where > 1 cm: — cm  Est. Oil Penetration: 30 cm
Pooled Oil: —  "Free" Oil: 5  % Coated:  H30% / M40% / L30%
Fresh 10  Mousse —  %  Tar Formation: 90 %
Drift Debris Oiled?:  Yes/No  Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

Very sheltered Cove with rocks covering entrance. Should be scouted to see if barges and boats can get inside. Although salt marsh is oiled, access should be restricted. Extensive mussel beds are not oiled in lower intertidal zone, special care should be taken not to oil these mussels. Salt marsh should be boom-ed off to prevent contamination during cleanup activities.
CH-9

Bar Exposed At -1' Tide

Tar Patches

Rock Outcrop

Water at oil level at +4.0 ft tide

Bar Exposed At -1' Tide

Rock face tar band over 2 meters high
Pocket Pebble Beach 17 meter band oil
flowing in Sun Pen. to +30 cm.
Rock face w/tar band over 2 meters high
Boulders coated with tar over 2 mm thick
Pocket Pebble/Granular Beach. Oil Band ~20 meters wide. Penetration to 25 cm.

5 to 6 meter band oiled boulder bases

Chenega Island

North End CH-9

Spruce Trees

Tar Patches

Rocks

Spruce Forest

Oiled Debris at base of grass

Light Sheen observed on water. Some oil in mud.

Fishing Marker

South End CH-9

Photo # 36
Ecological Constraints

1. No access to grass or trees
2. No foot traffic or intertidal mussel beds
3. Appropriate measures should be taken to protect lagoon area

No ecological constraints on outer headlands

CH 9
Map 2
Ecological Constraints
**LOCATION:** Chenega Island  
**SITE:**  
**LOCATION PREFIX:** CH  
**SEG. NO.:** 9  
**LENGTH:** 740 ft (M)  
**DATE:** 07/04/89  
**TIME (HHMM):** 1120  
**TIDE HT.:** +3 ft (Ft)  
**OILED ZONE:** Splash High Medium Low  
**SUBSTRATUM:** Rocks Boulder Cobble Gravel Sand Mud  

### LIVE BIOTA

**Fucus (algae):** Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Mytilus (Mussels):** Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

- Inter-graveled mussel beds form a spit between rocks and surf barriers

**Balanus (Barnacles):** Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Littorina**  
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Limpets:** Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

#### OTHER OBSERVATIONS:
- Ship with coal escort passing
- Clay and sand with fens grass "war" Field grass Bad

#### CLEANUP PRECAUTIONS:
- Restrict foot traffic on inter-graveled mussel beds - Safety Knox
- Work at Mid-tide taking appropriate measures to protect lower ITZ

#### MAMMALS: Otters Harbor Seals Sea Lions Whales Other

#### BIRDS: Hummingbird

#### GENERAL OBSERVATIONS:
LOCATION: Chenega Island
SITE: up Island Barrier
OBSERVER: Crank
LOCATION PREFIX: CH
SEG. NO.: 9
LENGTH: 940 (M)
DATE: 07/04/89
TIME (HHMM): 1015
TIDE HT.: -1

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

**Fucus (algae):**
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Mytilus (Mussels):**
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Several small patches creating a discontinuous band on headlands

**Balanus (Barnacles):**
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Continued dense on headlands

**Littorina**
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Limpets:**
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS:

CLEANUP PRECAUTIONS: Due to the extent of contamination at this portion of section CH9 at this time - no ecological restrictions are suggested.

**MAMMALS:**
Otters Harbor Seals Sea Lions Whales

**BIRDS:**
Hummingbird

GENERAL OBSERVATIONS:
Cultural Resource Evaluation

Date: July 4, 1989  Location: Chenega Is  Site: east coast

Survey Method:
Air (A - indicate on map) Boat (A - indicate on map)
Ground (G - indicate on map)

Known cultural resources (AHRS #): none  Data Source:

Oil conditions/beach visibility:

Width of beach zone surveyed: 60 m  Tree fringe surveyed: 10 m

Cultural resources observed in beach zone (AHRS code):
Cultural resources observed in tree fringe (AHRS code):

General observations justifying survey method and segment's site probability:
Shore Profile:
Fresh Water Sources:
Sea Exposure:
Access/Safety:

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5

Monitoring during cleanup needed: yes  Collection: yes

Photos:
Color Roll:
B/W Roll:
Observer(s): Ludwig

Time survey started: 10:20  Time survey ended: 12:10

Cultural resource considerations/restraints:
usual constraints
SHORELINE CLEANUP PROGRAM

DATE____ 7/08/89______ SHORELINE SEGMENT____ CH-10____

LOCATION: (see enclosed map)___ CHENEGA ISLAND-NORTHEAST SIDE____

ADEC NO. __________ SHORELINE ASSESSMENT DATE: ___ 7/4-5/89____

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus), free oil and patches of mousse.
  - Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
  - Use moderate to high pressure warm to hot water washing on rock and oiled logs.
  - Use other approved methods as appropriate.

Priorities Considerations:
Class 2: Heavy oil.
Class B: Resources absent.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. Restrict access to grassy knolls. (active bald eagle nest present in this area. See advisory.

Archeological Constraints (from site survey): No access to the forest zone during cleanup. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Charles Z. Dine
State Historic Preservation Officer *  
Date: July 8, 1989

ISCC:_________________________  
Date:_____________________

EXXON:_________________________  
Date:_____________________

FOSC:_________________________  
Date:_____________________

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
CLEANUP SHORELINE OIL EVALUATION

Date: July 4
Time: 21:30
Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane
Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION N.W. Chenega
SEGMENT NUMBER CH-10

LENGTH OF SHORELINE SEGMENT: 2690 m
ACCESS: Foot/ Vehicle/ Boat/ Barge/ Helio/ Float Plane
Fair weather

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT
Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B20%/ C20%/ P10%/ G 5%/ S 5% / M-3% / R 40%
Drift Debris on Beach: Yes/ No
Supra/ Upper/ Mid/ Lower Type Drift seaweed

OIL

Degree of Oiling: Heavy/ Moderate/ Light/ No Oil/ Unobserved
Area of Beach Impact: SU/ SP/ H/ M/ L
Continuous: Yes/ No % of Segment 70% Width of Band: 1 to 25 m
Sporadic: Yes/ No % of Segment 30%

Est. Oil Thickness where > 1 cm: __ cm
Est. Oil Penetration: up to 45 cm
Pooled Oil: __ % "Free" Oil: 5 % Coated: H 30% / M 50% / L 15%
Fresh 5 % Mousse 5 % Tar Formation: 90 %
Drift Debris Oiled: Yes/ No
Supra/ Upper/ Mid/ Lower Amount: H/ M/ L/ 0

Comments:

This segment is made up of a series of small pocket beaches separated by rocky headlands. On head/lands there is usually a one meter band of tar and some oiled fucus. On beaches, oil spreads out and in places penetration is ~30 cm in high intertidal and gets very shallow toward the lower intertidal zone.

Oil sheen is common near shore during high tides.
Segment CH-10

North End CH-10

Photos 16, 17, 18
25 meter band oiled cobbles & pebble beach penetration 15 cm. Oil still gooey and 2 to 3 mm thick in spots.

Pockets of oiled cobbles and Fucus on rocks.

Oil band on bed rock 2 meters high. Oiled boulders & cobbles 10-15 meters wide. Penetration 15 cm (hard to dig).

Patches of oil on boulders.

Oil band ~ 8 meters wide. Penetration to 45 cm in well sorted cobbles and pebbles. Oil still mobile at depth.

Green seaweed.

Oil band ~ 15 meters wide. Max. pen 25 cm.

See Map On Next Page

Oiled drift seaweed. Max. 10 cm. Frequent mussel, barnacle, and oiled Fucus. Local patches. 1 m wide.

Oiled drift seaweed on high intertidal East side. Patches of oil on drift seaweed. 1 m wide.

Oiled drift seaweed, local patches. 1 m wide.

Oil band ~ 2-3 meters wide. Pen. 10 cm. Frequent mussel, barnacle, and oiled Fucus. Local patches. 1 m wide.

3 concrete treated logs precariously tilted.

South East End CH-10

CHENEGA ISLAND

West Side - Band 2-3 meters wide. Pen. 10 cm. Frequent mussel, barnacle, and oiled Fucus. Local patches. 1 m wide.
Inset Map CH-10

Tar on circular
boulders and cobbles
on rock outcrop

Oil on sides of rock

Oiled cobbles

Sheen on small
pools of water
on rocks

2m High Black Tar coating

Tarred rock

Patches of asphalt

Pavement forming

20cm pit

Small spring

Dry on beach

Oil on surface is
patchy but just
below surface
oil seems continuous.
Mousse layer in storm
berm.
ECOLOGICAL EVALUATION

LOCATION: [REDACTED]  SITE:  OBSERVER: 

LOCATION PREFIX: CH  SEG. NO.: 10  LENGTH: 2255 (M)

DATE: 07/05/89  TIME (HHMM): 22:55-13:00  TIDE HT.: -2 ft

OILED ZONE: Splash  High  Medium  Low

SUBSTRATUM: Rocks  Boulder  Cobble  Gravel  Sand  Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Mytilus (Mussels): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/

Balanus (Barnacles): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/

Littorina

 Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Limpets: Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

OTHER OBSERVATIONS: Large population of sea stars (several species), other Sea Cocks

CLEANUP PRECAUTIONS: Standard precautions, restricted access to

MAMMALS: Otters  Harbor Seals  Sea Lions  Whales  Other

BIRDS: Terns  Seagulls  Gulls  Hummingbirds

GENERAL OBSERVATIONS: This section consists of Rocky Hazards...

On beaches, birds dramatically absent, shoreline protection...
MART-OCEAN CULTURAL RESOURCE EVALUATION

Date: July 4, 5, 1989 Location: Chenega Is. site northeast corner
Location Prefix: CH Segment #: 10 Length: 2,690 m

Survey Method:
- Air (A - indicate on map)
- Boat (A - indicate on map)
- Ground (G - indicate on map)

Known cultural resources (AHRS #) None Data Source

Oil conditions/beach visibility: sections with moderate or heavy oiling

Width of beach zone surveyed: 50 m
Tree fringe surveyed: 20 m

Cultural resources observed in beach zone (AHRS code)

Cultural resources observed in tree fringe (AHRS code)

General observations justifying survey method and segment's site probability:
- Shore Profile 20 to 50 m wide gravel pocket beaches separated by low dunes
- Fresh Water Sources: stream
- Sea Exposure: north of bay has open exposure to Knight Island Passage
- Access/Safety: easy access at head of bay

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5

Monitoring during cleanup needed: yes/no Collection: yes/no

Photos:
- Color Roll #: ______ Frames
- B/W Roll #: SL-5 Frames: 22-26

Observer(s): Ludwig

Time survey started: 2:10 Time survey ended: 3:00

Cultural resource considerations/restraints:

Usual constraints
S.C.A.T. Team 5
Greg Chaney
Segment: CH-10
Date: July 4 1989
Time: 21:30
Tide: 3 (ft)
Location: N.W. Chenega
Base Map: Seward B3
SHORELINE CLEANUP PROGRAM

DATE 7/08/89  SHORELINE SEGMENT CH-11

LOCATION: (see enclosed map) JUNCTION ISLAND-NORTH OF CHENEGA ISLAND

ADEC NO. ___________ SHORELINE ASSESSMENT DATE: 7/06/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus) and free oil.
  Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
  Use moderate to high pressure warm to hot water washing on rock and oiled logs.
  Use other approved methods as appropriate.

Priorities Considerations:
Class 2-4: Heavy to light oil.
Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone.
A sensitive seabird colony is located on the northern end of Junction Island. This area should be avoided. A possible bald eagle nest is located at the northern end of the island. See diagram.

Archeological Constraints (from site survey): No access to forest zone during cleanup. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *  Date: July 8, 1989

ISCC: _____________________________ Date:

EXXON: ___________________________ Date:

FOSC: _____________________________ Date:

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
Date: July 6  Time: 08:50
Surveyed From: Foot/Boat/Helio/Plane
Weather: Sun/Cloud/Rain/Snow/Fog
Observer: Greg Chaney

LOCATION
LOCATION: Junction Island
SEGMENT NUMBER: CH-11

LENGTH OF SHORELINE SEGMENT: 1580 m
ACCESS: Foot/Vehicle/Boat/Barge/Float Plane

SHORELINE:
Shoreline Type: SPI/BEA/COV/HL/STRT
Slope: LAN/HAN/VER
Wave Exposure: High/Med/Low
Sediment: B:10% / C:5% / P:3%/ G:3% / S:3% / M:1% / R:75%
Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type

OIL
Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L
Continuous: 0/N % of Segment 90% Width of Band: 1 to 15 m
Sporadic: 0/N % of Segment 10%

Est. Oil Thickness where > 1 cm: cm Est. Oil Penetration: Up To 20 cm
Pooled Oil: Trace % "Free" Oil: 10 % Coated: H:10% / M:30% / L:50%
Fresh 20 % Mousse 80 % Tar Formation: 80%

Drift Debris Oiled?: Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:
Sheen observed off shore at high tide. Peat layer under most beaches has kept penetration to a minimum but oil is concentrated on surface as a result. Very small pockets of standing oil were observed in cracks in bed rock outcrops.
Salt marsh is located on eastern side of island & oil is present but access should be restricted. Majority of oil is vis at the 6 ft tide level. See sketch Map for further info.
Entire island is surrounded by ~1 meter band of tar on vertical rock faces. Oil is heaviest where bedrock faces meet cobbles. Oil seems to run down rock face and collect on cobble/boulder base material.

Oil tends to stay near the surface because the beaches are underlain with an impermeable peat layer. Relic submerged stumps are found on several pocket beaches.

Sheen observed offshore at high tide.

Low rocks oil in cracks

- Small pocket oiled pebbles
  - Storm berm penetration 20 cm.
  - Oiled pebbles and seaweed 10 cm pen.
  - 5 m wide
  - Oiled cobbles 10 meters long
  - 5 meters wide pen. 10 cm.

Restic access

- Lightly oiled salt marsh. 1 cm.
- Standing oil in spots

Restrict access

- 5 meter wide band
  - Penetration 5-10 cm
  - High intertidal

5 meter wide band
- Penetration to 3 cm.

10 meter wide band
- Penetration to 3 cm.

2 meter band
- Oiled cobbles

Thickest oil on bedrock sides and at the base of bedrock

Oil collected in notch

- 1 meter band oiled
  - Shingle bar, pen. 5 cm.

Tarred Fucus
- On rock face
  - Tar band 0.1 meter

Rock Wall
- Tar band 0.1 meter
- Oiled boulders
- Light sheen

Rock Notch
- 2 meter band oiled
- Fucus and bedrock

Rock Terrace
- Oiled cobbles
- Crimea

Rocks
- Rock notch
- 2 meter band oiled
- Fucus and pebbles on
  - 5 cm, 4 m. wide
  - 15 meters long

Junction Island
- CH-II

Spruce Forest
- Oiled Fucus

Spruce Forest

Gravel Ridge
- Patch Tarred Boulders

USE CAUTION
- SEVERAL SMALL ROCKS

Bottom of Oil Band
- At G. tide level.

Hand wands and vacuums may prove useful in cleaning out standing oil in small cracks and crevasses in bedrock.
ECOLOGICAL EVALUATION

LOCATION: Island
SITE: 
OBSERVER: 

LOCATION PREFIX: H
SEG. NO.: 11
LENGTH: 1580 (M)

DATE: 07/06/89
TIME (HDDN): 1220-1315
TIDE HT.: 1.51

OILED ZONE: Splash

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/

Balanus (barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS:

Gulls dive below, Bald Eagles sitting in tree

CLEANUP PRECAUTIONS:

Work at tide 1/2 or higher. Off North

MAMMALS: Otters

HARBOR SEALS

SEA LIONS

Whales

OTHER

BIRDS:

GENERAL OBSERVATIONS:

Difficult access on SE side due to...
CULTURAL RESOURCE EVALUATION

Date: July 5-6 '89 Location: Chenega Is. Site: Junction Island
Location Prefix: CH Segment #: 11 Length: 1580 m

Survey Method:
Air _______ (A - indicate on map) Boat _______ (A - indicate on map)
Ground _______ (G - indicate on map)

Known cultural resources (AHRS #): none Data Source: 

Oil conditions/beach visibility: moderate to heavy in 12m wide band

Width of beach zone surveyed: 30 m Tree fringe surveyed: 20 m

Cultural resources observed in beach zone (AHRS code): 0

Cultural resources observed in tree fringe (AHRS code): 0MT's

General observations justifying survey method and segment's site probability:
Shore Profile: 20-40m wide pocket beaches, low 1-3m high bedrock outcrops and headlands

Fresh Water Sources: none

Sea Exposure: open exposure to Knight Island Passage

Access/Safety: good access with boat in calm weather

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5

Monitoring during cleanup needed: yes/no Collection: yes/no

Photos: Color Roll #: _______ Frames: _______
B/W Roll #: __________ Frames: 27-28

Observer(s): Ludwig

Time survey started: 8:10 Time survey ended: 11:30

Cultural resource considerations/restraints:
Usual constraints:


S.C.A.T Team 5
Greg Chaney
Segment: CH-11
Date: July 6 1981
Time: 08:52
Tide: 0 (ft)
Location: Junction Is. N. of Chicago
Base Map: Seward 83
SEG CH.9 INSPECTION 1
DATE 8-3-89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- Hot water wash
- Warm water wash
- Water deluge

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: TREATMENT OF THIS SEGMENT IS COMPLETE. READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT.

Signature: [Signature]
Date: 8/13/89
Time: 9:15
Printed Name: EOS GARCIA LEONARD HERBST, EXXON 3

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Degree of Oiling</td>
</tr>
<tr>
<td>Heavy</td>
<td>Medium</td>
</tr>
<tr>
<td>6.7%</td>
<td>15%</td>
</tr>
<tr>
<td>18.2%</td>
<td>Light</td>
</tr>
<tr>
<td>20%</td>
<td>Very Light</td>
</tr>
<tr>
<td>51.7%</td>
<td>None</td>
</tr>
<tr>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Reassessment

- Yes - necessary
- No - not necessary unless re-oiled

ADEC rep

Comments: OIL IMPACT SEVERE ENOUGH TO WARRANT REASSESSMENT AT A LATER DATE

Signature: [Signature]
Date: 8/13/89
Time: 14:30
Printed Name: [Printed Name]

FOSC rep

Demobilization approved/disapproved

Comments: Upper Delta box currently in waters of - Delta will continue to produce crude. No oil contamination.

Signature: [Signature]
Date: 8/13/89
Time: 19:38
Printed Name: [Printed Name]

COPY: EXXON ADEC FOSC ISCC

TOTAL P.14
SEGMENT INSPECTION RECORD

SEG 01-10 INSPECTION # 1
DATE 1-3-89

Shoreline Treatment Process(es) Completed for this Segment

- Hot water wash
- Warm water wash
- Water deluge

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: TREATMENT OF THIS SEGMENT IS COMPLETE. READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT.

Signature: [Signature]
Date: [Date]
Time: [Time]

Printed Name: [Printed Name]

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Degree of Oiling</td>
</tr>
<tr>
<td>24%</td>
<td>Heavy</td>
</tr>
<tr>
<td>10%</td>
<td>Medium</td>
</tr>
<tr>
<td>15%</td>
<td>Light</td>
</tr>
<tr>
<td>72%</td>
<td>Very Light</td>
</tr>
<tr>
<td>100%</td>
<td>None</td>
</tr>
</tbody>
</table>

Comments: SOME OIL IN THE RECEIVED BEACH AREAS. SOME OIL Oil:

Reassessment

- Yes - necessary
- No - not necessary unless re-oiled

ADEC rep

Comments: ALL IMPACT SEVERE ENOUGH FOR SEGMENT TO WARRANT ANOTHER EVALUATION AT A LATER DATE.

Signature: [Signature]
Date: [Date]
Time: [Time]

Printed Name: [Printed Name]

FOSC rep

Demobilization approved/disapproved

Comments: SOME OIL IN RECEIVED BEACH AREAS WILL PRODUCE SOME OIL.

Signature: [Signature]
Date: [Date]
Time: [Time]

Printed Name: [Printed Name]
## SEGMENT INSPECTION RECORD

**SEGMENT: CH-11**  
**DATE:** 9-3-89

### Shoreline Treatment Process(es) Completed for this Segment

- [X] Hot water wash
- [X] Warm water wash
- [X] Water deluge
- [ ] Mechanical
- [X] Non-mechanical
- [X] Other: Shore Been in Tidal Zone

**Exxon**

Treatment as indicated above has been completed. Request demobilization from this segment.

**Comments:** Treatment of this segment is complete.

**Ready for Demobilization & Deployment to a New Segment:**

**Signature:** Leonard Herbst  
**Date:** 8/13/89  
**Time:** 19:15

**Printed Name:** GOS GARCIA LEONARD HERBST, EXXON 3

### Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Degree of Oiling</td>
</tr>
<tr>
<td>0-10%</td>
<td>Heavy</td>
</tr>
<tr>
<td>11-50%</td>
<td>Medium</td>
</tr>
<tr>
<td>51-90%</td>
<td>Light</td>
</tr>
<tr>
<td>91-100%</td>
<td>Very Light</td>
</tr>
<tr>
<td>100%</td>
<td>None</td>
</tr>
</tbody>
</table>

**Reassessment**

- [X] Yes - necessary  
- [ ] No - not necessary unless re-oiled

**ADEC rep**  
**Comments:**

**Signature:** Dale Gardner  
**Date:** 8/13/89  
**Time:** 19:40

**Printed Name:** DAVE GARBER

**FOSC rep**  
**Demobilization approved/disapproved**

**Comments:** 

**Signature:**  
**Date:** 8/13/89  
**Time:** 19:42

**Printed Name:** Thomas D. Anderson (CT USCG)

**COPY:**  
**EXXON ADEC FOSC ISCC**
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Chenega Island North Block

Includes Shoreline Segments: CH-12, CH-13

Submitted: John Doe  Date: 7/18/89
(For Exxon)

ISCC Approval: Jane Smith  Date: 7/29/89

FOSC Approval: C. C. Alejandro, by dir.  Date: 7/29/89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file
FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A.DEC
A.FG
A.DNR
CAC
PWSCA
USFS
SHPO
SHORELINE CLEANUP PROGRAM

DATE 7/18/89  SHORELINE SEGMENT  CH-12

LOCATION: (see enclosed map)  North Chenega Island

ADEC NO.  SHORELINE ASSESSMENT DATE:  7/6/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus).
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 3-4: moderate to light oil
Class A: resources present, including active eagle nest

Ecological Constraints (from site survey): Work at mid tide +
or take appropriate measures to protect lower intertidal zone.
Active Bald Eagle nest. Cleanup activity should be delayed as
ecologists exhibited nest defense behavior. Contact ADEC for
further constraints. SEE ADVISORY IN MANUAL.

Archeological Constraints (from site survey):
If cleanup is planned for that portion of the segment shown on
the map as unsurveyed due to eagle nest, then an archeological
survey should be conducted prior to cleanup. If heretofore
undiscovered cultural materials are uncovered during cleanup,
contact Exxon's Archeological Field Director and take actions
prescribed in the Operational Guidelines for Shoreline Cleanup
dated 4/21/89 as amended. (NOTE: THE ARCHEOLOGICAL SURVEY OF THE
EAGLE NEST AREA WAS CONDUCTED ON 7/28/89 AND THE SURVEY REPORT IS
ATTACHED. THERE ARE NO

State Historic Preservation Officer *

ISCC:  Date: 7/29/89

EXXON:  Date:  8/13/89

FOSC:  Date:  7/29/89

* Signature required to satisfy stipulations in Alaska DNR land
use permits for tide and submerged lands.
CLEANUP SHORELINE OIL EVALUATION

Date: July 6 / Time: 11:50 AM
Surveyed From: Foot/Boat/Helio/Plane
Observer: Greg Chaney
Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION North Chenega Island SEGMENT NUMBER CH-12
LENGTH OF SHORELINE SEGMENT: 1130 m
ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane Fair weather

SHORELINE:

Shoreline Type: SPI/SEA/COV/HLD/STRT Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B25% / C15% / P5% / G5% / S0% / M0% / R50% Few logs
Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type at some seaweed

OIL:

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU/SP/H/M/L
Continuous: Y/N % of Segment 60 Width of Band: 1 to 2 m
Sporadic: Y/N % of Segment 20
Est. Oil Thickness where > 1 cm: ___ cm Est. Oil Penetration: 5-10 cm
Pooled Oil: ___ % "Free" Oil: 5 % Coated: H20 / M35 % / L40 %
Fresh 20 % Mousse ___ % Tar Formation: 80 %
Drift Debris Oiled? Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

Unable to survey ~20% of segment due to active eagle's nest. Before cleanup is undertaken, the area indicated should be surveyed. Penetration was not high due to under beach sediments. Some oil is fairly fresh in appearance and concentrated at the surface due to peat layer. Small pockets of moderate oiling observed at south end of segment.
North End CH-12

Patches of oiled gravel associated with oil fucus
(Not in grass)

Broken tree on island

Distinct oil band ~1 meter high around entire island, ~1/2 meter is oiled fucus

Oiled Band ~1 meter wide
~5 cm. pen.

Oiled Band ~2 meters wide
~5 cm. pen.
Fucus on boulder outcrop
oil coated 1 to 2 meter band

Oil band ~2 meter wide
penetration ~10 cm.

Oil band ~2 to 3 meters wide
observed offshore due to eagles

Patches oiled cobbles associated with oil fucus 1-2 meters wide,
penetration only ~10 cm due to impermeable peat layer.

Pocket of oiled pebbles 1-2 meters wide, Pen. ~5 cm.
Band ~2 meters wide oiled flat boulders and cobbles,
75% Surface oiling pen ~5 cm

Eagle's Nest Active

Small pockets of cobbles and boulders
5 cm penetration. Patches oil 5 meters in diameter.

South End CH-12

Oil band along rock face of island ~1 m high.

Photo #23

No survey due to eagle nest

Photo #24

Spruce Forest

Rock Face
LOCATION: Chenega Island
SITE: 

LOCATION PREFIX: CH
SEG. NO.: 12
LENGTH: 113 (M)

DATE: 07/06/89
TIME (HHMM): 1140
TIDE HT.: C (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

**Fucus (algae):** Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Continuous - dense or rock faces, moderate to sparse

**Mytilus (Mussels):** Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Extensive intertidal mussel beds

**Balanus (Barnacles):** Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Continuous, dense on rock faces, moderate to sparse or absent

**Littorina**

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

**Limpets:** Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS:

Eelgrass beds, clams abound

CLEANUP PRECAUTIONS:

Bald Eagle Nesting site - contact Fish - Game

Otherwise Normal Constraints

MAMMALS: Otters Harbor Seals Sea Lions Whales Other

BIRDS: See Map for Bald Eagle Nest site - pair of eggs

GENERAL OBSERVATIONS:

Unable to walk beach under eagle nest as eagle was exhibiting nest defense behavior
CULTURAL RESOURCE EVALUATION

Date: July 6, 1989 Location: Chenega Is., Site: north end
Location Prefix: C Segment #: 12 Length: __________

Survey Method:
Air: (A - indicate on map) Boat: (A - indicate on map)
Ground: (G - indicate on map)

Known cultural resources (AHRS #): none Data Source: __________

Oil conditions/beach visibility: moderate to heavy

Width of beach zone surveyed: 30 m Tree fringe surveyed: 20 m

Cultural resources observed in beach zone (AHRS code): __________
Cultural resources observed in tree fringe (AHRS code): __________

General observations justifying survey method and segment's site probability:
Shore Profile: 20-40 m wide gravel beaches separated by low bedrock outcrops at headlands

Fresh Water Sources: none

Sea Exposure: West exposure to Dangers Passage

Access/Safety: Good access in calm weather

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5

Monitoring during cleanup needed: yes/no Collection: yes/no

Photos:
Color Roll #: _______ Frames: _______
B/W Roll #: _______ Frames: 29, 30

Observer(s): Ludwig

Time survey started: 1140 Time survey ended: 1300

Cultural resource considerations/restraints:

Usual constraints

A beach (see map) with an active eagle's nest was not surveyed.

Should cleanup be planned for that beach, an archaeological survey must first be conducted.
S.C.A.T Team 5
Greg Chaney
Segment: CH-12
Date: July 6 1989
Time: 11:50 AM
Tide: 0 (ft)
Location: N. Chenega Island
Base Map: Seward 83
SHORELINE CLEANUP PROGRAM

DATE: 7/18/89  SHORELINE SEGMENT: CH-13

LOCATION: (see enclosed map) North Chenega

ADEC NO.  SHORELINE ASSESSMENT DATE: 7/6/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated fucus. See map for location.
- Flood/flush with hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 2: heavy oil
Class A: resources present, sensitive salt marsh

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone. Cleanup activity should not be conducted in Salt Marsh until appropriate technology is available and at that time areas should be reevaluated. Until that time restrict access to Salt Marsh. Care should be taken not to remove healthy fucus.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *
ISCC:  
EXXON:  
FOSC:  

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
CLeanup Shoreline Oil Evaluation

Date: July 6 89  Time: 21:10  Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

Location

Location: N. Chenega Island  Segment Number: CH-13

Length of Shoreline Segment: 450 m

Access: Foot/Vehicle/Boat/Barge/Helio/Float Plane

Shoreline:

Shoreline Type: SPI/BEAK/COV/MLD/STRT  Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B10% / C20% / P20% / G 10% / S 10% / M 10% / R 20%
Drift Debris on Beach: Yes/No  Supra/Upper/Mid/Lower Type: logs/SEaWeed

Oil

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L

Continuous: Y/N % of Segment: 50  Width of Band: 4 - 7 m
Sporadic: Y/N % of Segment: 30  max. observed

Est. Oil Thickness where > 1 cm: ___ cm  Est. Oil Penetration: ___ cm
Pooled Oil: ___ %  "Free" Oil: 10 %  Coated: H 30% / M 30% / L 30%
Fresh: 50 %  Mousse: 50 %  Tar Formation: 50 %
Drift Debris Oiled?: Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

This is a very complex environment. Salt marsh has been oiled, but any cleanup attempt may cause more problems than it would solve. The oil in this region is very fresh in appearance. Little penetration has occurred due to impermeable substrate. Outer beaches could benefit from hot water flushing at +10 ft. tide. Extensive precautions should be taken to avoid further oiling of marsh area.
NORTH END SEGMENT CH-13

4-5 meter band oiled cobbles 10 cm. pen.

Oiled Fucus on Rock Top
7 meter band thickly oiled

Oiled cobbles and Fucus

Oiled cobbles around Rock Outcrop

Oiled Fucus on Rock Outcrop

Oil splatters present and sheen standing on water

Oil on cobbles and Fucus

Oil on pebbles and cobbles

Oil at base of grass penetration 1-2 cm.

CONTINUED ON NEXT PAGE
CONTINUED FROM LAST PAGE

SOUTH END SEGMENT CH-13

Work at +10 ft. tide
Band of oiled bedrock and boulders

Forest

TIDAL POOL

PEBBLES

Grass Over Peat

+ 7 ft. tide

Brush

Grass Over Peat

Peat Flats

Brush

SPRUCE FOREST

SALT MARSH

TRACES OF OILED DEBRIS IN MARSH

SHEEN ON WATER
ECOLOGICAL EVALUATION

LOCATION: Chenega Island
SITE: 
SEG. NO.: 13
LENGTH: 450 (M)

DATE: 07/14/89
TIME (HHMM): 2100-2245
TIDE HT.: 4.5 +

OILED ZONE: Splash
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: But Bog Marsh Area behind cave with narrow channel, eelgrass, beds

CLEANUP PRECAUTIONS: Restrict Access to Salt Marsh (located on map). Work at mid-tide or higher.

MAMMALS: Otters Harbor Seals Sea Lions Whales Other

BIRDS: Bald Eagle, Terns, Gulls

GENERAL OBSERVATIONS: Numerous empty, unattached mussel and clam shells in cattle with northern end of segment
<table>
<thead>
<tr>
<th>Date</th>
<th>July 6, 89</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Chenega Is.</td>
</tr>
<tr>
<td>Site</td>
<td>Northwest Arc.</td>
</tr>
<tr>
<td>Location Prefix</td>
<td>CH</td>
</tr>
<tr>
<td>Segment #</td>
<td>13</td>
</tr>
<tr>
<td>Length</td>
<td></td>
</tr>
</tbody>
</table>

**Survey Method:**

- Air: (A - indicate on map) Boat: (A - indicate on map)
- Ground: (G - indicate on map)

**Known cultural resources (AHRS #):** none
**Data Source:**

**Oil conditions/beach visibility:** sections of heavy oil

**Width of beach zone surveyed:** 50 m
**Tree fringe surveyed:** 15 m

**Cultural resources observed in beach zone (AHRS code):** none
**Cultural resources observed in tree fringe (AHRS code):** CMU's

**General observations justifying survey method and segment's site probability:**

- **Shore Profile:** wide bay with extensive peat deposit
- **Fresh Water Sources:** small water seeps
- **Sea Exposure:** open exposure to dangerous waveage
- **Access/Safety:** easy access in calm weather

**Probability of undiscovered sites in beach zone (circle one):** 1 2 3 4 5

**Monitoring during cleanup needed:** yes/no
**Collection:** yes/no

**Photos:**
- Color Roll #: 1 Frames: __
- B/W Roll #: SL-5 Frames: 31-34

**Observer(s):** Ludwig
**Time survey started:** 2:00
**Time survey ended:** 2:45

**Cultural resource considerations/restraints:**

usual constraints...
S.C.A.T. Team 5
Greg Chaney
Segment: CH-13
Date: July 6 1991
Time: 21:30
Tide: 4.0 (ft)
Location: N. Chenega
Base Map: Seward B3
Shoreline Treatment Process(es) Completed for this Segment

- [ ] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: Treatment of segment CH-12 is complete

Ready for demobilization and deployment to next segment

Signature: Pete R. Allen
Date: 12/8 Time: 3:30 PM
Printed Name: Pete R. Allen

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 %</td>
<td>Heavy</td>
<td>Medium</td>
</tr>
<tr>
<td>64%</td>
<td>Medium</td>
<td>Light</td>
</tr>
<tr>
<td>10%</td>
<td>Very Light</td>
<td>Light</td>
</tr>
<tr>
<td>2%</td>
<td>None</td>
<td>Heavy</td>
</tr>
</tbody>
</table>

Subsurface Oil

- [ ] Yes
- [ ] No

Reassessment

- [ ] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments: No gross contamination observed. Clean up complete.

Signature: Jason J. Kramer
Date: 12/8 Time: 15:35
Printed Name: Jason J. Kramer

FOSC rep

Demobilization approved/disapproved

Signature: [Signature]
Date: 12/8 Time: [Time]
Printed Name: [Name]
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): Chenega Island Southeast Block

Includes Shoreline Segments: CH-14, CH-15, CH-16, CH-17

Submitted: J. D. Date: 7/18/89
(for Exxon)

Recommendation: St. Mark Christina Date: 7/26/89

ISCC Approval: A. C. Alejandro, by dir Date: 7/27/89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file
FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A. DEC
A. FG
A. DNR
CAC
PWSCA
USFS
SHPO
CHENEKA ISLAND SOUTHEAST BLOCK
CH-14, CH-15, CH-16, CH-17

No known active bald eagle nests in this area at this time
SHORELINE CLEANUP PROGRAM

DATE 7/18/89  SHORELINE SEGMENT CH-14

LOCATION: (see enclosed map) Chenega Cove, South Chenega Island

ADEC NO. ___________ SHORELINE ASSESSMENT DATE: 7/7/89

Recommended Cleanup Activity(ies):
- No cleanup recommended at this time (subject to FOSC reassessment at a later date) due to ecological and archeological constraints.

If cleanup is conducted:
- Manually remove contaminated drift material (fucus).
- Flood/flush with hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure warm to hot water washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 4: light oil
Class A: resources present

Ecological Constraints (from site survey):
Cleanup not recommended as crew activities and redistribution of oil could cause more damage to biota than present oil.

If cleanup is conducted:
- Avoid mussel beds around small springs (see map).
- Limit access to waterfalls.
- Work at 8ft.tide + or take appropriate measures to protect lower intertidal zone.

Archeological Constraints (from site survey):
No cleanup recommended due to visibility and fragility of Old Chenega Village remains. If cleanup is conducted inspection by an archaeological monitor is recommended during cleanup of sensitive portions of the segment, and if heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer

Date: 1/20/89

ISCC: Shawn K Christopher

Date: 7/26/89

EXXON: 

Date: 8/17/26

FOSC: A.C. Alejandro by dir.

Date: 7/21/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
**SHORELINE OIL EVALUATION**

Date: July 7 89  Time: 10:40 AM  Observer: Greg Chaney
Surveyed From: **Foot/Boat/Helio/Plane**  Weather: **Sun/Cloud/Rain/Snow/Fog**

**LOCATION**

Location: Chenega Cove/Chenega Is.  Segment Number: CH-14
Length of Shoreline Segment: **1200 m**
Access: **Foot/Vehicle/Boat/Barge/Helio/Float Plane**

**SHORELINE:**

Shoreline Type: SPI/SEA/COV/MLD/STRT  Slope: **LANG/HANG/VER**
Wave Exposure: High/Med/Low
Drift Debris on Beach: Yes/No  Supra/Upper/Mid/Lower Type: **Very few logs**

**OIL**

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: **SU / SP / H / M / L**
Continuous: Y/N  % of Segment: 30  Width of Band: **1-2 m**
Sporadic: Y/N  % of Segment: 60  Ave. Observed
Est. Oil Thickness where > 1 cm: **--- cm**  Est. Oil Penetration: **5 cm**
Pooled Oil:  --- "Free" Oil:  --- Coated: H[10%] / M[20%] / L[70%]
Fresh:  ---  Mousse:  ---  Tar Formation: 100 
Drift Debris Oiled?: Yes/No  Supra/Upper/Mid/Lower Amount: H/M/L

Comments:

Distinct band of oil at base of hill along beach. Majority of unit has random drips and patches of oil along a former high tide line. Little penetration has occurred due to moist fine grain matrix underlying cobble beach. At high portion of the beach near grass a rough band of asphalt like patches are present.
LOCATION: Chenega Island  SITE:  OBSERVER: 
LOCATION PREFIX:  O/  SEG. NO.:  4  LENGTH:  1200 (M)
DATE: 07/07/89  TIME (HHMM): 0830-1300  TIDE HT.: 0 ft  (M)
OILED ZONE: Splash  High  Medium  Low
SUBSTRATUM: Rocks  Boulder  Cobble  Gravel  Sand  Mud

LIVE BIOTA

**Fucus** (algae): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

**Mytilus** (Mussels): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

**Balanus** (Barnacles): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

**Littorina**

**Limpets**: Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

OTHER OBSERVATIONS: Kelp (Laminaria) and Seagrass Beds, Leather and Sun Stars

Part of door stuck and leg of small waterfalls (the one NE has small freshwater influence)

Clean up precautions:

MAMMALS: Otters  Harbor Seals  Sea Lions  Whales  Other

BIRDS: Hummingbird, Gulls, Murrells, Oystercatchers

GENERAL OBSERVATIONS: 
CULTURAL RESOURCE EVALUATION

Date: 7/9/89 + 7/11/89 Location: SE Chorng.a Island Site

Location Prefix: CH Segment #: 14 Length: 1200 m

Survey Method:
Air _____ (A - indicate on map) Boat _____ (A - indicate on map)
Ground _____ (G - indicate on map)

Known cultural resources (AHRS #) SEW-019, SEW-029. Data Source: AHRS

Oil conditions/beach visibility: very light oil, band of moderate, good visibility

Width of beach zone surveyed: 26 m Tree fringe surveyed

Cultural resources observed in beach zone (AHRS code): HTI, HTO, HSR, RLC

Cultural resources observed in tree fringe (AHRS code): GAN, PLG, HTO, HTI, CHT, CMY

General observations justifying survey method and segment's site probability:

Shore Profile: narrow talus beach at west end, wide low-energy gravel beach, one major stream at NE entrance of bay

Fresh Water Sources: Cove, other smaller streams

Sea Exposure: partly open, small islands at Chorng.a Cove entrance

Access/Safety: easy access, safe anchorage in cove

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5

Monitoring during cleanup needed: yes _____ no _____

Collection: yes _____ no _____


B/W Roll: SLG:2-17

Observer(s): Madeira Moss, Stephanie Ludwig

Time survey started: 5 different times. Total 14 1/2 hrs

Cultural resource considerations/restraints:

* Periodic monitor needed if cleanup is conducted. However, recommendation is no cleanup, based on visibility and vulnerability of cultural resources. Documented impacts to cultural resources have occurred since the oil spill, by persons unknown. This form is a composite of 7/9/89 + 7/11/89 forms.
S.C.A.T Team 5
Greg Chaney
Segment: CH-14
Date: July 7 89
Time: 8:40
Tide: 0 (ft)
Location: Chenega Cove, Chenega In
Base Map: Seward B 3
SHORELINE CLEANUP PROGRAM

DATE 7/18/89  SHORELINE SEGMENT CH-15

LOCATION: (see enclosed map) South of Chenega Cove on Chenega Island

ADEC NO. _______ SHORELINE ASSESSMENT DATE: 7/8/89

Recommended Cleanup Activity(ies):
No cleanup recommended at this time (subject to FOSC reassessment at a later date) due to light oil, and ecological and archaeological constraints.

If cleanup is conducted:
- Use moderate to high pressure warm to hot water washing on rock and oiled logs.

Priorities Considerations:
Class 4: light oil
Class A: resources present

Ecological Constraints (from site survey):
No cleanup is recommended at this time as biota may suffer greater damage from cleanup than from existing oil. If cleanup occurs, restrict access to intertidal mussel beds and grassy knolls, avoid foot traffic in between islands as it is a sensitive shell fish area; work at +7' tide or higher using booms, sorbent and other appropriate means to protect lower and middle intertidal zones, and contact ADEC 48 hrs. prior to cleanup as there is a possible eagle nest. NO ACTIVE NEST.

Archeological Constraints (from site survey):
No cleanup recommended due to visibility and fragility of Old Chenega Village remains. If cleanup is conducted inspection by an archeological monitor is recommended during cleanup of sensitive portions of the segment, and if heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *

Date: 7/21/89

ISCC: Sharon K. Christopherson
Date: 7/26/89

EXXON: 
Date: 8/20/89

FOSC: R.C. Alejandro, Jr.
Date: 7/27/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
Date: July 8, 1984  Time: 10:30 AM  Observer: Greg Cheney
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION
LOCATION  South of Chenega Cove  SEGMENT NUMBER  CH-15
LENGTH OF SHORELINE SEGMENT: 2350 m
ACCESS: Foot/Vehicle/Boat/Plane Helio/Float Plane

SHORELINE:
Shoreline Type: SPI/BEA/COV/HLD/STRT  Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B15% / O% / P5% / G3% / S2% / M-% / R6% 
Drift Debris on Beach: Yes/No  Supra/Upper/Mid/Lower Type

OIL
Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU / SP / (H/ M)/ L:
  Continuous: Y/N  % of Segment 10  Width of Band: up to 1 m
  Sporadic: Y/N  % of Segment 50
Est. Oil Thickness where > 1 cm: ___ cm  Est. Oil Penetration: 2-3 cm
Pooled Oil: ___ %  "Free" Oil: ___ %  Coated: H5% /M30% /L65%
Fresh ___ %  Mousse ___ %  Tar Formation: 100 %
Drift Debris Oiled?: Yes/No  Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:
Majority of segment has traces of tar however oiling is not extensive and appears to have remained on the surface. Most concentrated oil has remained on the beach on the north border of the segment. Access to the channel between the small island and the main island of Chenega is restricted to high tide only. Cleanup may not be a high priority however if conducted hand wands with local use of vacuum pumps and sorbents is recommended. Extra care should be taken to work at high tides to avoid damaging the lower intertidal.
North End
CH-15

Discontinuous band of tar drips along former high tide line

4 distinct bands of oil in rock cut 2 to 6 cm wide

Oil line on rock face ~ 5 cm wide

Discontinuous band of tar drips along former high tide line

Occasional dripping and splattering on bedrock face

Pocket beach with light splattering of cobbles, 20 cm pit. No pen

Trace of oil on pocket beach
2 bands ~ 5 cm wide

2 thin bands ~ 2 cm wide tar along former high tide line

Discontinuous splatters along high tide line
50% coverage within 1 meter band on cobbles & boulder bed
Random drops to lower intertidal zone

Random drips and splatters along rock faces
But distinct band was not observed

Tar band tapers to 0.5 meters
with a 50% coverage

Shallow Sea Caves
Vertical bedding in rock
Low Round Rock

EAST EDGE
CH-15

20 cm pit no oil observed
Tar ball and random splatters
Photo #6

Random drips and splatters
discontinuous band of tar drips and splatters

30 cm patch oiled fucales

Jagged vertical rocks with splatters and drips along protected rock faces observed.

Photos #3,4,5

Spruce

50 cm band of tar along bedrock face. Photo #7
ECOLOGICAL EVALUATION

LOCATION: Checagg Island
SITE: River mouth
LOCATION PREFIX: CH
SEG. NO.: 15
LENGTH: 2.356 (M) (M)
DATE: 07/10/89
TIME (HHMM): 1020 - 1445
TIDE HT.: 4.5
OILED ZONE: Splash High Medium Low
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Contin. stage with small to dense concentrations along high and mid intertidal line.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Dense intertidal bed on beach face, Sparse along high and mid levels and vertical rock faces.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Ulva present in a few dense patches

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Kelp (Laminaria) Beds along west side. Felquets
laid in channel. Crabs abundant. Other soft-shell snails and crab shells

CLEANUP PRECAUTIONS: Suggest no clean-up activity at this time as biota may
suffer greater ecological damage from clean-up than from water

MAMMALS: Otters Harbor Seals Sea Lions Whales

BIRDS: Bald Eagle, Herring Gull, American Crow, Western Gull, Ring-billed Gull, American Robin, Red-winged Blackbird, Rock Pigeon, Starling, American Crow, Gear, Herring Gull with 3 chicks, Duck with 5 chicks,

GENERAL OBSERVATIONS:
ECOLOGICAL EVALUATION

LOCATION: Chenega East  SITE: Seventy TIDE: Crank
LOCATION PREFIX: CH  SEG. NO.: 15  LENGTH: 2350 (total 244) (M)
DATE: 07/08/89  TIME (HHMM): 0945  TIDE HT.: ____________________ (M)
OILED ZONE: Splash High Medium Low
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

LITTERING

Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

LIMPETS: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS:
Early morning a school of fish came into bay.

CLEANUP PRECAUTIONS:
Due to the small amount of fuel, cleanup procedures may cause sensory corneal damage. For eye fit, wash.

MAMMALS: Otters Harbor Seals Sea Lions Whales

BIRDS:

GENERAL OBSERVATIONS:
CULTURAL RESOURCE EVALUATION

Date: 7/4/89  Location: SEWARD B-3 squad  Site:  

Location Prefix: CH  Segment #: 15  Length: 2350  

Survey Method:
Air: (A - indicate on map)  Boat: 10% (A - indicate on map)  
Ground: 90% (G - indicate on map)  

Known cultural resources (AHRS #): 49-SEW-19  Data Source: AHRS database  

Oil conditions/beach visibility: Very light oil, good visibility  

Width of beach zone surveyed: 20 m  Tree fringe surveyed: 150 m  

Cultural resources observed in beach zone (AHRS code): HTI, HTD, PLG, SHP  
Cultural resources observed in tree fringe (AHRS code): CBN, PLG, HTI, HTD, CMY, CMY, RCS, SHP, FCR  

General observations justifying survey method and segment's site probability:  

Shore Profile: A real mix: gravel pocket cove to steep near-vertical rock shore line.  

Fresh Water Sources: Minimal.  

Sea Exposure: Protected.  

Access/Safety: Poor - Channel between islands + Cheneque Island gets shallow.  

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5  

Monitoring during cleanup needed: Yes/No  Collection: Yes/No.  

Photos: Color Roll #:  Frames:  

Observer(s):  

Time survey started: 7/8 1000-1500  Time survey ended: 7/9 1000-1230, 1330-2010  
Total: 14 hrs.  

Cultural resource considerations/restraints: I recommend that no clean-up occur because vulnerability + visibility of cultural resources. Personnel from clean-up crews or support vessels should not be able to land at all.  

Cheneque village is a significant historic site with associated activities on nearby islands. This is also private property. Even if clean-up occur in vicinity of the site, we should consider sending in an archaeological monitor in addition to representative of Cheneque Nature Corporation.
S.C.A.T Team 5

Greg Chaney

Segment: CH-15

Date: July 8, 1989

Time: 10:30 AM

Tide: 1.0 (ft)

Location: Chenega Island

Base Map: Seward B-3
SHORELINE CLEANUP PROGRAM

DATE 7/18/89

SHORELINE SEGMENT CH-16

LOCATION: (see enclosed map) Small Bay east of Chenega Cove on Chenega Island

ADEC NO. __________ SHORELINE ASSESSMENT DATE: 7/9/89

Recommended Cleanup Activity(ies):
- Manually harvest dying fucus.
- Flood/flush with warm to hot water (up to 140°F) on low angle beaches and/or manually break up the tar/asphalt pavement.
- Use moderate to high pressure warm to hot water washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 2-4: heavy oil on eastern edge with light oil on most of segment.
Class B: resources absent

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect lower intertidal zone.
Restrict foot traffic on intergravel/cobble mussel beds and peat area. Restrict access to stream banks, this contains pink salmon. Contact ADEC and RAI 48 hrs prior to cleanup.

Archeological Constraints (from site survey): No access to Old Chenega Village during cleanup. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *
ISCC: Sharon K. Christopher
EXXON: 
FOSC: R.C. Allepud, by dir.

Date: 7/26/89
Date: 7/26/89
Date: 7/27/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
Date: July 10, 1987  Time: 12:00 noon  Observer: Greg Chaney

Surveyed From: Foot/Boat/ Helio/ Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION  SE Chenega Island  SEGMENT NUMBER  CH 16

LENGTH OF SHORELINE SEGMENT: 1600 m

ACCESS:  Foot/ Vehicle/ Boat/ Barge/ Helio/ Float Plane

SHORELINE:

Shoreline Type: SPI/ VEL/ BMM/ H/HLD/ STRT  Slope: LANG/ HANG/ VER
Wave Exposure:  High/ Med/ Low
Sediment:  BI 07 / C25 / P15 % / G15 % / S5 1 / M - 1 / R30 %

Drift Debris on Beach:  Yes/ No  Supra/ Upper/ Mid/ Lower Type dead fucus

OIL

Degree of Oiling:  Heavy/ Moderate/ Light/ No Oil/ Unobserved

Area of Beach Impact:  SU/ SP / H / M / L
Continuous: Y/N % of Segment 10  Width of Band: 1-2 ave. m
Sporadic: Y/N % of Segment 85  Max. Observed

Est. Oil Thickness where > 1 cm:  cm  Est. Oil Penetration:  10 cm

Pooled Oil:  % "Free" Oil:  % Coated:  H/0 % / M30 % / L60 %
Fresh  %  Mousse  Trace  %  Tar Formation:  100 %

Drift Debris Oiled?  Yes/ No Supra/ Upper/ Mid/ Lower Amount:  H/M/L

Comments:

Majority of segment has experienced discontinuous oiling. Light oiling is characteristic of the majority of segment but on eastern edge a small pocket of asphalt pavement was located which was 8 meters wide. Most oil observed consisted of tar and seemed unlikely to cause recanning in the future. In some locations bits of dead oiled fucus have washed up on the beach. Although penetration has been restricted to the surface 5 cm in most locations, tar is becoming cohesive near the surface.
Discontinuous band of asphalt tar pavement ~1 to 2 meters wide. Random drops over most of the beach.

Oil band was not observed in stream channel or associated grass lands.

Tar band tapers out.

Discontinuous band of random splatters at cliff base on boulders.

2 discontinuous bands of tar on rock face ~20 cm high. Patches heavier at times.

Continuous band oil 1 meter high on vertical rock faces. Pockets up to 3 meters wide in boulders. Photo #12

Oil band 3 to 4 meters wide. Photo #13

1-2 meter band continuous oiled boulder bases

Pocket oil 4 meters in boulders

Pocket beach asphalt pavement ~8 meters wide. Penetration ~5 cm.

Oil becomes discontinuous and patchy

Band of tar ~75 cm on rock face.

Photo #11

In pebble and granular deposits asphalt pavement ~2 meters wide forming. Penetration ~5 cm.

~2 meter wide continuous band oil with traces of mousse at boulder bases.

Trace of dead oiled fucus on high tide line.

Oil on rock faces ~30 cm high.

Spruce

Small pebble patch.

10-40 cm band discontinuous oiled fucus & cobbles 5 cm, pen.

20 cm. pit, buried oil located. Little oil 0-5 cm.

Oiled granuals 5-10 cm.

No oil obs. 10-20 cm.

Least Edge CH-16

Random splattering of oil on boulders at former high tide line. Little penetration.

Granual & pebble beach 30 cm. pit, no oil observed.

West Edge CH-16
ECOLOGICAL EVALUATION

LOCATION: [Redacted]  SITE: ___________  OBSERVER: Crank

LOCATION PREFIX: CH  SEG. NO.: 16  LENGTH: ___________ (M)

DATE: 07/10/89  TIME (HHMM): 1015  TIDE HT.: ___________ + 3 ft.

OILED ZONE: Splash  High  Medium  Low

SUBSTRATUM: Rocks  Boulder  Cobble  Gravel  Sand  Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Mytilus (Mussels): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Balanus (Barnacles): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Littorina

Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

Limpets: Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N

OTHER OBSERVATIONS: Pink Salmon Stream: confined by (Groomed) with sand
total clean-up

CLEANUP PRECAUTIONS:  Cleaning work at +40' or higher tide: equipment 6172 6172
Low speed boat traffic on intertidal mussel beds and fast use: Dept. 3000

MAMMALS: Otters  Harbor Seals  Steller Sea Lions  Whales

BIRDS: [List of birds]

GENERAL OBSERVATIONS: ________________________________
CULTURAL RESOURCE EVALUATION

Date 7/10/89 Location SEWARD B-3 Site

Location Prefix CH Segment # 16 Length 1600 m

Survey Method:
Air _______ (A - indicate on map) Boat 20% _______ (A - indicate on map)
Ground 80% _______ (G - indicate on map)

Known cultural resources (AHRS #) Not in this segment Data Source _______

Oil conditions/beach visibility: oil is light moderate, visibility still good

Width of beach zone surveyed up to 80 m Tree fringe surveyed up to 100 m

Cultural resources observed in beach zone (AHRS code) _______

Cultural resources observed in tree fringe (AHRS code) _______

General observations justifying survey method and segment's site probability:

Shore Profile: musau of pocket beaches between headlands + grass sized stream

Fresh Water Sources: stream at head of cove may be anadromous, smaller rivulet

Sea Exposure: some swells from Knight Island Passage

Access/Safety: moderate

Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # _______ Frames _______

B/W Roll # MM 5 MM 6 Frames 17-24 _______

Observer(s): M. Moss

Time survey started 1040 _______ Time survey ended 1500

Cultural resource considerations/restraints:

Standard Constraints - Keep cleanup crews away from 49-SEW-19
S.C.A.T. Team 5

Greg Chaney

Segment: CH-16

Date: July 10 1989

Time: 12:00 noon

Tide: +3 (ft)

Location: SE. Chenega Is.

Base Map: Seward B3
SHORELINE CLEANUP PROGRAM

DATE 7/18/89          SHORELINE SEGMENT  Ch-17

LOCATION: (see enclosed map)  Kake Cove, Southeast Chenega

Island

ADEC NO.   _________ SHORELINE ASSESSMENT DATE:  7/11/89

Recommended Cleanup Activity(ies):
No cleanup, recommended at this time (subject to FOSC reassessment at a later date) due to light oil, moderate wave exposure, and ecological constraints.

If cleanup is conducted:
- Use moderate to high pressure warm to hot water washing on rock. Take precautions to protect anadromous fish streams.
- Use other approved methods as appropriate.

Priorities Considerations:

Ecological Constraints (from site survey):
No cleanup recommended at this time as procedures may cause more damage to biota than present oil.

If cleanup is conducted:
Work at mid tide+ or take appropriate measures to protect lower intertidal zone; restrict foot traffic on banks of both streams, tidal channels, and intergravel mussel beds; contact ADF&G and RAT 48 hrs prior to cleanup due to presence of anadromous fish streams; limit access to marshlands; and do not disturb rock terraces with oyster catcher chick.

Archeological Constraints (from site survey):
If cleanup is conducted, inspection by an archaeological monitor during cleanup of northern third of segment is required. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *

Date:  7/26/89

ISCC:  Susan K. Christopher

Date:  7/26/89

EXXON:  

Date:  7/27/89

FOSC:  O. C. Alejandro, by dir.

Date:  7/27/89

* Signature required to satisfy stipulations in Alaska DNK land use permits for tide and submerged lands.
SHORELINE OIL EVALUATION

Date: July 11, 89  Time: 12:30 noon  Observer: Greg Chaney

Surveyed From: Foot/Boat/Helico/Plane  Weather: ☀/Cloud/Rain/Snow/Fog

LOCATION

LOCATION: Kake Cove, Chenega Is.  SEGMENT NUMBER: CH-17

LENGTH OF SHORELINE SEGMENT: 3150 m
ACCESS: Foot/Vehicle/Boat/Barge/ Helico/Float Plane

SHORELINE:

Shoreline Type: SPI/BEACOV/HLD/STRT  Slope: LANG/HANG/VER
Wave Exposure: High / Med / Low
Sediment: B/15% / C/10% / P/5% / G/10% / S/10% / M-1 / R-50%

Drift Debris on Beach: YES/NO  Type: Supra/Upper/Mid/Lower

OIL

Degree of Oiling: Heavy/Moderate / Light / No Oil/Unobserved

Area of Beach Impact: SU / SP / H/M/L
Continuous: Y/N  % of Segment: 5%
Sporadic: Y/N  % of Segment: 20%

Est. Oil Thickness where >1 cm: _cm  Est. Oil Penetration: _cm

Pooled Oil: _% "Free" Oil: _% Coated: H-% / M-% / L/100%

Fresh _%  Mousse _%  Tar Formation: 100%

Drift Debris Oiled? YES/NO  Type: Supra/Upper/Mid/Lower

Amount: H/M/L

Comments:

Kake Cove has traces of light oiling. The only significant amount of oil noted was observed in narrow bands on bedrock faces. Random drops of oil were observed on isolated cobbles in mid to high intertidal zone. The narrow bands of tar on bedrock faces could be treated with hot water at high pressure at +8 ft tide, but this treatment may cause a risk to the anadromous fish streams in Kake Cove. Other than removal, no technique known to us is suitable for treatment of random drops of tar on pebbles and cobbles in this sensitive environment.
No sheen observed on lake but wind was from the south & north portion of lake was not surveyed.

Tidal channel; no oil observed on rocks but light sheen observed on small pools

20 cm pit to impermeable layer; No oil observed at depth

25 cm band tar on rock face; Discontinuous - some fucus oiled

WEST EDGE CH-17

KAKE COVE

Narrow band of oil on rock faces

EAST EDGE CH-17
ECOLOGICAL EVALUATION

LOCATION: Chenega Island
SITE: 
SEG. NO.: 15
LENGTH: 3150 (M)
DATE: 09/11/89
TIME (HHMM): 00
OILED ZONE: Splash
TIME (HHMM): +3
TIDE HT.: 
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud
LIVE BIOTA
Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Eggs and held by both strings: Dens + Moderate clusters on Kelp
L. Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina:
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Nucella also present in sparse number

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Twelve full gasbag sacks in a group, just beyond the intertidal. Eelgrass and kelp beds, clam bed.

At this time, suspect clean-up not recommended as clean up progress.

CLEANUP PRECAUTIONS: May cause more damage to biology than present oil. If clean-up

MAMMALS: Otters  
Harbor Seals  
Sea Lions  
Whales  

BIRDS: Pair of oustercatchers: chick, Bahi Sage, Crows

GENERAL OBSERVATIONS: Mudflats has high potential as feeding ground.
CULTURAL RESOURCE EVALUATION

Date 7/11/89  Location SEWARD B-3 quad  Site

Location Prefix CH  Segment # 17  Length 3150 m

Survey Method:
Air  (A - indicate on map)  Boat 40%  (A - indicate on map)
Ground 60%  (G - indicate on map)

Known cultural resources (AHRS #) 49-SEW-68  Data Source delaguna/1986

Oil conditions/beach visibility  

Width of beach zone surveyed up to 75 m  Tree fringe surveyed up to 75 m

Cultural resources observed in beach zone (AHRS code) RCS, HAD, hammerstone

Cultural resources observed in tree fringe (AHRS code) RCS, HAD, CMT

General observations justifying survey method and segment's site probability:

Shore Profile broad gravel beaches punctuated by boulders and cliffs/enclosed by steep rocky shoreline at west end of segment

Fresh Water Sources  no permanent stream up lake, 1 active creek, 1 dry creek bed

Sea Exposure  some protection from Chenega Point peninsula, open to swells

Access/Safety  good

Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 5

Monitoring during cleanup needed  yes/no  Collection  yes/no

Photos:  Color Roll #  Frames  
B/W Roll #  Frames 15-22

Observer(s)  MMoss

Time survey started 11:15  Time survey ended 18:00  total hrs: 5 3/4

Cultural resource considerations/restraints:

Due to presence of 49-SEW-68 where delaguna collected artifacts in the intertidal zone (exact location unknown), evidence of substantial Native use of area, and the presence of the largest salmon-producing stream on Chenega Island, an archaeological monitor should be present during any clean-up operation along this segment.
S.C.A.T Team 5
Greg Chaney
Segment: CH-17
Date: July 11 '81
Time: 12:30 noon
Tide: 3.5 (ft)
Location: Kake Cove, Chenega Is.
Base Map: Seward B 3

Kake Cove
Chenega
Chenega Pt
SEG C4-16 INSPECTION

DATE 8/19/89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment
- [ ] Hot water wash
- [ ] Warm water wash
- [x] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical Beach Gear
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: Treatment of segment C4-16 is complete.
Ready for demobilization and deployment to new area.

Signature: [Signature]
Date: 8/19/89 Time: 3:20 PM
Printed Name: [Printed Name]

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Light</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Existing Shoreline Condition As Visually Determined by ADEC

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Light</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subsurface Oil
- [ ] Yes
- [x] No

COMMENT BELOW

Reassessment
- [x] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments

Signature: [Signature]
Date: 8/19/89 Time: 15:26
Printed Name: [Printed Name]

FOSC rep

Comments

Signature: [Signature]
Date: 8/19/89 Time: 15:50
Printed Name: [Printed Name]

COPY: EXXON ADEC FOSC ISCC
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): ______ CHENEGA ISLAND SOUTH BLOCK

Includes Shoreline Segments: ______ CH-18, CH-19, CH-20

Submitted: __________ Date: 8-1-89
(for Exxon)

ISCC Approval: __________ Date: 8-4-89

FOSC Approval: __________ Date: 8-5-89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A. DEC
A. FG
A. DNR
CAC
PWSCA
USFS
No known active bald eagle nests in this area at this time
THERE ARE ITEMS OF GREAT CONCERN IN THIS APPROVAL BLOCK THAT AFFECT THE DEPLOYMENT OF CREWS AND EQUIPMENT.

READ THIS FIRST

SHORELINE SEGMENTS WITHIN CHENEKA ISLAND SOUTH BLOCK ARE ON LANDS OWNED BY CHENEKA VILLAGE CORPORATION. PERMIT NO ACCESS TO UPLAND AREAS AT ANY TIME.
SHORELINE CLEANUP PROGRAM

DATE 7/23/89  SHORELINE SEGMENT CH-18

LOCATION: (see enclosed map) Chenega Island - South end

ADEC NO. _______ SHORELINE ASSESSMENT DATE: 7/17/89

Recommended Cleanup Activity(ies):
No cleanup recommended at this time (subject to FOSC reassessment at a later date) due to light oil moderate wave exposure and ecological constraints.

Priorities Considerations:
Class 5: Very light oil.
Class A: Resources present including potential anadromous fish stream, active eagle nest, and subsistence use.

Ecological Constraints (from site survey):
This is a very sensitive and diverse ecological area. The lower intertidal zone is healthy and lush. The area has a high potential for natural cleaning.

Archeological Constraints (from site survey):
If cleanup is conducted and heretofore undiscovered cultural materials are uncovered, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *

ISCC: L. K. Christofferson Date: 7-31-89

EXXON: J. A. Date: August 4, 1989

FOSC: G. E. Date: 8-5-89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
SHORELINE OIL EVALUATION

Date: July 15th, 1980  Time: 06:45 AM  Observer: Greg Chaney
Surveyed From: Foot/Boat/Helicopter/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION: S. Chenega Is.  SEGMENT NUMBER: CH-18

LENGTH OF SHORELINE SEGMENT: 1150 m
ACCESS: Foot/Vehicle/Boat/Barge/Helicopter/Float Plane

SHORELINE:

Shoreline Type: SPI/RED/COR/MID/STRT  Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B/s / C/s / P/s / G/s / S/s / M/s / R/s
Drift Debris on Beach: (Yes/No)  Supra/Upper/Mid/Lower Type: Legs & Screws

OIL

Degree of Oiling: Very
Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU/SP/CH/M/L
Continuous: Y/N  % of Segment: _____  Width of Band: _______ m
Sporadic: O/N  % of Segment: _____

Est. Oil Thickness where > 1 cm: _______ cm  Est. Oil Penetration: Surface cm
Pooled Oil: _____  "Free" Oil: _____  Coated: H - _____ / M/0 - _____ / L/O - _____
Fresh: _____  Mousse: _____  Tar Formation: _____
Drift Debris Oiled?: Yes/No  Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

The segment is characterized by a trace of oil deposited along a former high tide line. This drip line of tar is discontinuous and ~20 cm wide but much lighter in many locations. At approximately the 12 foot tide level on the small stream mouth the band of oil is apparent. Although the tar was observed adjacent to the stream, no tar was observed in the active stream bed.
Discontinuous band tar drops and small patches at ~12 ft. tide level

Small spring dry in intertidal zone, small pond

ACTIVE EAGLE'S NEST

10-20 cm dripline

WEST EDGE

CH-18

20 cm band dripline tar on rock face.

Band of discontinuous tar at base of boulders ~20 cm wide. Oil noted near stream channel

Random boulders with dripline of tar

Pocket Boulder Beach

010 cm band oil on headland

EAST EDGE

CH-18
ECOLOGICAL EVALUATION

LOCATION: Prince William Sound
SITE: South Chugach Island
OBSERVER: S.L. Dearn

LOCATION PREFIX: ___ SEG. NO.: CH-18 LENGTH: 1150 (M)
DATE: 07/15/89 TIME (H/HM): 0445-0945 TIDE HT.: 1.0-5.0 FT
OILED ZONE: Splash High Medium Low
SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
On rocky headlands, vertical walls/Fucus forms a continuous band. It is patchy on cobble or
beach edge, Drift/Focus forms a dense stand of high relief near headland. Some shallow
surrounding seaweed beds observed (large herbal kelp). Many green algae in intertidal zone.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Several small patches in crevices of large boulders/rocks. High number of dead mussels -75%.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Patchy dense on cobbles on beach; Dense, continuous band on vertical rock walls. Many
large barnacles (D. cariosus) are dead. 70% Most small barnacles (G. squamosa) are alive.

Littorina: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N Many Nicella plane
Widely scattered across beach, some small dense aggregations in crevices under Fucus.

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Under Fucus blades and on bare rocks. Many small individuals, probably recently settled.

OTHER OBSERVATIONS: Dead trees/Many organisms - White marine/hoodin, coralline algae, for
Surfgrass/Skagway in some parts present - in general patches in shallow subtidal area. Many brown algae
(at least 15) - these seem to be gathered in one particular area. reason for this is unknown however.

CLEANUP PRECAUTIONS: Care must be taken to avoid contamination of streams, especially if appropriate
personal designated areas. No contamination from streams. Protect traffic on algae and in Fucus/Dirt will be
limited to avoid jamming this seaweed which is used as a refuge for many organisms. Also minimize
mud, as possible. Do not carry oily runoff from any streams. Wastes are not to exceed
Maintain a distance of at least 300 feet from headland where eagle/1 eest is located.

MAMMALS: Otters Harbor Seals Sea Lions Whales

BIRDS: 1 mating pair Bald Eagles w/nest. Several Black-legged Kittiwakes, common gulls
10-12 walking/_present/ probably gulls.

GENERAL OBSERVATIONS: Segment has little to no oiling. Two streams are present that have low
potential as anomalous fish streams (fishing activity by ADFG stops). Eagle nest is present without
segment. Several small talus beds are located in the shallow subtidal area. Fucus band refuges many

1-2. Rupes

Other
CULTURAL RESOURCE EVALUATION

Date: July 15, 1989 Location: CHENGeka IS. Site S.W. Portion
Location Prefix: CH Segment #: CH-18 Length: 1150 m.

Survey Method:
Air (A - indicate on map) Boat X (40%) (A - indicate on map)
Ground X (60%) (G - indicate on map)

Known cultural resources (AHRS #): None Data Source ____________

Oil conditions/beach visibility: Light / Almost Total

Width of beach zone surveyed: 10 - 60 m Tree fringe surveyed: 0 - 35 m

Cultural resources observed in beach zone (AHRS code): None
Cultural resources observed in tree fringe (AHRS code): CMT (See Notes)

General observations justifying survey method and segment's site probability
Shore Profile: Variable, Cobble/Gravel

Fresh Water Sources: Very Small Stream 2 Tidal Seep (B-5; B-6)
Sea Exposure: Open to Whale Bay, True Bay & influenced by Knight Pass
Access/Safety: B-1-Boulders - With Caution - others quite accessible in
any but severe weather conditions.

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5

Monitoring during cleanup needed: Yes/No Collection: Yes/No

Photos: Color Roll # __________ Frames __________
B/W Roll # 3 Frames 6-7

Observer(s): Remark ____________

Time survey started: 0645 Time survey ended: 0945

Cultural resource considerations/restraints:
Standard Constraints - and if heavy Beach
Cleanup occurs (unlikely) keep workers out of
Tree Fringe (B-5; B-6)
SHORELINE CLEANUP PROGRAM

DATE 7/23/89  SHORELINE SEGMENT  CH-19

LOCATION: (see enclosed map)  Chenega Island - South end

ADEC NO.  SHORELINE ASSESSMENT DATE:  7-16-89

Recommended Cleanup Activity(ies):
No cleanup recommended at this time (subject to FOSC reassessment at a later date) due to very light oil, moderate wave exposure and ecological constraints.

Priorities Considerations:
Class 4-5: Very light oil.
Class A: Subsistence resources present.

Ecological Constraints (from site survey):
The intertidal zone in this segment is very healthy and lush. The oil present is very light and weathered. Also, the nearby marsh and subtidal eel grass beds are healthy and uncontaminated.

Archeological Constraints (from site survey):
If cleanup is conducted and heretofore undiscovered cultural materials are uncovered, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer  

Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
SHORELINE OIL EVALUATION

Date: July 16, 1989

Time: 07:45 AM

Observer: Greg Chaney

Surveyed From: Foot/Boat/Helio/Plane

Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION: S.E. Chenega Island

SEGMENT NUMBER: CH-19

LENGTH OF SHORELINE SEGMENT: 1050 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT

Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B25% / C10% / P10% / G5% / S-1% / M-1% / R50%

Drift Debris on Beach: Yes/No

Supra/Upper/Mid/Lower Type...secured

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / M / L

Continuous: Y/N

% of Segment: 0

Width of Band: __________ m

Sporadic: Y/N

% of Segment: 40

Est. Oil Thickness where > 1 cm: __________ cm

Est. Oil Penetration: __________ cm

Pooled Oil: ___ % "Free" Oil: ___ % Coated: H-___% / M30% / L70%

Fresh: ________ % Mousse: ________ % Tar Formation: ______% Drift Debris Oiled?: Yes/No Supra/Upper/Mid/Lower Amount: H/M/L/ L

Comments:

This coastal segment has some tar drip lines along 11 to 12 foot high-tide line. The tar observed was very stable and no sheen was seen in the vicinity. Discontinuous splattering was observed on the eastern cobble and marsh region. Use of small high pressure hot water washing systems could be the best way to clean the bedrock faces. Splattered cobbles could be washed with sorbents underneath. Treatment may not be advised due to potential impact on a healthy intertidal zone and tar did not appear to be aesthetically offensive.
Thin discontinuous tar dripline on rock faces average 2-3 cm. high up to 10 cm high in patches.

Discontinuous tar splattered on cobbles Pen. ~5 cm.

One boulder with thin discontinuous dripline tar

~5 to 10 cm band

~20 cm.
tar band across cobbles and southern portion of marsh

Discontinuous band tar dripline along bed rock face ~10 cm high
ECOLOGICAL EVALUATION

LOCATION: Prince William Sound
SITE: S. Chenega Island
OBSERVER: S. L. Dean

LOCATION PREFIX: ___
SEG. NO.: CH-19
LENGTH: 1050 (M)

DATE: 07/16/89
TIME (HHMM): 0745 - 1045
TIDE HT.: 0.0 - 5.0 ft (M)

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Fucus - patchy clumps across cobble/boulder beach; dense continuous bands on vertical walls of rock outcrops.

Nettastrea (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Littorina: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

OTHER OBSERVATIONS: Small marsh area located - light oiling (possibly) on grass within marsh. Many barnacles in higher zone on dead mangrove debris. Many mussels in these areas are also dead. (with gaping without the shell present). Dead intertidal with attached barnacles in shallow subtidal areas of pocket coves. Many 20-30 cm barnacles on rocks facing cliff. Incinerations of Nucula. (av 100 individuals within a 30 x 30 cm area). Large area of a kelp (Phyllophora) in shallow subtidal area.

CLEANUP PRECAUTIONS: Oil is present in very low amounts. If any cleanup occurs - care must be taken not to trample Fucus zone. Cause thermal damage by using hot water. Care must also be taken not to cause disturbance to offshore eelgrass beds by access vehicles or by a recontamination from clean up operation.

MAMMALS: Otters 2 Harbor Seals ___ Sea Lions ___ Whales ___

BIRDS: 1 bald eagle, black-legged Kittiwakes 2 pigeon guillemots

GENERAL OBSERVATIONS: Healthy intertidal area w/small marsh area on shore w/ eelgras beds. Nuculae. Little to no oiling (a slight "misty sheen" in area w/ many large intertidal Fucus plants lightly affected.)
(version of 4/29/89)

CULTURAL RESOURCE EVALUATION

Date: July 16, '89 Location: CHENEGA Is. Site: South Side

Location Prefix: CH Segment #: 19 Length: 1050 m.

Survey Method:

Air [A - indicate on map] Boat [X (60%)] (A - indicate on map)

Ground [X (40%)] (G - indicate on map)

Known cultural resources (AHRS #) Repeated Survey Data Source: AHRS

Oil conditions/beach visibility: Quite light/95%

Width of beach zone surveyed: 20 - 60 m Tree fringe surveyed: 20 - 30 m

Cultural resources observed in beach zone (AHRS code): None

Cultural resources observed in tree fringe (AHRS code): CMT's

General observations justifying survey method and segment's site probability:

Shore Profile: Typified by Rocky Bluffs/Cliffs & Steep Hardan

Fresh Water Sources: A Couple Meager Streams/numerous Seeps

Sea Exposure: Unnamed across from Ty Bays/Whale Biz

Access/Safety: Reasonable Calm Weather all Beaches quite access.

Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 5

Monitoring during cleanup needed: Yes/No

Collection: Yes/No

Photos: Color Roll #____________ Frames____________

B/W Roll #____________ Frames____________

Observer(s): ____________________________________

Time survey started: 0745 HRS Time survey ended: 1030 HRS

Cultural resource considerations/restraints:

Standard Constraints - oil concentration quite slight doubtful weather cleanup occurs however if so keep workers on beach.

* Could not locate - though some promising areas were investigated.
July 16, 1991

S.C.A.T Team 5
Greg Chaney
Segment: CH-19
Date: July 16, 1991
Time: 7:45
Tide: 0 (ft)
Location: SW Chenega Island
Base Map: Sound 83
Recommended Cleanup Activity(ies):
Manually remove contaminated drift material (fucus and driftwood), pooled oil and patches of mousse.
Manually harvest heavily contaminated fucus.
Break up and remove incipient asphalt pavement by appropriate methods. On fine-grained beaches, disking or relocating the contaminated berm sediments into the middle intertidal zone would accelerate natural cleaning. This is a moderately exposed shoreline segment in which the sediments would be reworked and redistributed back up the intertidal zone. Do not relocate sediments near the stream. DISKING NOT RECOMMENDED FOR THIS SEGMENT.

Priorities Considerations:
Class 4: Light oil.
Class A: Subsistence resources present.

Ecological Constraints (from site survey):
Harvest only heavily oiled Fucus. Avoid trampling healthy fucus on lower shore face. Work at mid tide or take appropriate measures to protect the lower intertidal zone. Anadromous fish stream No. 16260 is located within segment. Contact ADF&G and RAT at least 48 hours prior to any cleanup.

Archeological Constraints (from site survey):
Inspection by an Archeological Monitor is recommenced during cleanup of this segment. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
Date: July 17 81  Time: 07:00 AM

Surveyed From: [Foot] [Boat] [Helio] [Plane]  Observer: [Greg Chaney]

Weather: [Sun] [Cloud] [Rain] [Snow] [Fog]

LOCATION

Location: South Chena Island  Segment Number: CH 20

Length of Shoreline Segment: 1400 m

Access: Foot / Vehicle / Boat / Barge / Helio / Float Plane

Shoreline:

Shoreline Type: SPI / BEA / COV / HIL / STRT  Slope: [LANG] [HANG] [VER]

Wave Exposure: High / Med / Low

Sediment: B20t / C10t / P5t / G10t / S10t / M1t / R45t

Drift Debris on Beach: [Yes] [No]  Supra / Upper / Mid / Lower  Type: Drift Tags

OIL

Degree of Oiling: Heavy / Moderate / [Light] / No Oil / Unobserved

Area of Beach Impact: SU / SP / [H] / M / L

Continuous: Y / N  % of Segment: 10%  Width of Band: 1-2 m

Sporadic: Y / N  % of Segment: 60%

Max. Observed

Est. Oil Thickness where > 1 cm: 1 cm

Est. Oil Penetration: 15 cm

Pooled Oil: [trace]  "Free" Oil: 10%  Coated: H10% / M40% / L40%

Fresh: 5%  Mousse: 10%

Tar Formation: 95%

Drift Debris Oiled?: [Yes] [No]  Supra / Upper / Mid / Lower  Amount: H / M / L  Trace

Comments:

Oil is most apparent on bedrock faces. Highest concentrations of oil were observed on boulders on the east side of pocket beaches. This deposition was not continuous along the finer grained portion of the beach. Patches of heavily oiled fucus were observed on the boulders and bedrock faces. Local patches of standing oil were observed in the oiled boulder regions. Some free oil was present in the hot sun.
Oil band up to 1 meter on vertical rock faces. Due to low rugged rock, oil patches up to 2 meters in specific locations. Oiled fucus occurs in this band. Light sheen on some tide pools on rocks.
ECOLOGICAL EVALUATION

LOCATION: Jujuy Bay
SITE: 3: Change Island
OBSERVER: S.L. Dean

LOCATION: Segment
SEG. NO.: CH 20
LENGTH: 1400 ft (M)

DATE: 10/24/70
TIME (HHMM): 0900 - 1300
TIDE HT.: -1.0 - 0.5 ft (M)

OILED ZONE: Splash, High, Medium, Low

SUBSTRATUM: Rocks, Boulder, Cobble, Gravel, Sand, Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N, Contin. Y/N, Dense Y/N, Sparse Y/N, None Y/N
   Continuous dense clumps of Fucus on vertical walls of rock outcroppings. "Low 0.5-1.0m"; this heavily oiled is plus
   Scattered patches of Fucus on cobble/boulder across beach. At least 10 additional species of alg

Mytilus (Mussels): Patchy Y/N, Contin. Y/N, Dense Y/N, Sparse Y/N, None Y/N
   Small groups found under Fucus blades. In some areas, mussels almost entirely cover Fucus.
   Clustered scattered across beach areas of cover on cobble, along cracks in boulders in low intertidal.

Balanus (Barnacles): Patchy Y/N, Contin. Y/N, Dense Y/N, Sparse Y/N, None Y/N
   Barnacles in some areas, moderate to heavy cover with oil. "Low 0.5-1.0m"; this heavily oiled is plus
   Continuous bands of vertical rock outcroppings. Dense clusters on large cobble/boulder cover.

Littorina
   Patchy Y/N, Contin. Y/N, Dense Y/N, Sparse Y/N, None Y/N
   Mostly scattered throughout intertidal zone. Found mostly associated with intertidal seaweed
   Mostly small, observed mostly on light-weathered, weathered granite.

Limpets: Patchy Y/N, Contin. Y/N, Dense Y/N, Sparse Y/N, None Y/N
   Very few limpets observed. Found under Fucus blades. Empty shells of limpets scattered across
   surface.

OTHER OBSERVATIONS: ADF&G fish stream #16260 located within segment. No oil present on bank
   of this stream however oil is on the beach of the cove. Many 200' + segments observed without
   any oil. Larvnae & Agonidae were observed within these algae beds. Jellyfish existing on face of intertidal
   Egoscuing

CLEANUP PRECAUTIONS: Heavily oiled Fucus should be removed to avoid recontamination of
   area. Care should be taken during cleanup to maintain as much of the healthy Fucus as
   possible, regardless of the cleanup procedure utilized. It is important to have healthy plants in
   the area. Fucus must be cleared from the cleared region. If contaminated ALF-a are withheld or
   used they are placed on gravel to absorb washed oil. ADF & G Stream #16260 is located in segment. Contact ADF & G at least 48 hrs prior to
   clean up

MAMMALS: Otters (Some) Harbor Seals ______ Sea Lions ______ Whales ______

BIRDS: 2 bald eagles (1 sitting in tree) Several Steller's in nearby woods. 1 surf seeter
   Several black-backed Kittiwakes offshore

GENERAL OBSERVATIONS: Areas of the segment, particularly eastern side of pocket cover are
   Moderately to heavily oiled. 0.5-1.0m from Fucus zone is heavily oiled in places. Fucus in those
   areas oil free to dead as are most of the barnacle and mussel beneath the Fucus. Dense
   continuous bands of healthy Fucus occur mostly on rocky outcroppings of headlands. The shallow
   intertidal region appears to support a wide diversity of organisms
CULTURAL RESOURCE EVALUATION

Date: JULY 17 Location: CHENEGA IS, SITE 8, E. AREA
Location Prefix: CH Segment #: 20 Length: 1400 m

Survey Method:
Air (A - indicate on map) Boat (x 15%) Ground (x 85%)

Known cultural resources (AHRs #) NONE Data Source: 
Oil conditions, beach visibility: MODERATE - TO LT, HEAVY IN AREA

Width of beach zone surveyed: 10 - 40 m Tree fringe surveyed: 0 - 25 m

Cultural resources observed in beach zone (AHRs code): NONE
Cultural resources observed in tree fringe (AHRs code): C'MT'S

General observations justifying survey method and segment's site probability

Shore Profile: Varies from Fine gravel, pebble mix to Boulder Spewn. 
Fresh Water Sources: Some streams & seeps

Sea Exposure: Open close to Knight Passage
Access/Safety: MOST Beaches very accessible - Some caution & scouting would be wise.

Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 5:

Monitoring during cleanup needed: * no Collection: yes/no

Photos: Color Roll #: Frames: 
B/W Roll #: 3 Frames: 13-21

Observer(s): Robert MACK

Time survey started: 0700 hrs Time survey ended: 1115 hrs

Cultural resource considerations/restraints:

Standard Constraints with the addition of a "part-time" Archaeologist Monitor. Due to the known history of the area (DeLaGraaff et al.) and the fact of comparatively large number of C'MT's (25 total) are quite concentrated, I am recommending a (per) archeologist monitor to be used in the role of periodic monitoring. Perhaps initially, when clean up begins and again during cleanup, for a couple days "drop-in"
Date: July 17, 1989
Time: 7:00
Tide: -1 (ft)
Location: South Chenega Is.
Base Map: Seward B3

S.C.A.T Team 5
Greg Chaney
Segment: CH-20

CH-20

Chenega

Kake Cove

Chenega

Chenega Pt
SEG CH-18 INSPECTION #1
DATE 8/19/89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [ ] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [X] Other: No treatment recommended

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: Treatment of segment CH-18 is complete.

Ready for demobilization and deployment to next segment.

Signature: Michael J. Lindley
Date: 8/19/89 Time: 8:20 PM
Printed Name: Michael J. Lindley

Existing Shoreline Condition As Visually Determined by USCG
Surface Oil

<table>
<thead>
<tr>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Heavy</td>
</tr>
<tr>
<td>0</td>
<td>Medium</td>
</tr>
<tr>
<td>0</td>
<td>Light</td>
</tr>
<tr>
<td>0</td>
<td>Very Light</td>
</tr>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>100 %</td>
<td></td>
</tr>
</tbody>
</table>

Subsurface Oil

- [X] Yes
- [ ] No

Existing Shoreline Condition As Visually Determined by ADEC
Surface Oil

<table>
<thead>
<tr>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Heavy</td>
</tr>
<tr>
<td>0</td>
<td>Medium</td>
</tr>
<tr>
<td>1</td>
<td>Light</td>
</tr>
<tr>
<td>0</td>
<td>Very Light</td>
</tr>
<tr>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>95 %</td>
<td></td>
</tr>
</tbody>
</table>

Subsurface Oil

- [X] Yes
- [ ] No

Reassessment

- [X] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments: A thin band of oil was visible on SE corner of section CH-18. Eagles and sea gulls spotted.

Signature: [Signature]
Date: 8/19/89 Time: 15:34
Printed Name: [Printed Name]

FOSC rep

Demobilization approved/disapproved

Comments: [Comments]

Signature: [Signature]
Date: 8/19/89 Time: 15:34
Printed Name: [Printed Name]
SEG CH-19 INSPECTION #1
DATE 8/19/89

SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment
☐ Hot water wash
☐ Warm water wash
☐ Water deluge
☐ Mechanical
☐ Non-mechanical
☐ Other

No Treatment Recommended

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: Treatment of segment CH-19 is complete. Ready for demobilization and deployment to new segment.

Signature: Michael J. Tydings
Date: 8/19/89 Time: 4:00 pm
Printed Name: Michael J. Tydings

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>Heavy</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Light</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Very Light</td>
</tr>
<tr>
<td></td>
<td>99</td>
<td>None</td>
</tr>
<tr>
<td>100 %</td>
<td>0</td>
<td>Heavy</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Light</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Very Light</td>
</tr>
<tr>
<td></td>
<td>99</td>
<td>None</td>
</tr>
</tbody>
</table>

Subsurface Oil
☐ Yes
☐ No

Existing Shoreline Condition As Visually Determined by ADEC

ADEC rep

Comments: This board was detected about 4" x 2" dug in the sand and covered with a light layer of sand. It was removed and disposed of in a safe manner.

Signature: Michael Ehl
Date: 8/19/89 Time: 15:53
Printed Name: Michael Ehl

FOSC rep

Demobilization approved/disapproved

Comments: Contamination - No clean-up - No treatment needed.

Signature: [Signature]
Date: 8/19/89 Time: 15:50
Printed Name: [Signature]
**SEG CH-20 Inspection Record**

**Date:** 8/25/9

**Shoreline Treatment Process(es) Completed for this Segment**

- [x] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [x] Mechanical
- [ ] Non-mechanical
- [ ] Other

**Existing Shoreline Condition As Visually Determined by USCG**

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0%</td>
<td>Heavy</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td>Light</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>Very Light</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>None</td>
</tr>
</tbody>
</table>

- [ ] Yes
- [x] No

**ADEC rep**

Comments: "Was unable to contact ADEC"

**FOSC rep**

Demobilization **Approved**

Comments: ____________

Signature: ____________ Date: __/__/__ Time: __:__

Printed Name: ____________
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): CHENEGA POINT NORTH BLOCK

Includes Shoreline Segments: CH-21, CH-22, CH-23

Submitted: ___________________________ Date: 7/3/85
(for Exxon)

ISCC Approval: ________________________ Date: 7/3/85

FOSC Approval: ________________________ Date: 7/3/85

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:
Exxon Shoreline Coordinator
Exxon Shoreline Supervisor
Exxon SCAT file

FOSC
CDFU
NOAA
EPA
USDA (FS)
USFW
A. DEC
A. FG
A. DNR
CAC
FWSCA
USFS
SHPO
SCOT NOTE

SHORELINE SEGMENTS WITHIN THIS BLOCK ARE ON LANDS OWNED BY CHENEGA VILLAGE CORPORATION. NO ACCESS TO UPLAND AREAS AT ALL TIMES.
No known active Bald Eagle nest at this time.

CH-22
ACTIVE BALD EAGLE NEST

8/8 (nest	
CH-21 Pair near nest but nest empty

CHENEGA POINT NORTH BLOCK
CH-21, CH-22, CH-23
SHORELINE CLEANUP PROGRAM

DATE  7/26/89       SHORELINE SEGMENT  CH-21

LOCATION: (see enclosed map)  CHENEGA ISLAND-Southeast end

ADEC NO.  ___________ SHORELINE ASSESSMENT DATE:  7/18/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus).
- Harvest heavily oiled fucus in upper intertidal zone.
- Flood/flush with warm to hot water (up to 140 F) on low angle gravel beach.
- Use moderate to high pressure warm to hot water washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
Class 4: Light oil.
Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect healthy and lush lower intertidal zone. Harvest only heavily oiled fucus. An active bald eagle's nest is located at the north end of this segment. (See advisory). Notify Rat Boat 48 hours prior to cleanup activities in this segment.

Archeological Constraints (from site survey): If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *

ISCC: ____________________________  Date:  7/31/89

EXXON: ____________________________  Date:  7/31/89

FOSC: ____________________________  Date:  7/31/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
SHORELINE OIL EVALUATION

Date: July 18/89  Time: 7:30 AM  Observer: Greg Chaney
Surveyed From: Foot/Boat/Helic/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION

LOCATION S.E. Chenega Is.  SEGMENT NUMBER CH-21
LENGTH OF SHORELINE SEGMENT: 2700 m
ACCESS: Foot/Vehicle/Boat/Barge/Helic/Float Plane

SHORELINE:

Shoreline Type: SPI/BEA/COV/HLD/STRT  Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B20% / C5% / P3% / G2% / S-% / M-% / R70%
Drift Debris on Beach: Yes/No Supra/Upper/Mid/Lower Type

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU / SP / H / M / L
Continuous: Y/N % of Segment 20%  Width of Band: up to 1 m
Sporadic: Y/N % of Segment 60%  Max: Observed
Est. Oil Thickness where > 1 cm: ----- cm  Est. Oil Penetration: 15 cm
Pooled Oil: ---- % "Free" Oil: trace % Coated: H/10% / M/20% / L/70%
Fresh 5 %  Mousse 5 %  Tar Formation: 90 %
Drift Debris Oiled?: Yes/No Supra/Upper/Mid/Lower Amount: H/M/L

Comments:
The segment is characterized by steep rock faces and a thin band of tar along the former high tide line. Pocket beaches and cracks in rock often contain higher concentrations of oil. The most significant amount of oil was located at a small pebble and boulder beach near survey monument Czar. The sediments of this beach were coated near the storm surf and to a lesser degree near the lower intertidal zone.
ECOLOGICAL EVALUATION

LOCATION: Prince William Sound  SITE: SE. Chenega Island  OBSERVER: S. L. Dean

LOCATION PREFIX:  SEG. NO.: CH-21  LENGTH: 2700 (M)

DATE: 07/18/89  TIME (HHMM): 0700 - 0735  TIDE HT.: 6.0 - 02.5 ft.

OILED ZONE: Splash  High  Medium  Low

SUBSTRATUM: Rocks  Boulder  Cobble  Gravel  Sand  Mud

LIVE BIOTA

**Fucus** (algae): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Fucus present in dense continuous bands on rocky headlands & vertical walls beneath pocket caves. On beach, Fucus is in scattered patches on cobbles & boulders. In areas of oil dispersion (primarily pocket caves) upper 0.5m of Fucus layer is lightly - heavily oiled.

**Mytilus** (Mussels): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Clusters of mussels located along small ledges on rock face. Oil taints & coats cobble & boulders near beaches & in sand sale. Spreading of oil & staining from cobble/mussels onto general beach. Some patches of mussels are dark due to visible pyrolysis (indicated by presence of tarballs and tar-like materials).

**Balanus** (Barnacles): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
A continuous dense band of barnacles occur on rocky headlands & vertical walls beneath pocket caves. Barnacles are particularly dense on cobbles & boulders. Areas of heavy oil dispersion, barnacles are dark or very close to dead. In the areas, approx. 80% of barnacles are dead.

**Littorina**
Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Relatively few littorinas are present in many areas of segment.

**Limpets**
Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Limpets (mostly **Nerita serripes**), located usually under Fucus blades.

OTHER OBSERVATIONS:
Several Nevermanni observed laying eggs. Many different mussels (4 species) several species of **Haliotis** at least 20 different species of algae, and a wide variety of invertebrates were observed within this segment. Several patches of red algae were also noted very close to shore.

CLEANUP PRECAUTIONS:
Stay 300 feet away from shore while near eagle nest. If oil is on rock walls in cleaning, it is taken below + 10 ft tide level or not at all. The spray decanter should be placed at a不少于. The spray decanter should be manually removed from segment to avoid contamination of breeding areas (intertidal & subtidal areas + fast water).

MAMMALS: Otters  Harbor Seals  Sea Lions  Whales  Other

**BIRDS:** 2 bald eagles - adults associated w/ a nest; 1 eaglet observed within nest (youngest was 45;

**GENERAL OBSERVATIONS:** This segment has an extremely rich & diverse mid-to-low intertidal zone. It supports many species of algae & invertebrates. There are eagles actively nesting. It is most definitely an ecologically sensitive area - both intertidally & subtidally.
Grei Chaney
Segment: CH-21
Date: July 18 1989
Time: 07:30 AM
Tide: - (ft)
Location: S.E. Chenega Is.
Base Map: Seward B.3

--continued--

Steep bare rock face
Pocket beach with oiling. Pebbles and boulders. Penetration to 12 cm. Oiled sorbent on beach. Band ~10 meters wide.
Up to 1 meter band oil in boulders near bases. Still flowing in the sun.
Eagle's Nest. Chick Observed

20 cm. high tar dripline on boulders and rocks.

1-meter band oil on bedrock face in crevasses.
Boulder pocket beaches. 1-meter band oil on boulder bases.
Sheen on small pools. No penetration observed.
Surface coating only.

20 cm. oil on bedrock faces. Thin band
Knee Cove
Chenega
Chenega Pt
South End CH-21

Pocket granular beach. Trace of oil. 50 cm band on bedrock face.
CULTURAL RESOURCE EVALUATION

Date: July 18  Location: CHENEGA IS Site: S.E. Edge (acw)
Location Prefix: CH  Segment #: 21  Length: 2700 meters

Survey Method:
Air (A - indicate on map) Boat (90%) (A - indicate on map)
Ground (10%) (G - indicate on map)

_known cultural resources (AHRS #)  None  Data Source -

Oil conditions/beach visibility: Slight - Moderately Heavy (95%)
Width of beach zone surveyed: 5-25 m  Tree fringe surveyed: 10-30 m

Cultural resources observed in beach zone (AHRS code): None
Cultural resources observed in tree fringe (AHRS code): L.M.T.'s

General observations justifying survey method and segment's site probability:
Shore Profile: Much of it was Homogenous Steep Rock Cliffs to 14 ft.
Fresh Water Sources: None
Sea Exposure: Knight Is. Passage
Access/Safety: Variable - Many areas w/reasonable calm are good

Probability of undiscovered sites in beach zone (circle one) 1 2 3 4 5
Monitoring during cleanup needed: Yes/No  Collection: Yes/No

Photos: Color Roll #: Frames
B/W Roll #: 3 - Frames 24

Observer(s):

Time survey started: 0700 hrs  Time survey ended: 1035 hrs

Cultural resource considerations/restraints:
Standard Constraints
North End CH-21

Eagle's Nest

Discontinuous tar band on rock face.
Up to 1 meter high.

Steep bare rock face

058 Continued
SHORELINE CLEANUP PROGRAM

DATE 7/26/89  SHORELINE SEGMENT CH-22

LOCATION: (see enclosed map) CHENEGA ISLAND-Southeast side

ADEC NO. _______ SHORELINE ASSESSMENT DATE: 7/18/89

Recommended Cleanup Activity(ies):
- Manually remove contaminated drift material (fucus), and patches of mousse.
- Harvest oiled fucus.
- Flood/flush with warm to hot water (up to 140 F) on low angle beaches.
- Use moderate to high pressure washing on rock and oiled logs.
- Use other approved methods as appropriate.

Priorities Considerations:
  Class 2-4: Heavy to light oil.
  Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide or take appropriate measures to protect lower intertidal zone. Do not enter marsh area. Avoid foot traffic over entire intertidal zone.

Archeological Constraints (from site survey): No cleanup crew access to the uplands. If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

State Historic Preservation Officer *
ISCC: 
EXXON: 
FOSC: 

Date: 7/25/89
Date: 7/31/89
Date: 8/9-07-31
Date: 7/31/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
SHORELINE OIL EVALUATION

Date: July 18, 1977  Time: 11:00 AM  Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION
LOCATION: SE Chenega Is.  SEGMENT NUMBER: CH-22

LENGTH OF SHORELINE SEGMENT: 800 m
ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:
Shoreline Type: SPI/BEA/COV/HLD/STRT  Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B 20% / C 15% / P 5% / G 10% / S 1% / M 20% / R 40%
Drift Debris on Beach: Yes/No  Supra/Upper/Mid/Lower Type: Drift/Logs/Seaweed

OIL:
Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU/SP/H/M/L
  Continuous: Y/N  % of Segment: 30%  Width of Band: up to 8 m
  Sporadic: Y/N  % of Segment: 20%  Max Observed
Est. Oil Thickness where > 1 cm: ___ cm  Est. Oil Penetration: 35 cm
Pooled Oil: ___  "Free" Oil: ___  Coated: H 30% / M 40% / L 30%
Fresh 30%  Mousse 10%  Tar Formation: 60%
Drift Debris Oiled?: Yes/No  Supra/Upper/Mid/Lower Amount: H/M/L
Comments:
Small pocket beach at southern portion of segment has the most concentrated oil observed. Penetration up to 35 cm was observed in the storm berm, but depth of penetration decreases rapidly toward the lower intertidal zone. No oil was observed in marsh.
Oiled Rock Crevasses up to 6 meters wide with associated oiled Fucus.

Marsh
No Oil Observed

Submerged Stumps & Peat

Small Spring

Patches of oiled Fucus and boulders

Oiled boulder bases

Well sorted pebble beach.~8 meter band oiled pebbles. Decreasing penetration toward lower intertidal zone. Penetration ~35 cm. at storm berm. Lightly oiled drift logs and seaweed present.

North Edge CH-22

~1 meter vertical oil on rock faces. Associated oiled Fucus.

South Edge CH-22
ECOLOGICAL EVALUATION

LOCATION: Prince William Sound
SITE: SE Chugach Island
OBSERVER: S.L. Dean

LOCATION PREFIX: ________ SEG. NO.: CH-22 LENGTH: ________ (M)

DATE: 07/18/89 TIME (HHMM): 1040-1230 TIDE HT.: 52.5 - 7.5 ft.

OILED ZONE: Splash High Medium Low

SUBSTRATUM: Rocks Boulder Cobble Gravel Sand Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Fucus-continuous algae band on headland points. Occasional patches on larger boulders on beach.
There are some heavily oiled Fucus plants.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Clustered mussels occur on the larger boulders in the beach area; along small ledges on the vertical rock walls.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
Dense on headland rocks and on larger boulders on beach.

Littorina: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Present but not extremely abundant, scattered across beach.

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N

Found usually under Fucus blades. Many small individuals ~5 mm.

OTHER OBSERVATIONS: Segment contains area of flat, receded land. A marsh/flood system has developed on the land and empties into a creek/stream into intertidal area. Some small fish are observed in flat/marsh/flood. Likely runs into the intertidal - there may be a low potential for it to be an adequate fish stream. No identification of the ADF&G fish stream maps - need to confirm with ADF&G prior to any cleanup operations.

CLEANUP PRECAUTIONS: Clean Fucus should be removed manually. Limit foot traffic (60/acre) into entire area of intertidal. Do not enter marsh area. Avoid trampling seaweeds in intertidal areas.

MAMMALS: Otters Harbor Seals Sea Lions Whales Other

BIRDS: 2 Crows

GENERAL OBSERVATIONS: The marsh area is an ecologically sensitive region of segment. Care must be taken not to disturb it. Region of segment have considerable oiling. This seems to have affected the upper areas of the Fucus zone, gravel beach or barnacle zone.
CULTURAL RESOURCE EVALUATION

Date: 18 July 1989  Location: CHENEQ A - IS  Sites: East Coast
Location Prefix: CH  Segment #: 22  Length: 800 m

Survey Method:
Air: (A - indicate on map)  Boat: (A - indicate on map)
Ground: (G - indicate on map)

Known cultural resources (AHRS #): NONE  Data Source:

Oil conditions/beach visibility: Moderate to Severe patches

Width of beach zone surveyed: 10-15 m  Tree fringe surveyed: 10-30 m

Cultural resources observed in beach zone (AHRS code): NONE
Cultural resources observed in tree fringe (AHRS code): Some concentration of Cmts. (See Notes)

General observations justifying survey method and segment's site probability:

Shore Profile

Fresh Water Sources: ONE small stream in extreme S.E. corner

Sea Exposure: to Knight Island Passage

Access/Safety: Somewhat protected - reasonably well accessed

Probability of undiscovered sites in beach zone (circle one): 1 2 3 4 5

Monitoring during cleanup needed: (yes/no)  Collection: yes/no

Photos: Color Roll #:  Frames:
B/W Roll #:  Frames:

Observer(s): Robert VMCK

Time survey started: 10:40  Time survey ended: 12:30 HRS

Cultural resource considerations/restraints:

Standard Constraints - Periodic Monitor - Drop in on Clean-Up Process - Could Work with periodic Monitoring Recommended

Same for CH-19 - again due to some of a Concentration (11) Cmts. and this appeared (eco-setting) most favorable then - a long part of the lower East Coast.
Date: July 18 1981
Time: 11:00 AM
Tide: 4 (ft)
Location: S.E. Changua Is.
Base MLP: Seward 83
SHORELINE CLEANUP PROGRAM

DATE 7/26/89  SHORELINE SEGMENT CH-23

LOCATION: (see enclosed map) CHENEGA ISLAND-East side

ADEC NO. SHORELINE ASSESSMENT DATE: 7/19/89

Recommended Cleanup Activity(ies):
- Harvest heavily oiled fucus in southern portion of this segment.
- No other cleanup recommended at this time (subject to FOSC reassessment at a later date), due to light oil and medium wave exposure.

Priorities Considerations:
   Class 4: Light oil.
   Class A: Resources present.

Ecological Constraints (from site survey): Work at mid tide + or take appropriate measures to protect rich lower intertidal zone. An anadromous stream is located in the adjacent segment to the north (CH-01). (Stream Nos. 226-20-16280). Contact ADF&G prior to cleanup.

Archeological Constraints (from site survey):
If heretofore undiscovered cultural materials are uncovered during cleanup, contact Exxon's Archeological Field Director and take actions prescribed in the Operational Guidelines for Shoreline Cleanup dated 4/21/89 as amended.

Date: 7/23/89

ISCC: Date: 7/31/89
EXXON: Date: 7/16/89
FOSC: Date: 7/31/89

* Signature required to satisfy stipulations in Alaska DNR land use permits for tide and submerged lands.
SHORELINE OIL EVALUATION

Date: July 19/17  Time: 07:30 AM  Observer: Greg Chaney
Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloudy/Rain/Snow/Fog

LOCATION
LOCATION: East Chenega Island  SEGMENT NUMBER: CH-23

LENGTH OF SHORELINE SEGMENT: 2600 m
ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:
Shoreline Type: SPI/BEA/COV/HLD/STRT  Slope: LANG/HANG/VER
Wave Exposure: High/Med/Low
Sediment: B/30° / C/5° / P/3° / G/2° / S/1° / M/1° / R/0°
Drift Debris on Beach: [Yes/No]  Drift/Logs

OIL
Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved
Area of Beach Impact: SU/SP/[H]/M/L
Continuous: Y/N  % of Segment  Width of Band: up to 1 m
Sporadic: Y/N  % of Segment 30%

Est. Oil Thickness where > 1 cm: — cm  Est. Oil Penetration: No/Observed cm
Pooled Oil: —  "Free" Oil: —  Coated: H/10° /M/10° /L/20°
Fresh  Mousse  Tar Formation: 100°
Drift Debris Oiled? [Yes/No]  Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:
This segment is characterized by steep rock faces and coarse boulder beaches. Sporadic dripline of tar was present on rock faces. Tar observed was stable and did not seem likely to cause reoiling in the future. No cleanup of tar on rock faces recommended at this time. In southern portion of segment Focus which has been oiled may be manually removed.
ECOLOGICAL EVALUATION

LOCATION: Prince William Sound  SITE: E. Chequen Is.  OBSERVER: S.L. Dean
LOCATION PREFIX:  SEG. NO.: CH 23  LENGTH: 2600 (M)
DATE: 07/19/1987  TIME (HHMM): 0730 - 0945  TIDE HT.: - 0.5 - 0.5 ft
OILED ZONE: Splash  High  Medium  Low
SUBSTRATUM: Rocks  Boulder  Cobble  Gravel  Sand  Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Continuous band of Fucus along vertical rock walls. Upper 0.5 m of Fucus lightly oiled in pocket below.

Mytilus (Mussels): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Small clumps present in most of segment. N end of segment contains large masses.

Balanus (Barnacles): Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Some barnacles in areas of oiling - covered w/ moderate coating of oil. Many individuals still alive.

Littorina
Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Lower numbers of littorines scattered across/throughout segment. Under Fucus, not in dense aggregations.

Limpets: Patchy Y/N  Contin. Y/N  Dense Y/N  Sparse Y/N  None Y/N
Lower numbers of limpets scattered across segment.

OTHER OBSERVATIONS:
Low intertidal zone appears rich. Many plants + invertebrate fauna/flora very diverse & abundant.

CLEANUP PRECAUTIONS:
Some areas relatively inaccessible due to steep rock wall. Lower intertidal region very rich in plants & animals. Do not clean at tides lower than 0.4 ft; if cleaning is performed, make note of areas cleaned (fresh shore).

MAMMALS: Otters ___  Harbor Seals ___  Sea Lions ___  Whales ___
Other ___

BIRDS: 2 Pigeon guillemots  ___  Black-legged Kittiwakes ___  3 Eagles flying by (separate)

GENERAL OBSERVATIONS:
Very rich lower intertidal area. Some oiling in discontinuous band has lightly heaavily coated some Fucus + barnacles; these are higher in the intertidal region.
CULTURAL RESOURCE EVALUATION

Date 7-19-89 Location CHRISEA ISLAND Site EAST COAST

Location Prefix CH Segment # 23 Length 2,600 M

Survey Method:
Air _______ (A - indicate on map) Boat X (50%) (A - indicate on map)
Ground X (50%) (G - indicate on map)

Known cultural resources (AHRS #) MORE Data Source

Oil conditions/beach visibility of segment - little or no oil in northern 3/4 of segment

Width of beach zone surveyed 10 m Tree fringe surveyed 0

Cultural resources observed in beach zone (AHRS code) MORE

Cultural resources observed in tree fringe (AHRS code) MORE

General observations justifying survey method and segment's site probability:
Shore Profile: Moderately high angle rock cliff with breakers open - steep coast 100' above

Fresh Water Sources: No streams running at this time may be several creeks

Sea Exposure: Unprotected coastline open to west towards Knight Island passage

Access/Safety: unprotected bays or coves - deep water access up to 3/4

Probability of undiscovered sites in beach zone (circle one) (1) 2 3 4 5

Monitoring during cleanup needed yes/no Collection yes/no

Photos: Color Roll # MORE Frames

B/W Roll # MORE Frames

Observer(s) Bob Butt

Time survey started 0733 Time survey ended 0923

Cultural resource considerations/restraints:

Standard statement - no additional archaeological restrictions
S.C.A.T Team 5
Greg Chaney
Segment: CH-23
Date: July 19 1989
Time: 07:30 AM
Tide: -1 (ft)
Location: East Chenega Is.
Base Map: Seward B3

North Edge CH-23
Random Drops on Boulders
5 cm. band tar on rock face

Pocket gravel beach. 30 cm. plt. No oil observed at depth.

Pocket pebble/gravel beach. 30 cm. plt. No oil observed at depth.

Oil band Tapers out.

1 meter discontinuous tar band with oiled Fucus.

South Edge CH-23
SEGMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

- [ ] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: TREATMENT OF THIS SEGMENT IS COMPLETE.

READY FOR DEMOBLIZATION & DEPLOYMENT TO A NEW SEGMENT

Signature: Gary Frick Date: 8/14/79 Time: 1:43 PM
Printed Name: Gary Frick

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Degree of Oiling</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>27%</td>
<td>Heavy</td>
<td>None</td>
</tr>
<tr>
<td>37%</td>
<td>Medium</td>
<td>None</td>
</tr>
<tr>
<td>57%</td>
<td>Light</td>
<td>None</td>
</tr>
<tr>
<td>97%</td>
<td>Very Light</td>
<td>None</td>
</tr>
<tr>
<td>100%</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Reassessment

- [ ] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep Comments: ADEC Initial Survey was present during inspection.

Signature: Date: Time:
Printed Name:

FOSC rep Comments: Demobilization approved/disapproved @ THIS TIME

Signature: Date: Time:
Printed Name: Thomas A. Harrison LT USCG

COPY: EXXON ADEC FOSC ISCC
SEG CH2Z INSPECTION #1
DATE 8/5/89

SEGTMENT INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment
- [X] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [X] Non-mechanical SNARE BOOM
- [ ] Other

Exxon
Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: TREATMENT OF THIS SEGMENT IS COMPLETE. READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT.

Signature: [Redacted] Date: 8/5/89 Time: 9:32 AM
Printed Name: [Redacted] Exxon 3

Existing Shoreline Condition As Visually Determined by USCG

Surface Oil

<table>
<thead>
<tr>
<th>Percent</th>
<th>Degree of Oiling</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95%</td>
<td>Heavy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.2%</td>
<td>Medium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.7%</td>
<td>Light</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0%</td>
<td>Very Light</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0%</td>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subsurface Oil

Comments

[Redacted]

Reassessment
- [ ] Yes - necessary
- [X] No - not necessary unless re-oiled

ADEC rep Comments: Deserves a reassessment at a later date

Signature: [Redacted] Date: 8/15/89 Time: 9:25
Printed Name: DALE GARDNER

FOSC rep Comments: Possibly圆满完成 in Green Oil if found ok

Signature: [Redacted] Date: 8/15/89 Time: 9:25
Printed Name: THOMAS C. SHANDLER, JR.

COPY: EXXON ADEC FOSC ISCC
SEGMENT
INSPECTION RECORD

Shoreline Treatment Process(es) Completed for this Segment

☐ Hot water wash        ☐ Mechanical
☐ Warm water wash        ☐ Non-mechanical
☐ Water deluge

Exxon
Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: TREATMENT OF THIS SEGMENT IS COMPLETE.
READY FOR DEMOBILIZATION & DEPLOYMENT TO A NEW SEGMENT.

Signature: [Signature]
Date: 7/14/89 Time: 1:43 PM
Printed Name: Gary Emerson

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Subsurface Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>Degree of Oiling</td>
</tr>
<tr>
<td>0%</td>
<td>Heavy</td>
</tr>
<tr>
<td>10%–20%</td>
<td>Medium</td>
</tr>
<tr>
<td>30%–40%</td>
<td>Light</td>
</tr>
<tr>
<td>50%–60%</td>
<td>Very Light</td>
</tr>
<tr>
<td>70%–80%</td>
<td>None</td>
</tr>
<tr>
<td>90%–100%</td>
<td>None</td>
</tr>
<tr>
<td>100%</td>
<td>None</td>
</tr>
</tbody>
</table>

Comments: Core is ADSG HAD

Reassessment
☐ Yes - necessary    ☐ No - not necessary unless re-oiled

ADEC rep
Comments: ADEC HARD SURVEY WAS PRESENT DURING

Signature: [Signature]
Date: 7/14/89 Time: 1:43 PM
Printed Name: [Printed Name]

FOSC rep
Comments: Demobilization approved/disapproved

Signature: [Signature]
Date: 8/14/89 Time: 1:43 PM
SHORELINE PRE-CLEANUP ASSESSMENT BLOCK REPORT

Location (see enclosed map): CHENEGA ISLAND NORTHWEST BLOCK

Includes Shoreline Segments: CH-900

Submitted: [Signature] Date: 8-29-89
(for Exxon)

ISCC Recommendation: [Signature] Date: 9-1-89

FOSC Approval: [Signature] Date: 9-1-89

The cleanup procedures identified in the Shoreline Cleanup Program are recommended. Modifications to these systems can be made in the field. Exxon and other field personnel are encouraged to suggest innovations and productivity enhancements to the OSC's on-scene representative. The OSC's representative has the authority to approve on-site modifications. The Field Resource Team should be consulted if these actions do not fit within the Ecological Constraints of the Shoreline Cleanup Program. Requirements for safety and the protection of cultural material must be observed.

Distribution:
- Exxon Shoreline Coordinator
- Exxon Shoreline Supervisor
- Exxon SCAT file
- SHPO
- FOSC
- CDFU
- NOAA
- EPA
- USDA (FS)
- USFW
- A.DEC
- A.FG
- A.DNR
- CAC
- PWSCA
- USFS
**********  SCOT NOTE  **********

THERE ARE ITEMS OF GREAT CONCERN IN THIS APPROVAL BLOCK THAT AFFECT THE DEPLOYMENT OF CREWS AND EQUIPMENT.

READ THIS FIRST

ALL SHORELINE SEGMENTS WITHIN THE CHENEGA ISLAND NORTHWEST BLOCK ARE ON LANDS OWNED BY CHENEGA VILLAGE CORPORATION. PERMIT NO ACCESS TO UPLAND AREAS AT ANY TIME.
SHORELINE CLEANUP PROGRAM

DATE_ 8/27/89_ SHORELINE SEGMENT_ CH-900

LOCATION: (see enclosed map) _CHENEGA ISLAND-SOUTH OF_

MASKED BAY _ (CHENEGA ISLAND NORTHWEST BLOCK) _

ADEC NO. _ _ _ SHORELINE ASSESSMENT DATE: _ 8/20/89 _ 

Recommended Cleanup Activity(ies):
No cleanup recommended at this time (subject to FOSC reassessment 
at a later date), due to no oil.

Priorities Considerations:
No oil

Ecological Constraints (from site survey):
A cataloged anadromous stream (#16200) is located in this 
segment. If cleanup is planned notify ADF&G and RAT forty eight 
hours prior to beginning cleanup activities.

Archeological Constraints (from site survey):
If cleanup is planned, a full archeological assessment is 
required.

State Historic Preservation Officer *

ISCC: _Sharon K. Christopher_ Date: _Aug 29, 89_

EXXON: _Dwight D. Todd_ Date: _9-1-89_

FOSC: _C. E. Nelson_ Date: _9-1-89_

* Signature required to satisfy stipulations in Alaska DNR land 
use permits for tide and submerged lands.
**SHORELINE OIL EVALUATION**

Date: 8/20/85  Time: 13:20  Observer: G. MACDONALD

Surveyed From: Foot/Boat/Helio/Plane  Weather: Sun/Cloud/Rain/Snow/Fog

LOCATION  Cheney I, south

LOCATION  Masked Bay

SEGMENT NUMBER  CH-900

LENGTH OF SHORELINE SEGMENT: 4,200 m

ACCESS: Foot/Vehicle/Boat/Barge/Helio/Float Plane

SHORELINE:

Submerged rocks: navigation hazard

Shoreline Type: SPI/BEA/COV/HLD/STRT  Slope: LANG/HANG/VER

Wave Exposure: High/Med/Low

Sediment: B, 10% / C, 15% / P, 15% / G, 10% / S, 15% / M, 15% / R, 45%

Drift Debris on Beach: Yes/No  Supra/Upper/Mid/Lower Type

OIL

Degree of Oiling: Heavy/Moderate/Light/No Oil/Unobserved

Area of Beach Impact: SU / SP / H / M / L  NOT APPLICABLE

Continuous: Y/N  % of Segment Width of Band: _______ m

Sporadic: Y/N  % of Segment

Est. Oil Thickness where > 1cm: _______ cm  Est. Oil Penetration: _______ cm

Pooled Oil: _____%  "Free" Oil: _____%  Coated: H, _____% / M, _____% / L, _____%

Fresh: _____%  Mousse: _____%  Tar Formation: _____%

Drift Debris Oiled?: Yes/No  Supra/Upper/Mid/Lower Amount: H/M/L/

Comments:

- rock stream coastline, narrow embayments with intertidal
  grassy wetland

- discontinuous trace for line(s), < 2 m wide
  typically e up. HTE -> sh, on steep rock

-
DOCUMENTATION:
☑ Aerial photo marking segment boundaries: Attached

VTR: Y/N  Tape Number(s)

Photography: Y/N  Roll Number(s)

Sample Numbers Collected: None
SEGMENT CH-900

DANGEROUS PASSAGE

low relief, mod. shelter, steep rocky shelf; trace fault discontinuous top band <3m wide @ up. H17Z. Steeply bedded, easily weathered sediments.

KEY
- trace oil (0.1m wide)
- stream
- Sea Grass
- Thin
- Steep
- Peat & grass intertidal wetlands; no oil.
- mud; slaty cob-fab. beaches.
- no oil.

--- 1 mile ---

8/26/89
G. Macdonald
8/20 SEGMENT CH.-900
13:20 hrs Δ Thin → Δ STEEPLE

mod. sheltered, steep rocky coast. 
 discontinuous trace for line (1) of H.T. A 
< 2 cm wide total.

mod. angular/sheltered sub-cobbles 
often of intertidal greenkelp. no oil.

See Gorse abun. & muddy firth <

LYC.

LEV thic to line - a SL+ @ Δ 
STEEPLE ≤ 1-2 cm max., < SW long.

14:20 hrs
END OF SEGMENT
ECOLOGICAL EVALUATION

LOCATION: Prince William Sound
SITE: W. Chenega Is.
LOCATION PREFIX: (Internal Passage, Brgy)
SEG. NO.: CH-900
LENGTH: 4,300 (M)

DATE: 08/20/89
TIME (HHMM): 1320-1415
TIDE HT.: 5.5-9.0 ft

OILED ZONE: Splash
SUBSTRATUM: Rocks, Boulder, Cobble, Gravel, Sand, Mud

LIVE BIOTA

Fucus (algae): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
  Dense, continuous bands present, especially on larger boulders, rocks, and cobble.

Mytilus (Mussels): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
  Small, infrequent patches present on sides of rock walls. Some present amongst
  gravel, cobble, and boulders near fish-streams.

Balanus (Barnacles): Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
  A narrow dense, continuous band present on vertical rock walls. Also present on
  tops of larger cobble - boulders.

Littorina
Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
  Scattered throughout the high intertidal zone, especially among Fucaceae

Limpets: Patchy Y/N Contin. Y/N Dense Y/N Sparse Y/N None Y/N
  Scattered throughout high intertidal - especially on bare cobble higher up

OTHER OBSERVATIONS: Seagrass beds nearshore (see map). Potential anchovys
fish stream located (see map). Several grassy wetlands areas. Small clam
beds near eelgrass beds. Subsurface kelp beds on rocky shallow subtidal area

CLEANUP PRECAUTIONS: No cleanup is recommended due to the low/insufficient
amounts of oil and higher numbers of ecologically sensitive areas within segment.

MAMMALS: Otters 1/offshore Harbor Seals ___ Sea Lions ___ Whales ___
Other

BIRDS: 2 Lego's 1/Adult + 1/Immature Upon 3 Common Mergansers

GENERAL OBSERVATIONS: A wide variety of habitats are present within this segment.
This increase in habitat diversity results in an increased species diversity and organism
abundance.
### CULTURAL RESOURCE EVALUATION

**Date:** 8-20-89  
**Location:** Dangerous Passage  
**Site:** Cheenga, N. coast  
**Location Prefix:** CH  
**Segment #:** CH-900  
**Length:** 4300m

**Survey Method:**  
- Air (A - indicate on map)  
- Boat (A - indicate on map)  
- Ground (G - indicate on map)

**Known cultural resources (AHRS #):** None  
**Data Source:** AHRS

**Oil conditions/beach visibility:** True to very good visibility

**Width of beach zone surveyed:** 2 m  
**Tree fringe surveyed:** 2 m

**Cultural resources observed in beach zone (AHRS code):** None

**Cultural resources observed in tree fringe (AHRS code):** None

**General observations justifying survey method and segment's site probability:**

**Shore Profile:** Subtropical cobbles/gravel to 2m beach/sediment

**Fresh Water Sources:** Several freshwater and possible seepages, streams

**Sea Exposure:** Semi-protected

**Access/Safety:** Good access, barring offshore reefs, safety

**Probability of undiscovered sites in beach zone (circle one):** 1 2 3 4 5

**Monitoring during cleanup needed:** Yes/No  
**Collection:** Yes/No

**Photos:**  
- Color Roll #__  
- Frames__  
- B/W Roll #__  
- Frames__  

**Observer(s):** D.C. Phippen

**Time survey started:** 1330  
**Time survey ended:** 1430

**Cultural resource considerations/restraints:** Standard constraints
low relief, mud silted, steep rocky shoal; trace fault
discontinuous tvy band < 3ms wide
E up. HITZ. Steeply bedded, easily weathered sediments.

KEY
- trace oil
  (<0.1m wide)
- stream.

SEGM. CH-900

--- 1 mile ---
Shoreline Treatment Process(es) Completed for this Segment

- [ ] Hot water wash
- [ ] Warm water wash
- [ ] Water deluge
- [ ] Mechanical
- [ ] Non-mechanical
- [ ] Other

Exxon

Treatment as indicated above has been completed. Request demobilization from this segment.

Comments: Treatment of segment is complete. Ready for demobilization and deployment to new segment

Signature: Peter A. Allen
Date: 8/27/89
Time: 3:16

Printed Name: Peter A. Allen

Existing Shoreline Condition As Visually Determined by USCG

<table>
<thead>
<tr>
<th>Surface Oil</th>
<th>Percent</th>
<th>Degree of Oiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>Heavy</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>Light</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>Very Light</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>None</td>
</tr>
</tbody>
</table>

Subsurface Oil
- [ ] Yes
- [ ] No

Reassessment
- [ ] Yes - necessary
- [ ] No - not necessary unless re-oiled

ADEC rep

Comments: Oil contamination observed. Limiting oil is light & very light in visible pockets. Some light subsurface oil present.

Signature: Joseph S. Stanier
Date: 8/27/89
Time: 15:30

Printed Name: Joseph S. Stanier

FOSC rep

Demobilization approved/disapproved

Comments: 

Signature: [Signature]
Date: 8/27/89
Time: 15:30

Printed Name: [Signature]

COPY: EXXON ADEC FOSC ISCC