

EXXON VALDEZ OIL SPILL
PRINCE WILLIAM SOUND ZONE

A CHRONOLOGY OF OIL SPILL RELATED
ACTIVITIES AT
ANADROMOUS STREAM NUMBER
226-40-16780

BEACH SEGMENT LA-18 (Sleepy Bay)

ALASKA DEPARTMENT OF FISH AND GAME
HABITAT DIVISION

1989 & 1990

ALASKA DEPARTMENT OF FISH AND GAME
333 Raspberry Rd.
Anchorage, AK 99518

January 24, 1991

Ken Middleton

REPORT #3

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INTRODUCTION

The purpose of this document is to provide state attorneys and Alaska Department of Fish and Game (ADF&G) staff personnel with a ready reference source for one of the more severely oiled streams in Prince William Sound. The information available in ADF&G files is presented in chronological order beginning with the earliest records and ending at the conclusion of 1990 field activities. It is important to realize that this report does not necessarily represent a summary of all information available.

This unnamed stream located in Sleepy Bay at the northern end of Latouche Island received the most severe impact from the Exxon Valdez oil spill. The notched shaped bay, facing northeasterly, was in a direct line with the southwesterly flow of oil, and the bay acted as a natural trap.

This stream was a cataloged anadromous stream before the oil spill. Eight observations were made by Habitat Division field people between July 22 - August 26, 1990. The highest number of fish seen was 150 pink salmon in the lower intertidal zone of the stream on August 24, 1990.

The stream was first surveyed April 18, 1989 during the Departments' initial reconnaissance surveys to locate oiled streams. The seven photos taken, both aerial and ground, are graphic representations of the extreme oiling conditions in and around this stream.

No historical escapement data was located at the time this report was compiled.

STREAM SUMMARY REPORT

CHRONOLOGY OF EVENTS

LA-018 (Sleepy Bay) ASC #226-40-16780

S.F. survey

- 4/18/89 This stream was surveyed by ADF&G personnel. Documentation consisted of a field sketch map depicting general oil coverage approximately 50 meters to either side of the stream, and approximately 100 meters upstream from the stream mouth. Notes on the sketch indicate pooled oil 3-5 inches deep, oil saturated into substrate 2 feet and deeper, plus oil on larger substrate in the stream proper. Seven photos were taken at the site, two aerial and five ground perspectives.
- 6/12/89 Habitat biologist, Jack Winters visited this stream. He took both aerial and ground video coverage plus the first notes detailing oiling conditions and recommending the use of sorbents along stream edges to collect oil from cleanup operations. He noted that the gravel the stream courses through is 100% oiled. The top layer of oil is black and tarry but just below the surface, brown mousse covers all the rocks.
- 6/14/89 A shoreline evaluation was conducted by a SCAT group covering oil, ecological and cultural resource evaluations. The oil evaluation basically indicated heavy oiling over 100% of segment in a band 50+ meters consisting of 90% fresh oil and 10% mousse. Penetration was listed at 30 cm. Observer was Rick Gillie of Woodward Clyde, contractor to Exxon. No state observer on this survey.
- 6/17/89 Three documents are on file for this date,. One is S.C.A.T. memo from Ed Owens to Andy Teal listing detailed preferred techniques for moving contaminated sediments into the lower intertidal zone for cleaning by wave action. This memo is procedural and generic, not specially related to any particular site. However, it does appear to be related to a second document titled "Shoreline Treatment Guidelines for Northern Evans and Latouche Islands." This document is dated 17, June 89 with the typed initials EHO, so presumably Ed Owens drafted this on the basis of the above memo. The portion relating specifically to LA-18 is copied below.

AREA 6-Stream Mouth (SCAT segment LA 18)

within 20 yards east and west of the stream, recommend pushing river-bank sediments down into lower tidal zone at earliest opportunity and allow river and wave action to clean and redistribute the material.

-could use a Bob-cat for about 3 hours for this site.

The following general comments were footnoted to the specific recommendations for individual segments and sites:

These recommendations can be applied to all boulder, rock and beach environments except the sheltered bays, where the flush/flood washing methods may be used e.g. in SHELTER BAY.

In summary:

-on heavily oiled rock and boulder shores use the OMNI's avoid human traffic due to safety factors.

-on beaches where possible/appropriate use (1) manual seaweed/debris pickup, (2) water/air injection, and (3) pushing/mixing, in that order.

-use flush/flood only in sheltered bays and other sheltered areas e.g. west of Evans Point.

EHO
17 June 89

The third document consists of a Shoreline Cleanup Program form, essentially a work order during this season, but this particular form is a working copy in that it does not have the required signatures to constitute a formal work order. Most of the typed recommended cleanup procedures have been crossed out on this copy with a note referring to I.S.C.C. discussion on 6/21/89.

6/21/89 An Anadromous Fish Stream Authorization was issued by Marilyn Sigman (ADF&G) with cleanup procedures and stipulations listed that apparently were worked out this date via the I.S.C.C. in Valdez. (attached)

6/22/89 A ADEC Daily Shoreline Assessment (inspection) form was completed by Laurie Keefer. She was accompanied by U.S.C.G. representative Gary Ryder and SCOT inspector Tom Harrison. She reported that 30 VECO workers had collected 60 bags of oiled debris along a

ALASKA
DEPARTMENT OF FISH AND GAME

STEVE COWPER, GOVERNOR

333 RASPBERRY ROAD
ANCHORAGE, ALASKA 99518-1599
PHONE: (907) 344-0541

EXXON Valdez-Oilspill Cleanup
Anadromous Fish Stream Authorization

Date 6/21/89

EXXON Authorized Representation C. B. SIKSTROM

Shoreline Segment LA-18

Anadromous Fish Stream Number (s) 226-40-16780,

Sleepy Bay

Approved Cleanup Techniques (See attached)

Approved Cleanup Period before July 10, 1989

Alaska Department of Fish and Game

Marilyn Sigmund
Authorized Officer

[Signature]
Permittee's Signature

June 21, 1989

Authorization is hereby given to perform measures necessary to mitigate impacts of the EXXON Valdez oil spill:

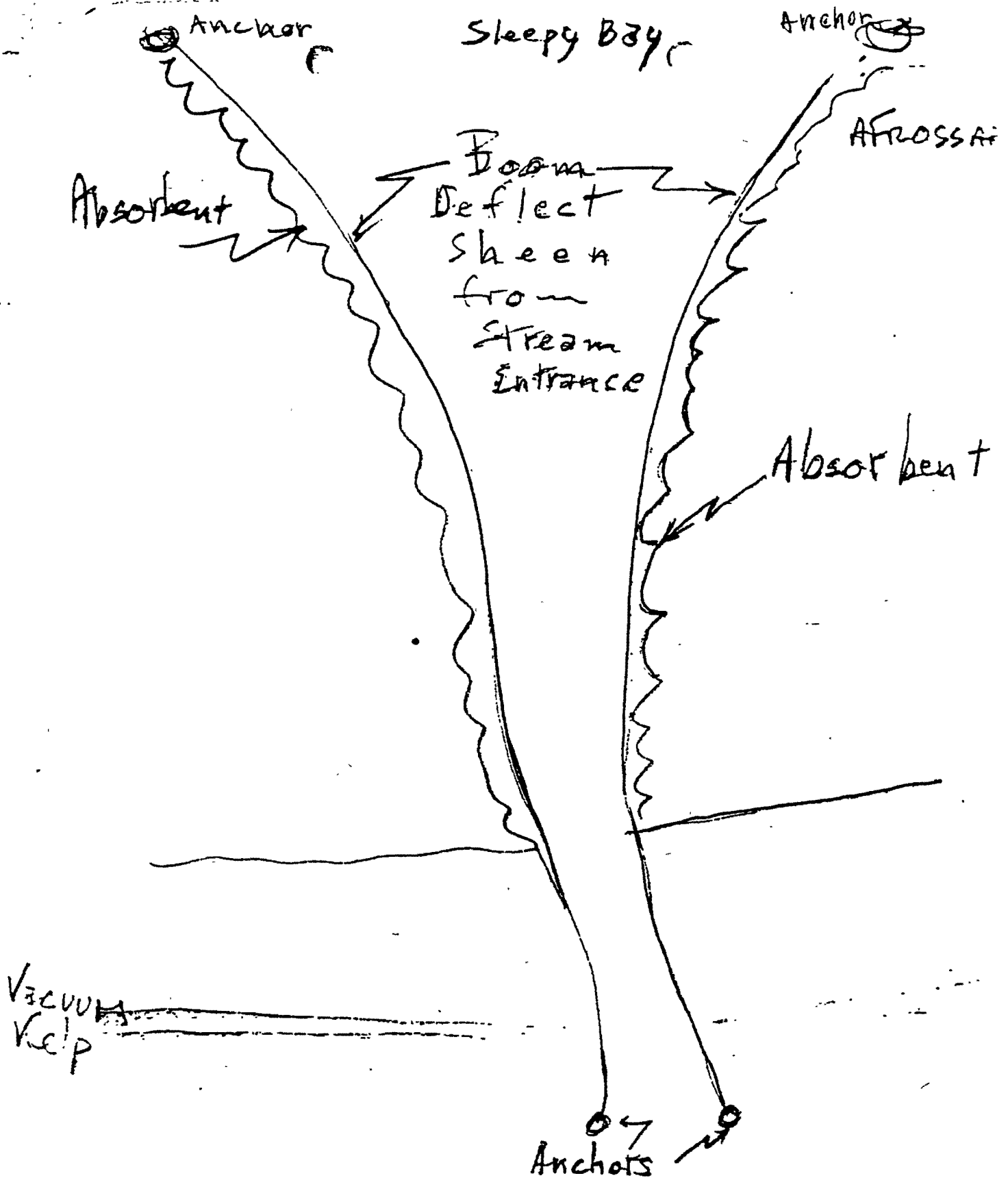
1. Use of a front-end loader or backhoe to remove all oil-contaminated sediments from the top and faces of the unvegetated stream banks.
2. Use of manual oil clean-up methods (i.e., shovelling, raking, hand pick-up) or portable steam-cleaning units to remove all oil-contaminated sediments and oil from rock surfaces with the stream channel.
3. Replacement of bank gravels with clean (i.e., free of oil or other toxic components) material to restore the original stream profile.

The following stipulations shall apply to all work done:

1. Disposal of contaminated materials shall be a sufficient distance away from the stream floodplain to prevent reintroduction of materials or pollutants.
2. Vehicle access to the stream channel is prohibited.
3. Access by workers to the stream channel shall be limited to that necessary to perform authorized manual work.
4. Introduction of oil-contaminated material or debris into the stream floodplain shall be minimized prior to removal work and prohibited thereafter.
5. Booms shall be placed and maintained per the attached EXXON workplan as long as the threat of oil or sheen introduction into the stream is present.
6. Cross sectional profiles of the stream channel and "as-built" profiles following restoration work shall be provided to the Alaska Department of Fish and Game no later than August 1, 1989.

Further mitigative measures may be required.

MS:nms
EXXON3



SUGGESTED
BOOMS FOR
AREA 5 STREAM
MOUTH

Submitted by
E. Owens, Exxon
representative
at Interagency Shoreline
Cleanup Committee meeting
1/2/78

200 yard stretch. Only hand wiping, raking, shoveling and debris collecting was being done due to the anadromous stream. A double row of snare booms were employed along the stream banks.

6/23/89 Field notes from ADF&G representative Marilyn Sigman reflected special concerns regarding use of a backhoe along stream banks. The concern related to gravel compression and subsequent squeezing of oil into the stream as the backhoe rocked to pick up gravel on the slopes. The field crew personnel also recommended chain-link fencing lined with sorbent materials to collect seeping oil during washing operations. Another concern was expressed about washing operations on gravel east of the stream since terrain slopes to the stream. Recommended trenching to intercept oil movement. Upon departure flight it was noted that booms in the bay were opened and sheening was occurring.

6/25/89 A Notice of Violation was issued by Marilyn Sigman
6/26/89 (ADF&G) to Cal Sikstrom (Exxon) based on field observations of ADF&G field monitor, Aimee Weseman on 6/25 and 6/26. Field reports and N.O.V. attached.

ADEC field representative Pam Keyes also inspected the site on 6/25 and 6/26. She completed a Daily Shoreline Assessment form for each visit. Her comments related to equipment problems already covered in the attached forms and are not included in this report.

6/27/89 ADF&G field representative Aimee Weseman visited the site and wrote an extensive field report on cleanup activities involving two backhoes removing oiled gravel from each stream bank. Her notes reflected the need for a decision by Exxon as to whether they intended to wash the oiled gravel and replace along stream, or to bring in new, clean gravel. Her preference was to bring in new gravel.

Pam Keyes of ADEC also visited the site and stated she believed bringing in new gravel would be less labor intense. The area under treatment was listed as 50 meters x 250 meters with six workers. VECO, Exxon and U.S.C.G. representatives were present.

6/28/89 Aimee Weseman of ADF&G was at the site most of the day as were representatives of ADEC, USFS, USCG, Exxon and VECO. Concerns revolved around ways to deal with oiled gravel below the stream bed level, and use of

STATE OF ALASKA

DEPT. OF FISH AND GAME

JAY S. HAMMOND, GOVERNOR

333 RASPBERRY ROAD
ANCHORAGE, AK 99502

NOTICE OF VIOLATION

The undersigned says that on the 25th & 26th day of June, 1989,Sikstrom,
(Last Name)Cal
(First Name)

(Middle)

P.O. Box 670,
(Residence)Valdez,
(City and State)AK 99686-0670
(Zip Code)M
(Sex)

(Date of Birth)

Exxon U.S.A
(Employment)

(Telephone No.)

did unlawfully violate the following
Alaska State StatuteA.S. 16.05.870Describe: (See Attachment 1)

company represented by the

of Amice West

The undersigned further states that this notice of violation is based upon ~~his~~ personal observations that the person named herein committed the offense contrary to law. The person named herein is to take the following steps by the 30th day of June, 1989, to correct the violation cited above:(See Attachment 2)Marilyn Sigman
(Signature, Fish and
Game Official)Field Office Coordinator
(Title)

() Personally Served () Sent by Certified Mail No. _____

Attachment 1

Violations: The following violations occurred at ADFG Stream #226-40-16780 (Sleepy Bay, North LaTouche Island):

1. No permit was on-site on June 26, 1989, for use by the work crew in violation of a condition of the ADFG permit FE 89-II-0397.
2. No cross-sectional profiles of the stream were taken prior to commencement of work on June 26, 1989 in violation of stipulation #6 of the Field Authorization issued on June 21, 1989.
3. Three unauthorized backhoe crossings of the stream occurred (one on June 26, 1989, two on June 27, 1989) in violation of stipulation #2 of the Field Authorization issued on 6/21/89.

Corrective Actions:

1. Permit must be retained on-site at all times and be made available to supervisory personnel.
2. Exxon shall obtain copies of cross-sectional profiles taken by the Alaska Department of Environmental Conservation on June 25, and June 26, 1989, for use in restoring the stream to its original profile.
3. Exxon shall ensure compliance with the stipulation that prohibits vehicle access to the stream channel unless written authorization is obtained from an ADFG representative.
4. Given the progress of work to date and available equipment and materials, the department is concerned about the ability of the permittee to complete the work authorized by the permit which requires removal of all contaminated materials from the banks, replacement with clean materials, and restoration of the original stream profile. Therefore, by June 30, 1989 Exxon shall provide the department with a plan and schedule for completing this work.

Failure to comply will result in a citation.

visited beach 5-24-89 work had been done earlier - manual removal of oiled organic debris
cutting it burning it and it was not known if it had been permitted from DEC.
also burned on 5-19

ALASKA DEPARTMENT of FISH AND GAME
Shoreline Treatment Evaluation

NAME Aimee Woseman DATE 6-25-89
TIME begin 1:00 pm end 4:30 pm
LOCATION La Touche Is - Sleepy Bay Segment LA 18 - by Anadromous Stream
WEATHER Clear & Sunny TIDAL STAGE receding to TEMP 70-80°
SEA Calm

TYPE SHORELINE TREATED:

ROCK 5 %, BOULDER %, GRAVEL 80 %, SAND 10 %, OTHER 5 % cobble

TREATMENT TECHNIQUES: (Circle all applicable)

HAND WIPING VACUUMING FLOODING OMMI BOOM

COLD-WATER WASHING HOT-WATER WASHING

MANUAL rake, shovel, hand

OTHER WORKERS ON SITE (number) 8

EQUIPMENT USED 2 - 580D Backhoes

NAMES OF OTHER OFFICIALS AND INSPECTORS AND THEIR AFFILIATION:

Frank Box - Joe Hudman - Exxon Beachmasters. Monty Craig Ueda Foreman
RAT off Tongass Range - Breitinger CS, Mike Zustra CS, Heidi Sarney DEC
Scott I. Rick Thomas ADFC crew off silver spider - Pam Keyes crew leader
Dick Roberts USFWS Neil Crozier BIA

COMMENTS (Observations on progress, problems, equipment problems, treatment deviations, new techniques, impacts to plants or animals, etc.)
work began on stream bank of Anadromous Fish stream

846-40-16780 at 11:50am. No sorbent boom was in place along stream as in
Title 16 Field authorization. Mike Zustra, RAT USCG & I spoke with Frank Box.
(no scot on scene) Work ceased as we discussed issue. He interpreted permit as booms & sorbent
at end of workday but during treatment we compromised on 4 layers of sorbent
across stream perpendicular. Work resumed at 1:25 & the second backho
began working also. Work progressed slowly, beginning at the top of the

SCOT II: was only on scene for 1 hr - they arrived only at 2:00 PM. request & weren't of much assistance. They did, however, suggest placing more filter fences across stream to block oiling in stream.

Page 2
Shoreline Treatment Evaluation
ADF&G

RECOMMENDATIONS: (Needs or changes in equipment, personnel or procedures to benefit shoreline treatment):

oiled area, reachable by backhoe. The bucket of the hoe would scrape away the stream bank, pulling it back from the edge then transporting it down the bank to the bottom of the oiled zone, spreading it out. The bank gravels are fine and oil penetration is deep > 1' deep. The backhoe dug 1 1/2 ft down to reach clean

gravel. Work progressed approximately 20-25 ft downstream along the bank by 4:30. The backhoes slipped a lot on the oiled rocks (being on wheels) and were somewhat precarious with their loads - almost went into stream several times. A track vehicle would be more stable with better traction. In Craig recommended a 315 CAT, D4 Do: or a 350 John De

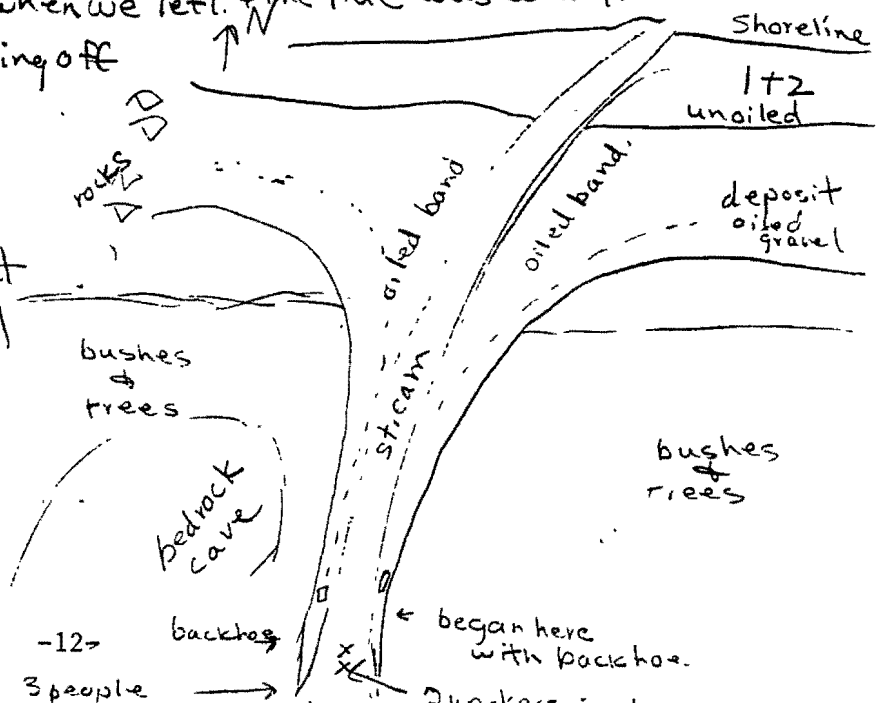
The heat of the day really brought up the oil in pools on the beach.

It was agreed upon at the end of the work day to place containment & shore boom along both sides of the stream and around beach at bottom of oiled zone. It wasn't in place when we left & the tide was coming in on the oiled zone - a lot of oil was coming off

ADF&G RAT
Shoreline Treatment Evaluation
EXXON3
aw:nms

the area immediately. A boat with sorbent boom was on hand to soak it up. Recovery on these large amounts of oil & re-oiling will be a problem here.

Pinks were seen jumping in Sleepy Bay



ALASKA DEPARTMENT of FISH AND GAME
Shoreline Treatment Evaluation

NAME Aimee Roseman DATE 6-26-89
TIME begin 8:30 end 5:30 pm
LOCATION LaTouche Is-Sleepy Bay Segment Ln 18-stream #226-40-16
WEATHER Sunny TIDAL STAGE HT 8:15 (1.8) TEMP 65-75
SEA calm LT 1:23 (1.0)

TYPE SHORELINE TREATED:

ROCK 5 %, BOULDER %, GRAVEL 80 %, SAND %, OTHER 5 % cobble

TREATMENT TECHNIQUES: (Circle all applicable)

HAND WIPING VACUUMING FLOODING OMMI BOOM

COLD-WATER WASHING HOT-WATER WASHING MANUAL-Rake, shovels, hand

OTHER WORKERS ON SITE (number) 8 - Veeco

EQUIPMENT USED 2 - 580D Case Backhoes, hand shovels, rake

NAMES OF OTHER OFFICIALS AND INSPECTORS AND THEIR AFFILIATION:

Kelly Williams - med-tox ass (Exxon)
Rick Thomas SCAT, Dave White - New, SCOT, Sharon Christoffersen, Jackie Mitchell NOAA
Ed Owens-SCAT, Karolien Debuschere SCAT, Carl Yanagawa, Mark Dalton-CAC

Wallie Walker - Veeco Foreman in charge of work for day, Monty Craig - Veeco Foreman
Dave Hall - Roxanne Peterson, Julie Noffke - DEC doing stream profile

COMMENTS (Observations on progress, problems, equipment problems, treatment deviations, new techniques, impacts to plants or animals, etc. Backhoe work began here at 8:30 this morning. When I arrived at 9:30 they were

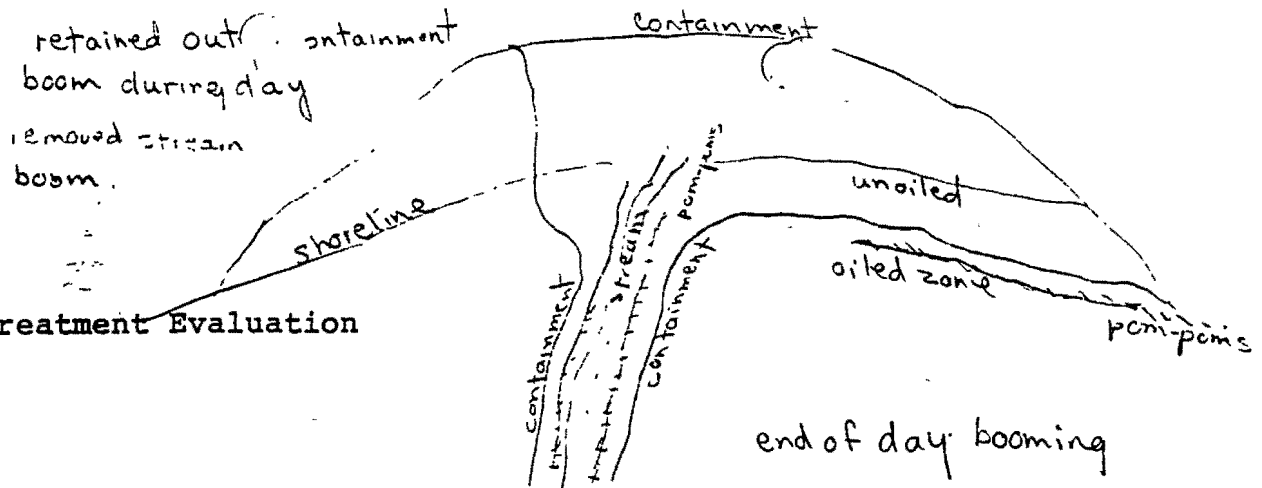
working on the river stream containment boom. Met with Veeco Foreman of the day - Willie Walker
who was totally in the dark as to what was going on. He had no permit site - I gave him a copy

The hoe operators were new also. We had numerous mechanical problems thru-out the day. Hoe on east side
had no hydraulic fluid for front end for over 2 hrs - dug a ditch but couldn't move the pile.

Hoe on west broke down for an hour & had it's bucket modified to be more effective.

Western hoe crossed stream at mouth & back to get this work done (violation of permit - without
my permission. Lower bridge washed out with tide, upper one still in place.
Work was slow - on east side particularly. By end of work day 4:00 - west side had progressed
10 ft downstream & 5' wide - 2-4 ft deep depending on penetration. Siled gravel on west was moved
down to Int 2 - within siled area. The east side is more difficult to maneuver in because of large
rocky & steeper slope much time was spent clearing this in order to move the siled area.

Page 2
Shoreline Treatment Evaluation
ADF&G



RECOMMENDATIONS: (Needs or changes in equipment, personnel or prodedures to benefit shoreline treatment):

away from stream An area 5 ft long x 15' wide was dug. By end of day - half the piled gravel was still by stream - hadn't been moved over yet. Oil penetration very deep here, operator dug next to stream - lower than stream bed - still oiled - I had him put back gravel or stream would overflow banks. Will need clean gravel to replace it before attempting to remove - may have to dike stream to contain while exchanging gravel.

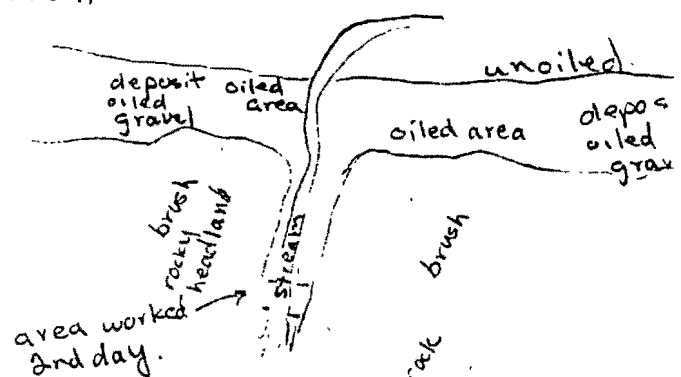
Had many visitors to site. Ed Owens ~~error~~ SCIT advised Walker to work closely with me - Walker agreed & was more than happy to get direction from someone. At my request he had pom-poms placed in spot along bank where oil oosing into stream. DEC transect team on site yesterday & today to do stream profile. Exxon failed to get it done, but began work anyway. While operation seems to be poorly run - it's not being given attention or priority by Exxon.

Oil penetration seems to be deeper as we progress down stream. It was 1 ft at top & is 2-4 ft - 15 ft down stream.

The two back hoes need to switch sides. The western one is 4-wheel drive & needs to be on more difficult eastern side. Eastern hoe is 2-wheel & would work on western side. I gave Walker permission to make exchange using 2 sheets of plywood across stream. He may make move tomorrow.

ADF&G RAT
Shoreline Treatment Evaluation
EXXON3
aw:nms

Two-wheel drive hoe (on east) may be leaking hydraulic fluid. Need to watch if they put more in. They put it in today & should it have to replace for duration.



backhoes adjacent to the stream. Aimee and the USCG representative, Chris Hogan, agreed that removal immediately adjacent to the stream best handled by manual shoveling rather than risk pushing oil and oiled gravel into the stream by pressure of wheeled backhoes and dropping the bucket into the gravel. They also discussed barricade structures to protect the stream while removing/replacing below-bed gravel. Staked chicken wire lined with sorbents and pom-pons was proposed.

Wes Ghormley and ^{Cindy} ~~Andy~~ Clagett of ADEC visited and completed a Daily Shoreline Assessment form. They delivered 10 cases of snare booms to the crew. They reported only three workers were on site and more were needed.

6/29/89 Marilyn Sigman of ADF&G was to meet Cal Sikstrom of Exxon today, but he did not show up. However, several other people did. Jacqui Michel and Dave Kennedy of NOAA; Joe Hiteman and Frank Joseph, Exxon foremen; two SCOT U.S.C.G. representatives; Pam Keyes, John Bauer and Bob Hull of ADEC. The discussion revolved around possible solutions to two problems:-1) oil encountered in the stream bank that extended below the stream bed, and, 2) a clean gravel source still had not been located by Exxon. The consensus recommendation was to construct a sorbent fence, place clean gravel behind it, then place contaminated gravel that had been washed with hot water behind this to restore the banks. Michel recommended using beach gravel from the upper storm berm or uplifted (pre-earthquake) beach gravel as clean sources. She also suggested that bioremediation application in the oiled gravel might help biodegradation, but had reservations about ammonia concentrations and possible effects upon eggs and alevins.

Marilyn noted that oiled sediments had slumped along the east bank. Also the pom-pons and snare booms were oily and had not been effectively placed between oiled sediments and the stream.

An ADEC Daily Shoreline Assessment report this same date noted that Exxon had canceled operations due to a vague permit.

6/30/89 A memorandum from Marilyn Sigman of ADF&G was sent to Steve Provant, SOSOC, pointing out the Notice of Violation she issued 6/26/89 listing corrective

actions to be taken by 6/30/89, efforts to resolve on-site problems by collective agency and company representatives as well as at the 6/30/89 Interagency Shoreline Cleanup Committee, and that no revised work plan had been received. She stressed her concerns about the prospect of getting needed work done by the 7/10/89 deadline. She also pointed out that Exxon had voluntarily ceased site work at 5:00 p.m. 6/28/89.

An ADEC Daily Shoreline Assessment report this date indicated no work activity although 5 workers and 2 backhoes were on site. Overnight storm had washed out the foot bridge, and a light sheen was observed in the stream. The notes also reflected that operations were on hold pending an I.S.C.C. review today. This holdup was voluntary on the part of the operator as indicated above.

An ADEC stream profile dated 6/30/89 is in the file. Nine transect elevation profiles were plotted from the stream mouth to above the upstream oil reach. Presumably this was constructed in response to concerns about excavation of oiled sediments extending below the stream bottom and maintaining hydrology integrity of the stream.

7/1/89 A Permit Amendment was issued by ADF&G specifying cleanup procedures and a deadline date of July 10, 1989.

A letter from Exxon responding to the Notice of Violation served June 30, 1989. Both documents are included in this report.

ADEC monitor Pam Keyes visited the site and completed a Daily Shoreline Assessment form. The two backhoes were not in operation at the time of her visit at mid-day. The comment section of our file copy was not readable.

7/2/89 ADF&G representative Marilyn Sigman visited the site and noted no further work had been done since her last visit.

A letter from C.B. sikstrom representing the shoreline cleanup advisory team was addressed to Marilyn Sigman of ADF&G outlining a plan and schedule for cleaning priority anadromous streams (attached)

7/3/89 A Notice of Violation was issued by Marilyn Sigman of ADF&G against Exxon. The violations and required

(Vers 6/10/89) (H:\clerical\forms\shorlnas.frm)

ID#

1997

(Office Use)

A.D.E.C. DAILY SHORELINE ASSESSMENT

(One for each beach inspected)

NAME Pam Keyes / John Hayes DATE 1/30/89 TIME begin 10:00 end 11:04LOCATION LaTouche Island, Hoopy Bay SEGMENT LA-18WEATHER clear sunny TEMP 45-70°F SEA calmTYPE SHORELINE TREATED: Boulder %, Cobble %, Pebble/Granule/Sand %,
Mud %, Rock %

TREATMENT TECHNIQUES: (Circle all applicable) HAND WIPING VACUUMING

LOADING OMMI BOOM COLD-WATER WASHING HOT-WATER HI-PRESSURE

HOT WATER LO-PRESSURE OTHER No activityEQUIPMENT USED 2 backhoes not in operationWORKERS ON SITE # 5 VECO ✓ NORCON OTHER AMOUNT OF SHORELINE TREATED: Length: 40 yd Width: 40 ydESTIMATED AMOUNT OIL/WATER EMULSION RECOVERED: EX DEC (BBLs)ESTIMATED AMOUNT DEBRIS RECOVERED: EX DEC CUBIC YDS (LxWxH)ANIMALS OBSERVED DEAD DISTRESSED NAMES OF OFFICIALS AND THEIR AFFILIATION: Floyd Dougen, Joe HitemanFrank Joseph EXXON, Steven Foster VECO

COMMENTS (Observations on tide stage (rising/falling), progress, problems:

equipment problems, treatment deviations, new techniques, Coast Guard comment

and clean-up estimates, etc.): Storm from previous night washedout walk bridge. Booms appeared to be disturbed. Lightsheen was observed in stream. Deposits of oiled gravel

RECOMMENDATIONS (Needs or changes in equipment, personnel or procedures to benefit

shoreline treatment): SIGNATURE: Pam Keyes 1/30/89

and were located in HITZ. It was discussed that the deposits should be removed manually to discourage high tides creating re-oiling of the shore. This sections operations are still on hold until information from ECL meeting has been recieved. The meeting, 6/30/89, was to include discussions about stream treatment alternatives acceptable under given permit. Aluminum gang plank was placed to replace washed out bridge. Observed areas of re-oiling. Oiled pompoms were replaced w/ new. Sorbent was placed w/in containment boom. One string of sorbent was placed across stream at HITZ and another at stream mouth. Sheen was lighter by 14:50. Some light sheen observed near bank. Sheen appears to originate from heepage from oiled bank.

Paul 6/30/89

DEPARTMENT OF FISH AND GAME

July 1, 1989

FG 89-II-0397
Amendment II

FILE COPY

General Public

Re: Permit Amendment for Cleanup and Removal of Crude Oil
and Crude Oil Byproducts from Anadromous Fish Streams
in Prince William Sound

This amendment supercedes Amendment I to FG 89-II-0397 for
the Prince William Sound area, issued on June 30, 1989.

Pursuant to AS 16.05.870(b), the Alaska Department of Fish
and Game (ADF&G) has determined that an Amendment of General
Permit No. FG 89-II-0397 is warranted to allow for the
continuation of on-going activities and the use of existing
techniques for the cleanup and removal of crude oil and
crude oil products resulting from the EXXON Valdez oil spill
from anadromous fish streams in Prince William Sound. Work
conducted in streams specified to be important to the
spawning, rearing, or migration of anadromous fish pursuant
to AS 16.05.870(a) will include the use of sorbent
materials, hand tools and hand-operated equipment, and other
appropriate methods authorized by an ADF&G representative.

In accordance with AS 16.05.870(d) (Anadromous Fish Act),
project approval is hereby given subject to the following
stipulations:

1. All instream cleanup activities conducted under the
terms of this permit Amendment shall be completed by 10
July, 1989.
2. All instream work to remove crude oil or related
materials from anadromous fish streams shall be approved
by a representative of the ADF&G in writing prior to the
initiation of the activity.

For any activity which significantly deviates from the
approved plan the permittee shall notify the ADF&G and
obtain written approval in the form of a permit amendment
prior to the commencement of the activity. Any action
taken by the permittee which increases the overall scope of
the project or which negates, alters or minimizes the intent
or effectiveness of any stipulation contained in this permit
will be considered a significant deviation from the approved


plan. The final determination relative to the significance of any deviation and the need for a permit amendment is the responsibility of the ADF&G; therefore, it is recommended that the ADF&G be consulted immediately when a deviation from the approved plan is being considered.

This letter constitutes a permit issued under the authority of AS 16.05.870. This permit must be retained onsite during construction, and expire 10 July, 1989. Please be advised that our approval does not relieve you of the responsibility of securing other permits: state, federal, or local. You are encouraged to contact the Alaska Permit Information Center, 3601 C Street, Suite 1350, Anchorage, Alaska 99503, telephone 563-6529 if you are in doubt as to the need for obtaining other permits.

Pursuant to 6 AAC 80.010(b), the conditions of this permit are consistent with the Standards of the Alaska Coastal Management Program.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. The department reserves the right to require mitigation measures to correct disruption to fish and wildlife created by the project and which were a direct result of the failure to comply with this permit or any applicable law. This permit decision may be appealed in accordance with the provisions of AS 44.62.330 - 44.62.630.

Sincerely,


Norman A. Cohen, Deputy Commissioner

EXXON COMPANY, U.S.A.

POST OFFICE BOX 670 • VALDEZ, ALASKA 99686-0670

FILE COPY

July 1, 1989

Ms. Marilyn Sigman
Field Office Coordinator
State of Alaska
Department of Fish and Game
Valdez, Alaska 99686

Re: Reply to Notice of Violation served June 30, 1989
(Sleepy Bay, North LaTouche Island)

Dear Ms. Sigman:

To comply with Notice of Violation personally served on Exxon June 30, 1989 and a 24 hour extension provided by Charlotte Craig on June 30, 1989, Exxon provides the following plan and procedure for completing the work on Sleepy Bay, North LaTouche Island and similar operations:

1. Exxon has agreed to use ADEC cross-sectional profiles for Sleepy Bay. Prior to restarting this operation, Exxon has obtained copies of cross-sectional profiles taken by the Alaska Department of Environmental Conservation on June 25, 1989, for use in restoring the stream to its original profile. Cross-sectional profiles for June 26, 1989 have not been located, but Exxon will obtain same if made available.

2. Prior to restarting the operation, Exxon will provide a copy of the applicable permit to the cleanup contractor and obtain a signed letter by said contractor (a) acknowledging receipt of the permit, (b) agreeing to comply with the terms of said permit and (c) agreeing to retain a copy of the permit on location at all times.

3. Exxon designates its on-scene beachmaster for coordination with the ADF&G field representative during operations. Also, if possible, Exxon would like William Rainey, Exxon Command Center, Valdez, Alaska, to receive any notices of violation in the future.

4. At the conclusion of the operation, the survey contractor or Exxon will check the site to determine if the stream's bank has been properly restored. "As built" profiles will be prepared.

Page Two
Ms. Marilyn Sigman
July 1, 1989

5. Exxon will submit to ADF&G the pre-commencement drawings and "as built" drawings after completion of the operation, but prior to August 1, 1989.

6. Any variances from the permit will be confirmed in writing by ADF&G before the activity constituting a variance is commenced. After further review of the restrictive requirements in ADF&G's June 30, 1989 Amendment to the applicable permit, Exxon anticipates submitting a new plan and schedule to complete the restoration of stream #226-40-16780.

7. Prior to releasing the work order for commencing similar operations, Exxon will require a copy of the cross-sectional drawings.

I trust the foregoing is more than adequate to meet the requirements of the notice of violation, including unauthorized backhoe crossings. Exxon intends to implement similar procedures in similar cases in the future.

Thank you for your cooperation.

Sincerely,

EXXON COMPANY, U.S.A.


William Rainey

WR/gjm
cc: Cal Sikstrom

Ms. Marilyn Sigman
Field Office Coordinator
State of Alaska
Department of Fish and Game
Valdez, Alaska 99686

89-07-02

RE: ANADROMOUS FISH STREAM TREATMENT PLANNING

Dear Ms. Sigman:

We have examined our Shoreline Cleanup Assessment Team files for information on the priority streams that you described to Ms. Michel in your June 30th letter. The following is Exxon's proposed plan and schedule for the streams designated as highest priority for cleanup prior to July 10. By this letter we are requesting advance approval of this plan.

Only sorbent materials, hand tools and hand operated equipment will be used to conduct any further treatment at these streams. Exxon will:

1. Cooperate with ADFG and RAT in development of appropriate manual methods for cleanup of these streams. Daily updates on on planned areas of work will be provided.
2. Deploy small work crews to priority stream locations.
3. Supply each work crew with absorbants (eg. boom, pompoms, mats) to recover free and collected oil. Provide shovels, rakes and bags for collection of oily debris.
4. Manually remove oily debris from the stream bed, within the stream banks, and on the stream banks near the stream. The objective will be to prevent the recontamination of the stream by runoff from adjacent oil contaminated areas. Pressure washers will not be used in the stream channel. Other appropriate methods may be used if approved by ADFG/RAT.
5. Protect the stream from reoiling, when cleanup is conducted in adjacent areas by booming the mouth of the stream.
6. Notify ADFG/RAT prior to completion of the cleanup work on each stream and obtain permission prior to leaving the work area.

Mobilization to conduct this work will begin immediately and cleanup is planned to commence as soon as possible. Highest priority streams will be treated by July 10 and streams where treatment need not take place before July 10 will be treated by fall of this year. I understand that field authorizations for this work will be issued in the field and that will greatly help us to expedite this work.

Please call me or Andrew Teal at 835-7749 if you have any questions or concerns about this work.

Yours truly,



C. B. Sikstrom

Shoreline Cleanup
Advisory Team

corrective actions are attached.

Marilyn Sigman visited the site and discussed problems and options with Admiral Robbins, George Murray and Bill Stillings of Exxon. The basic issue involved obtaining clean gravel to replace the removal of oiled gravel to restore and maintain stream bank integrity. Exxon representatives were pursuing prospects of upland gravel with Chenega Corporation. It was decided that upland gravel would not be satisfactory due to concerns for destabilizing the upper beach as well as fines and organic materials entering the stream. Agreement was reached that unoiled gravel in the lower intertidal zone was the only on-site source.

Bill Stillings was to draft a workplan this afternoon which would incorporate ideas proposed and agreed to by the group.

A detailed workplan was submitted to Marilyn Sigman by Bill Stillings that described work in both the upper and lower stream areas with accompanying maps (attached).

7/4/89 ADF&G representative, Marilyn Sigman, arrived at the site via vessel. The approved Exxon workplan was discussed with field monitors as well as Exxon and USCG representatives. Areas were staked to delineate clean gravel removal in the lower intertidal zone. She also reported a re-oiling area to the west of the stream, approximately 1,000 feet, with very black mobile oil along a 300 foot stretch.

ADEC representative, Laurie Keefer, completed a Daily Shoreline Assessment sheet with co-workers John Hayes and Pam Keyes. Report covered general status and progress of cleanup operations this day. It was noted that oil was leaking out where manual cleanup had been performed, and was creating sheen and brown film in pools within the stream bed. A sketch was made of the stream work site indicating dates and type and extent of work performed.

7/5/89 A daily Shoreline Assessment form was completed by ADEC monitors Laurie Keefer and John Hayes. Comments reflected that removal of oiled gravel within 10 feet of stream complete. Backfilling complete on the west bank, and 80% complete on east bank. It was also noted that much more oil film and sheen visible in the creek today. Sketch map was attached.

Attachment 1

Violations: The following violations occurred at ADFG Stream #226-40-16780 (Sleepy Bay, North LaTouche Island):

1. No permit was on-site on June 26, 1989, for use by the work crew in violation of a condition of the ADFG permit FE 89-II-0397.
2. No cross-sectional profiles of the stream were taken prior to commencement of work on June 26, 1989 in violation of stipulation #6 of the Field Authorization issued on June 21, 1989.
3. Three unauthorized backhoe crossings of the stream occurred (one on June 26, 1989, two on June 27, 1989) in violation of stipulation #2 of the Field Authorization issued on 6/21/89.

Corrective Actions:

1. Permit must be retained on-site at all times and be made available to supervisory personnel.
2. Exxon shall obtain copies of cross-sectional profiles taken by the Alaska Department of Environmental Conservation on June 25, and June 26, 1989, for use in restoring the stream to its original profile.
3. Exxon shall ensure compliance with the stipulation that prohibits vehicle access to the stream channel unless written authorization is obtained from an ADFG representative.
4. Given the progress of work to date and available equipment and materials, the department is concerned about the ability of the permittee to complete the work authorized by the permit which requires removal of all contaminated materials from the banks, replacement with clean materials, and restoration of the original stream profile. Therefore, by June 30, 1989 Exxon shall provide the department with a plan and schedule for completing this work.

Failure to comply will result in a citation.

To: Ms. Marilyn Sigman
Field Office Coordinator
State of Alaska
Department of Fish and Game
Valdez, AK. 99686

From: William Stillings WS
Exxon Shoreline Operations

Subject: LA-18 - Anadramous Stream #226-40-16780

Date: July 3, 1989

Re: Restoration of Stream #226-40-16780
Reference Mr. William Rainey letter July 1, 1989
Answer to Notice of Violation - Sect. 6

This letter will serve to document the discussion which took place on site this morning. As agreed by all involved, when completed, this work should clean the stream to allow a successful salmon spawn.

See drawing attached:

- The stream bank will be segmented into two sections:
 - 1) Above the bridge.
 - 2) Below the bridge.

Area above the bridge:

- Bank materials will be manually removed from along the shoreline and hauled to the lower 1/3 of the inter tidal zone. No material will be used to replace the removed gravel.
- Material to remove:
 - West side: approx. 20' long X 8" deep X 6' wide
 - East side: approx. 50' long X 8" deep X 6' wide
- Don't backfill removed material.

Below the bridge:

- Pull material away from the stream bank 1' deep X 10' wide on both banks. Replace material as the work progresses.
- Move the material to the lower 1/3 of the inter tidal zone.
- Replace this material with clean gravel obtained at or near the low tide line on both sides of the stream. Material obtained will be at least 30 yards from the stream channel. This area will be staked out and approved by the ADFG/RAT team. As large an area as possible will be staked out. No more than two skimmings, each 6" deep, will be used without rechecking with the ADFG/RAT team.

Machine crossings will be necessary. They will be minimized and made at the low tide line. No hauling of gravel across stream bank.

Viscous booms will be put in place and maintained at the completion of work until the end of the spawn.

Upper Section

EAST



WEST

DRAFT

Lower Section



old

10'

MATERIAL TO
BE REMOVED

old

10'

Material will be replaced along
stream bank

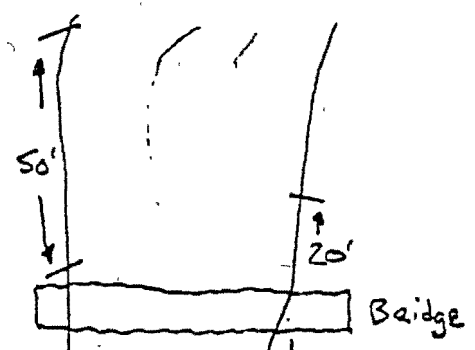
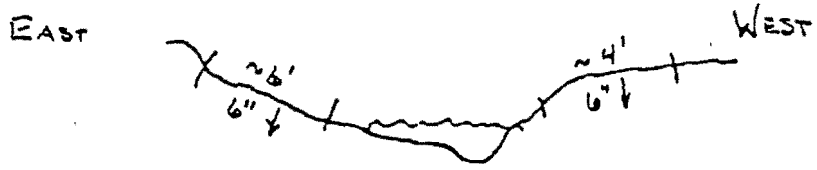
Not to scale

SLEEPY BAY

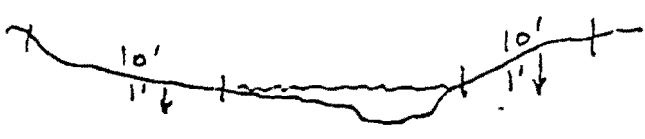
UNIT 13 TEAM 10-10-10130
EF

WEST

UPPER SECTION



LOWER SECTION



AREA 7000A
WATER
AREA 3000A

100'

10'

10'

Gravel
Pickup
Area

30 yds

30 yds

SLEEPY Bay

(MAP NOT TO SCALE)

7/6/89 ADEC representatives Laurie Keefer and Pam Keyes visited the work site and completed a Daily Shoreline Assessment form. Manual cleaning and mechanical digging of oiled sediments with backhoe continuing. Backfilling of east bank proceeding with raking of the fill. Oil on the water surface and containment booms in place.

7/7/89 ADEC representative Pam Keyes completed a Daily Shoreline Assessment report. One backhoe and nine rakers and shovelers were working. Operations reported satisfactory. Snare booms were employed along stream banks, and a "V" boom at stream mouth. Comments were not legible on second page of report.

ADF&G representative Aimee Weseman reported concerns about oiled gravel being stockpiled too close to the stream. She also reported that some contaminated fill material was being collected because of the tidal level the crew was working at.

7/8/89 ADEC representatives Laurie Keefer and John Hayes reported on a site visit. Ten workers were engaged plus a 580 D Case backhoe/loader. Pockets of mousse were exposed by today's operations. Brown oil scum and heavy mousse observed in water of bay along shoreline east of stream. Brown oil and sheen observed in stream water above foot bridge. Little oil observed in stream below bridge.

7/9/89 ADF&G representative Charlotte Craig visited the site. She questioned the U.S.C.G. inspector, Paul Putkey, concerning his willingness to sign off the site as completed. Putkey replied that he considered the area sufficiently clean if "gross contamination" was removed. When asked to define this standard, he responded by saying the only criteria was that the oil not be runny. Craig commented that this criteria would differ depending upon time of day and temperature.

ADEC monitors visited LA-18. This was the final day for cleanup operations since USCG representative Putkey approved demobilization. Sheen and brown oil were reported along the west bank above the foot bridge and along the beach on the east side of the stream. A brown oil band approximately 14 yards wide was reported along the east shore. A containment boom was heavily oiled with mousse approximately one foot wide along the outside edge. Recommended leaving snare and containment boom in place until fish arrive.

- 7/24/89 A memo to the files was written by Marilyn Sigman of ADF&G concerning Exxons' request for an "as built" stream profile to fulfil the stipulations in the 6/21/89 ADF&G authorization. Eric Gundlach of ADEC agreed to do the work. ADEC had previously completed a stream profile (6/30/89) after Exxon failed to produce one as stipulated in the 6/21/89 work authorization, resulting in a Notice of Violation.
- 7/31/89 A composite stream profile "as-built" was completed by ADEC. (This essentially compares the "before and after" stream profile as a result of excavation and backfilling).
- 8/16/89 ADEC field monitors Laurie Keefer and Pam Keyes visited the site. Today's operation involved the LCM Marlene B to apply Inipol. Inipol spray to be confined to oiled cobble/gravel areas. No sheen was observed and operations reported as satisfactory.
- 10/3/89 ADEC conducted a Post-Treatment Survey. Detailed field sketches with notes accompany the standard form. Overall, this assessment characterizes the segment as heavily oiled. The area east of the stream was noted as very heavily oiled in the UITZ. The area west of the stream ranged from heavy brown stain with free oil and mousse to mid-light oiling with up to 10 centimeter penetration. The 500 foot sector surveyed was divided into six units for classification. The summary assessment sheet is attached.
- 10/22/89 ADF&G field personnel Rick Gustin, Mike East and Dulce Ben spent most of the day developing a detailed and professional survey of the entire stream mouth area. The intent was to establish transect study sites for long-term evaluation of cleanup operations. This effort was abandoned after this initial survey. Nonetheless, these products represent the most complete survey effort known at this site. In addition to large, detailed maps delineating the most heavily oiled zones with compass bearings and measurements, duplicate sediment samples were collected in four sample plots where pits had been dug (oil penetration exceeded 25 centimeters in all but the outermost beach site). Information derived from each pit included oil characterization, elevation profile and video/photo documentation.
- 11/10/89 ADEC Shoreline Treatment Summary. This is a three page document listing all pertinent dates and processes from the initial SCAT survey on 6/17/89 up

ADEC EXXON VALDEZ POST-TREATMENT SURVEY REPORT

SEGMENT#: LA018
LOCATION: SLEEPY BAY, LATOUCHE I.

DATE: 10/03/89
TIME: 10:30

Survey Type: Boat, Ground
Team: D. Hall, P. Montesano

WEATHER AND SEA CONDITIONS

Weather: Sunny, Cloudy, Rain Wind Direction: SE
Sea State: Calm Knots: 0-15

Low Tide: 22:19	Feet: 0.35	High Tide: 3:57	Feet: 10.8
Low Tide: 9:41	Feet: 3.06	High Tide: 15:37	Feet: 12.6

SHORELINE DESCRIPTION

Shoretypes: H,LR,B
(H=headland, LR=low-lying rock, B=beach, C=cove, L=lagoon, M=marsh)
Wave Exposure: H,M (H=high, M=moderate, L=low)
Shoreline Composition: R,B,C,G
(R=bedrock, B=boulder, C=cobble, G=gravel, S=sand, M=silt)

OIL CHARACTERISTICS

Degree of Oiling: N,H
(N=none, VL=very light, L=light, M=moderate, H=heavy)
Area of Impact: N,M
(S=supratidal, H=high intertidal, M=mid tidal, L=low intertidal)
Max. Oil Thickness: 1 mm (1 = 1 mm or less, 0 = no oil)
Max. Oil Penetration: 40 cm (35 = 35 cm or greater)
Percent Segment Categorized as Oiled: 100%
Presence of Oiled Driftwood (y/n): y
Oil Types: M,SY,A,ST
(P=pooled, M=mousse, SY=sticky, T=tar, A=asphalt, ST=stain)
Samples: LA018-1 / LA018-2 / none / none

DAMAGED OR OILED ORGANISMS

Fucus (y/n): n Barnacles (y/n): y Mussels (y/n): y
Dead Mammals: 0 Dead Birds: 1

SOLID WASTE FOUND

Type: One locality, signs, paint marks
Bags Collected: 0

Draft

Printed: 12/12/89 11:43

to the last seasonal ADEC survey on 10/22/89.

1990

- 2/6/90 A Segment Summary was produced by ADEC for LA-18. A copy of this is attached. There is an apparent typo error on line five. The July should probably be June - the date for FOSC approval.
- 4/17/90 STAG (State Technical Advisory Group) reviewed the SSAT (Spring Survey Assessment Team) package with cleanup recommendations. The actual survey was conducted 4/2/90, and this package specifically covers sub-division A of LA-18. It was noted by the ADEC field representative (J. Lynn Martin) that the super-tidal area was covered with snow, but appeared to be heavily oiled and further inspection should be conducted at a later date. The STAG review proposed adding the removal of oiled debris from the snow-covered upper tidal fringe area. This survey does not address the anadromous stream.
- 4/22/90 A survey to assess oil conditions specific to the anadromous stream (226-40-16780) was conducted by ADF&G representatives Mike Wiedmer and Tom Crowe. Surface oiling was measured, as was thickness and substrate penetration for the stream proper and immediate stream bank areas. Recent re-oiling was noted and the suspected source was a heavily oiled beach area approximately 50 meters west of the stream. A detailed map defining oiled areas was attached to the field report form. A summary of observations and cleanup recommendations is attached.
- 4/27/90 A revised assessment/evaluation packet of the original SSAT survey (4/2/90) was processed for STAG-TAG review. The reason was due to incorrect boundaries indicated on the original survey documents. The revised boundaries include the anadromous stream (226-40-16780) and reflect adjusted measurements and percentages from the original material.
- Two evaluation forms (work orders) were processed through TAG and one was signed by the FOSC. One deals with the anadromous stream specifically (signed by the FOSC 5/14/90), and another addresses the remaining shoreline of the segment (signed by TAG members 5/17/90). Copies of each are attached for reference.
- 5/7/90 ADEC received the Anadromous Fish Stream Assessment package for the STAG-TAG review process. The STAG

SEGMENT SUMMARY

LA-18

FEBRUARY 6, 1990

DRAFT

Beach segment LA-18 is located on the southwest corner of Sleepy Bay on the northeast end of Latouche Island in Prince William Sound. This segment was SCAT'ed on June 17, 1989. The SCAT report was submitted to the ISCC on June 17 and recommended for approval on July 21. Recommended treatment included removal of oiled fucus, debris pick-up, relocation of contaminated sediments to unvegetated portions of the lower intertidal zone using a front-end loader, and treatment of sediments with a hot water flush. Directions were given to avoid re-introduction of contaminated materials into stream. The FOSC approved this plan on June 21, 1989.

A ground survey (station #43) was run on this segment by Clay Robinson and David Hall on June 11, 1989. There was an average coverage of 45%, an average penetration of 30 cm and an average thickness of 2 mm.

Treatment commenced on June 22, 1989, according to the USCG. Exxon stated on the Segment Inspection Record that treatment consisted of header hose flood, warm/hot water moderate pressure wash, and backhoes. ADEC observers Wes Ghormley, John Hayes, Cindy Claggett, Pam Keyes, Laurie Keefer and Peter Frantz reported treatment to include hand wiping, substrate removal, debris pick-up, header hose flood, cold water/high pressure wash, warm/hot water moderate pressure wash, backhoes, shovels, rakes and chain saws.

Problems noted on the Daily Shoreline Assessment forms:

1. Oil film and sheen in anadromous stream
2. Tractor crossed stream which is totally
3. Against ADF&G permit
4. Oiled gravel falling into anadromous stream
5. Oil release beyond containment boom

Another ground survey (station #43) was run on this segment on July 16 by Clay Robinson and Lea Ann Robinson. At that site there was an average coverage of 35%, an average thickness of 1mm and an average penetration of 50cm.

Doug Dasher (ADEC) and Paul Putkey (USCG) signed off this segment on July 16, 1989. Paul Putkey estimated 50% medium, and 50% light concentration of oil remains following treatment reassessment was recommended.

David Hall and Peter Montesano conducted a post-treatment assessment on October 3, 1989. The team found heavy and moderate oil in the form of mousse, sticky oil, asphalt and stain. There was a maximum penetration of greater than 40 cm. A dead bird was found and recovered from this segment.

Original by Dianne Munson
Revised by Lea Ann Robinson

Lea Ann Robinson

2/55

~~File~~

spare copy

Alaska Department of Fish and Game
ANADSCAT Observations and Recommendations
Team 15 - Michael Wiedmer and Tom Crowe

22 April 1990

ASC # 226-40-16780
Segment LA-018 (Sleepy Bay)

Observations This site was very heavily oiled last year and remains a heavily impacted site. Nearby deposits of mobile oil are a source of chronic re-oiling of the stream channel. Within the upper intertidal portion of the channel, both banks have bands of recently (< 5 days) deposited oil and oily debris. Along the low-mid-intertidal east bank of the channel are relatively recent heavy surface deposits of mousse.

3

A band of oiled substrate crosses the stream channel in the upper intertidal zone. Cascading oiled gravels and cobbles cover the western upper-intertidal bank and the adjacent submerged portion of the stream channel. Multiple pits east of the channel did not reveal significant quantities of oil adjacent to the stream. However, the upper- and mid-intertidal portions of the beach west of the channel contain large amounts of buried oil. This pattern is consistent with the sites of oiled gravel removal conducted last year (oiled gravel was removed east of the channel but not west of the channel).

The level of substrate oiling increases west from the stream. An extremely heavy deposit of mobile oil begins approximately 50 meters from the channel. This deposit is a likely source for the chronic re-oiling of the stream channel.

Although mostly covered by snow, limited observations indicate that the storm berms on either side of the channel contain significant amounts of oil and oily debris. Heavily stained cobbles and boulders are densely distributed throughout the upper- and mid-intertidal zones.

Treatment Recommendations Nearby sources of chronic re-oiling must be thoroughly treated prior to cleaning the immediate stream area. All surface mousse and tar deposits on and near the stream bank and within the stream channel should be manually removed. The oil deposit west of the channel should be hot washed, mechanically tilled, and hot washed again. This would be a very appropriate location to apply mechanical gravel washing techniques, should they become available.

FOSC 5/14/90
(3)

ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/ LA-18 STREAM NO: 226-40-16780 DATE 4/22/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)

1B Salmon stream mouth - spawning (7/10 to 8/31)

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

7II Subsistence area: Deer harvesting (8/15 to 2/28)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. There are no ecological constraints re: intertidal biota as per recommended cleanup measures.

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact a member of Exxon's Cultural Resource Program immediately (564-3657; 564-3658 or 564-3276).

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

Subsurface Oil Observed: Yes X No Maximum Depth 45+cm

RECOMMENDATIONS:

 No Treatment Recommended

X Treatment Recommended

X Manual Pickup

X Bioremediation

X Tarmat: Breakup

X Removal

 Snare/Absorbent Booms

X Oil Snares (pom poms)

 Absorbents (pads, rolls, etc)

X Spot Washing: X Wands

 Beach Cleaner

X Other (see comments)

COMMENTS: Recommended treatment includes 1) manual removal of patties and vegetation, 2) mechanically till areas as indicated on attached sketch, 3) spot wash, and 4) bioremediate after tilling. Line stream bed and waterline with pom pom boom during mechanical work. Work should be conducted between 5/15 and 7/10 and with ADF&G approval of tilling and bioremediation of stream banks. SEE ANAD. FISH ADDENDUM dated 6/10/90.

TAG COMMENTS: MANUALLY RAKE SURFACE OILED SEDIMENTS AWAY FROM THE STREAM, PARTICULARLY WHERE BANKS ARE STEEP IN THE VITZ AS INDICATED ON SKETCH
MANUALLY REMOVE TARMATS ON EAST BANK OF STREAM.

TAG APPROVAL DATE: 5/10/90

ADEC ART WERNER

EXXON ANDY GEAR

NOAA Burl Wernett

USCG D. D. HOME

-36-

FOSC: [Signature] DATE: 5-14-90

NOTIFY CUC 24 HRS. IN ADVANCE OF WORK

SHORELINE EVALUATION

SEGMENT ST/LA-18 (REVISED) SUBDIVISION A (1 OF 1) DATE 4/2/90 (REVISED)

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

6U Recreation: Tent sites (6/1 to 9/15)
7II Subsistence area: Deer harvesting (8/15 to 2/28)
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
#226-40-16780 (Ps, 12/89)

Sensitivity code and general time constraints. See attached Ecological sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

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

ARCHAEOLOGICAL CONSTRAINTS:

If cultural resources are uncovered during shoreline treatment, stop work in the vicinity, mark the location of the find and contact Exxon's Cultural Resource Program immediately (564-3274 (Anchorage) or 229-1508 (24hrs.)).

SHPO SIGNATURE: Robert J. Owen DATE: 5/18/90

FILED CATEGORIZATION:

Wide 449m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 30 m
Subsurface Oil Observed: Yes X No Maximum Depth 30 cm

RECOMMENDATIONS:

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

COMMENTS: Recommended treatment includes: 1) manual removal of tarmat, 2) manual pick up of mousse and pooled oil, 3) spot wash as required and 4) bioremediate areas of coat and cover as indicated on attached sketch map. Work between 5/15 and 7/10 due to anadromous stream constraints.

TAG COMMENTS: _____

TAG APPROVAL DATE: 5/17/95

ADEC ART WELMER 2/1/68

EXXON ANDY TSN

NOAA Gary Petrac Asst. Petrac

USCG G.A. REITER G.A. REITER

FOSC: _____ **DATE:** _____

review indicated several field recommendations that were not carried through on the Exxon prepared evaluation-recommendation form for TAG review. The STAG reviewer for ADF&G noted specific recommendations in addition to those initially proposed to be relayed on to TAG for consideration.

- 5/14/90 The final TAG cleanup proposals are signed by the FOSC. This is the same form referred to above under the 4/27/90 entry. This final work order reflects the additional concerns and cleanup procedures indicated under the 5/7/90 entry above. This collection of file forms also included a pre-Anad Scat survey conducted 4/13/90 by Tom Crowe of ADF&G, and Greg Cheney of Exxon which had not been noted earlier in its proper chronological order.
- 6/10/90 An Anadromous Fish Stream Evaluation Addendum was issued by the FOSC. This addendum specifies various ecological time constraints and special considerations concerning disturbances, flushing pollutants, use of Inipol, ADF&G monitoring and authorization relating to stream work.
- 6/14/90 An Anadromous Fish Stream Authorization was issued by Mark Kuwada of ADF&G.
- 6/15/90 ADEC field monitors Jay Vincent, Jan Krieger and Dale Gardner inspected cleanup activities. Their comments are attached since they reflect a continuing problem throughout cleanup operations, i.e., field operations supervisors often would not allow any cleaning other than that which was expressly drawn on a field sketch even though oiling conditions obviously and routinely extended beyond circles and arrows on a field sketch accompanying the work order.
- 6/16/90 ADF&G field monitor Rick Gustin wrote a two page typed report as a result of his visit to the stream site to observe cleanup operations. He sharply criticized the work order specifications in that they did not deal with the extensive subsurface oil condition, i.e., only surface conditions and procedures were specified. He said this failure caused frustration for the work crews. Although a Bobcat was on a barge anchored nearby, it was not used on the beach. Only one crew spent the day in essentially futile hand work without any mechanical assistance. He stated that the severe subsurface oiling condition required a bulldozer or backhoe to remove the overburden to allow workers access to actually remove oil. His assessment was

115 190

PHOTO/VIDEO DOCUMENTATION

PHOTOGRAPHS: ROLL # N/A FRAME(S): _____ REASON: _____VIDEO: TAPE # N/A REASON: _____

COMMENTS

PROBLEMS: ENFORCEMENT ACTIVITIES, UPLAND CONT., ETC.

(PLEASE NOTE IF PROBLEM WAS DISCUSSED WITH PROPER AUTHORITY,
AND SUBSEQUENT RESPONSE.)

Today's treatment activities involved the removal of tarcoat and oiled subsurface sediments both near and adjacent to Anadromous stream # 226-40-16280. There is extensive subsurface oiling at this site which is characterized as OP, OF. Although the SSAT & ANADSCAT written reports document extensive oiling in this area, the "site specific" work order maps address only a portion of the areas which need to be treated. This is a continuing problem since Exxon representatives generally will not treat oiled areas that are not identified on work order maps. The ~~needed~~ necessary equipment for mechanical treatment per work order recommendation is not currently available for use. However, Exxon officials have stated that the equipment will be available some time next week.

OBSERVATIONS: TREATMENT EFFICIENCY, POSSIBLE IMPROVEMENTS, ETC. _____

SIGNATURE

Ray Vincent 6/15/90

* ADEC DAILY SHORELINE ASSESSMENT
6/15/90 - 2nd sheet only

that the subsurface oil was so heavy that neither tilling nor Inipol could be effective if the intent is to remove oil. His recommendation was straight forward and practical - use a heavy caterpillar with a ripper bar to reach the deep subsurface oiled areas, once the overburden is removed, to allow the Inipol to be more effective as well as exposing oil for actual removal.

A revised work order (Shoreline Evaluation Form) is signed by the FOSC. It is identical in cleanup recommendations to the one signed by TAG members 5/17/90.

- 6/17/90 ADEC monitor Jay Vincent reported that less than 10% of recoverable oil has been removed from the segment. OP/OR subsurface oiling observed down to 40 centimeters in some work areas. The trenches have yet to extend down to visibly clean subsurface sediments. Equipment necessary for mechanical treatment reportedly due next week.
- 6/20/90 The FOSC issues an addendum relating to environmental constraints. It is a slight modification of the one issued 6/10/90 which basically identifies the cataloged anadromous stream in the subdivision.
- 6/28/90 ADEC monitors Brian Fitz Simons walked the site along with ADF&G monitors Rick Gustin and Tom Crowe plus Craig Levine of Exxon. The group agreed to using a tracked backhoe to work on the stormberm and tilling oiled sediments.
- 6/29/90 ADEC monitor Brian Fitz Simons reported that USCG, Exxon and ADEC supervisors agreed to have ADF&G direct the mechanical treatment for the anadromous stream area of LA-18. Work started late today on the west bank of the stream. A backhoe was used to till sediments to a depth of 4-5 feet. Areas of heavy OP were excavated and Customblen applied. Test holes dug along side of stream showed little oil in this vicinity.
- 6/30/90 ADEC monitor Brian Fitz Simons reported that track-hoe finished tilling west bank of stream. Customblen was spread in bottom of areas where OP/OR sediments were excavated before backfilling. It was decided not to smooth over excavated areas following tilling to provide more surface area for tidal action and weathering.
- 7/1/90 ADEC monitor Brian Fitz Simons reported the track-hoe uncovered a heavy pocket of OP at the tideline. The area was boomed off and water within the containment became covered with dark brown oil and mousse. The hoe completed tilling the eastern area and moved back to the west bank of the stream to finish tilling. Late in the day a 10 meter square area of OP/MS/PO was uncovered requiring hand removal. The crew dug out 2

1/2 supersacks of oiled sediments by the end of the work day.

7/3/90 ADEC monitor Brian Fitz Simons reported crew continuing to remove oiled sediments uncovered day before yesterday. Track-hoe was moved to another site.

7/4/90 ADEC monitor Brian Fitz Simons reported at length on problems encountered this day concerning discussions with USCG representative Tom Reilley and Exxon representative Criag Levine. At issue was the prospect for demobilization. Fitz Simons pointed out several TAG stipulations that had not been satisfactorily fulfilled in his opinion, while Levine questioned the need for further work. Commander Reilly, who had arrived late, stated that no debris or oiled vegetation would be removed from the grass/bush zones. He said this issue was discussed yesterday and was the wish of the landowner (Chenega Village Corporation).

Fitz Simons responded that he had just discussed this matter with C.V.C. representative Steve Ward, and that he wants oiled vegetation and debris removed from their land, regardless of location. Rick Gustin of ADF&G also supported this removal, as well as completion of remaining work. Reilley challenged Fitz Simons' authority to even address the issue of remaining work on the basis ADF&G had been relegated the responsibility for stream work. Fitz Simons advised him that while ADF&G indeed had free reign to direct stream treatment, any final demobilization and evaluation of TAG required work completion was his (Fitz Simons) responsibility. Reilley maintained that no work was going to be done in the grass/bush zone. Fitz Simons told him that was his prerogative, but he would not sign off on the segment. At this point, Levine of Exxon, said he had no problem doing the work, he just did not want to work 10-12 feet back into the brush line. Fitz Simons assured him that that would not be the case. Apparently, the day ended on this understanding.

7/5/90 An ADEC Demobilization Report for anadromous stream 226-40-16780 was signed by Brian Fitz Simons. This document is attached and specifies what recommended work that was done as well as the remaining oiling condition.

7/6/90 An ADEC visit report was recorded by Peter Montesano.

ADEC DEMOBILIZATION REPORT *for Anad Stream*
226-40-16780

To: Alaska Department of Environmental Conservation
Oil Spill Response Center
Anchorage, Alaska
Attn: John Bauer
FAX 265-4666, 265-4656

TODAY'S DATE 7-5-90

RE: SEGMENT NUMBER 2A 18

Anad Stream 226-40-16780
SUBSEGMENT NUMBER 4

DEC REP Brian K. FitzSimons USCG REP Tom Reilly

EXXON REP Craig Levine BOAT NAME/SQUAD NUMBER Columbia #2

Has work been completed as stated on the work order? If your answer is no please explain in detail how the work performed was different from the work order language. *Yes - with one deviation. TAG recommended spot washing following Tilling - None was performed.*

Is there additional oil remaining? If yes then describe amount of oil remaining (type, size of area and location). *Yes.*

Within tilled areas there are small columns of OP/OR sediments - Much moderate OR sediments remain throughout the tilled areas - Light OR & OF throughout the storm berms.

Date and Time of demobilization from segment 7-4-90
1830 hours

COMPLETE THIS FORM AND FAX TO ANCHORAGE AFTER DEMOBILIZATION FROM EACH SEGMENT.

Additional Comments (keep objective) *Custom biter was scattered throughout the area composing the Anad stream treatment zone*

Brian K. FitzSimons
signature

Revised 5/8/90

The track-hoe was used in the stream area to smooth previous work site. The crew worked mainly in an area about 10x3 meters from which 9 supersacks were filled. Under 6-8 inches of clean sediments the crew struck thick, pooled oil. Oil was removed to the OF layer, but mousse kept working back into excavated areas from between boulders.

- 7/7/90 ADEC monitor Montesano reported a short work day due to weather. Crews continue to remove pooled subsurface oil from either side of completed stream section.
- 7/10/90 A Work Plan Modification Recommendation form was made out and signed by ADEC, Exxon and USCG representatives. The reason was that Exxon and USCG recommended application of Inipol in addition to Customblen. ADF&G requested Inipol not be used. Suggested adjustment to Work Plan was to apply Customblen only to areas where manual or mechanical work was completed.
- 7/13/90 Field notes from ADF&G monitor Rick Gustin detail the extent and condition of oiling through several days of work. The basic issue was one of the industry and USCG wanting only to deal with surface cleaning. It became obvious that the more one excavated, the more oil was found, and subsequently released as a result of this activity. The State's position was that this was exactly what was needed in order to remove oil, but the industry essentially did not want to exert the time and energy to accomplish that objective.
- 7/16/90 Another ADEC Demobilization Report was issued by Brian Fitz Simons for the areas aside from the anadromous stream which was demobilized 7/5/90 with qualifications. Similar remaining oil condition problems existed at this time for those areas and a copy of this report is attached for reference.
- 7/17/90 An ADEC Demobilization Report for Inipol and Customblen Treatment was completed by Michael Ebel with amounts applied (200 gallons Inipol, 95 pounds Customblen) to 2,520 square meters of area. He also describes extent and type of remaining oil, and this report is also attached.
- 8/15/90 ADF&G monitors Tom Crowe and Rick Gustin completed an Anadromous Fish Streams/Oiling Condition Form and sketch. Oil is described as remaining in the stream bed and stream banks. Salmon recorded as milling

ADEC DEMOBILIZATION REPORT

To: Alaska Department of Environmental Conservation
Oil Spill Response Center
Anchorage, Alaska
Attn: John Bauer
FAX 265-4666, 265-4656

TODAY'S DATE 7-16-90

RE: SEGMENT NUMBER LA 18

SUBSEGMENT NUMBER A

DEC REP Brian K. FitzSimons USCG REP Kewin Dneker

EXXON REP John Butler

BOAT NAME/SQUAD NUMBER Columbia / Sq #2

Has work been completed as stated on the work order? If your answer is no please explain in detail how the work performed was different from the work order language. No. Small areas of Tarnat

OP/PO sediments and Mousse are still present around and under boulders in Boulder field on east 1/3 of segment. No spot

ushing was performed.

Is there additional oil remaining? If yes then describe amount of oil remaining (type, size of area and location). OP/PO/MS around

and under boulders on east portion of segment (intermittent)

From eastern border of Anad portion of LA 18A to Boulder field

there is an oiled lens of OP (OP) sed 4 to 6 inches below clean surface to depths of 12-14 ~~inches~~ inches - HETZ to HETZ

Date and Time of demobilization from segment 7-16-90

1800 hrs

COMPLETE THIS FORM AND FAX TO ANCHORAGE AFTER DEMOBILIZATION FROM EACH SEGMENT.

Additional Comments (keep objective)

Too much emphasis is placed on keeping to a schedual and too little on ensuring adequate treatment of segments being worked.

Brian K. FitzSimons
signature

Revised 5/8/90

ADEC DEMOBILIZATION REPORT
FOR INIPOL AND CUSTOMBLEN TREATMENT

To: Alaska Department of Environmental Conservation
Oil Spill Response Center
Anchorage, Alaska

Attn: John Bauer
FAX 265-4666

From: Mike Ebel (please print)

RE: SEGMENT NUMBER LA-18 SUBSEGMENT NUMBER A, Site #1

ADEC REP Mike Ebel USCG REP Mike Zenone

EXXON REP Frank Box BOAT NAME/SQUAD NUMBER MV/Dan Ballinger
Squad #3

Site #	Length (along shore m)	Area m ²	Inipol (gallons)	Customblen (lbs.)
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I	210m L x 12m W = 2520m ²		200 gal.	95 #
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Has work been completed as stated on the work order? If your answer is no please explain in detail how the work performed was different from the work order language.

yes.

*** Place on Hot List**

Describe the amount of oil remaining (type, size of area and location).

Heavy oil here. Surface has 1/2 in oil on cobbles and boulders under which OP begins in a 1/3-1/4 dist. Pooled black oil had seeped into areas where manual removal was formerly done (1/4 dist) mostly in WT & on western end of band. OP/OR > 25 cm (difficult to dig deeper through the underlying cobbles). The band extended from MTR-542 with an observable average depth grading heavier up the beach face at ~200. Additional Comments (keep objective) Time did not permit a comprehensive survey to flip very many rocks over but mousse and LV was found under boulders (mostly black oil in places grading brown like mousse). OR sedo were the bulk of observed subsurface oil (high percent of cobbles). Unsure of oiling below indicated cobbles.

signature Michael J. Ebel

Date and time of demobilization from segment 7/17/90

Shoremon/Demob.bio 55/30/90

(OP sedo were also seen under boulders moving east of Tarmat areas where little disturbance to cover rocks was done).

offshore of stream. Both banks listed as having patchy moderate to heavy OR in surface and subsurface sediments. Recommended for reassessment in 1991.

8/21/90 An ASAP Follow-up Recommendation was completed with comments by Bob McCready of ADEC, Al Snook of Exxon, Donald Cline for NOAA (also USCG) and Gail Evanof representing the landowner, Chenega Village Corporation. This report plus a sketch map and ADEC treatment recommendations are attached.

Another set of forms (Field Shoreline Comment Sheet) accompany the above referenced forms. These are filled out by the same people and say essentially the same thing. One additional form is included in this package which describes the type and distribution of both surface and subsurface oil in the standard assessment format. Because of this added information, and that the comment and recommendation sheets are much easier to read in this package, copies of these are also attached.

ASAP FOLLOWUP RECOMMENDATIONS

ANDO STREET

Segment: AS/ A-18

Subd.: 225-40-16780

Site: 2

Date: 8-21

1990

Conditions Observed: SURFACE COATS & STAINS REMAIN IN UPPER & MID
ITZ. SUR REMAINS IN AREAS WHERE TARMATS/TAR PATCHES
WERE REMOVED THIS SUMMER. SUBSURFACE OILING IS PRIMARILY
OIL IN UPPER ITZ.

Followup Recommendations: SEE COMMENTS BELOW

Completed by Pickup ☐ YES ☒ NO

Priority for Addressing in 1990: ☐ High ☒ Med ☐ Low

ADEC

Bob M. Coady

Robert D. M.C.

Comments:

* High Priority for '90 with ADEC approval
AP, SOR, OF, and OR is present and requires removal. Mechanical
relaxation and washing using Twin Pack (8 HP motor hoses - Handline)
is necessary with ADEC approval.

Exxon

Al Swock

Al Swock

Comments: CONTINUE TO APPLY BIO TREATMENTS TO AREAS WHERE
COATS & SUR REMAIN IN UPPER & MID ITZ. THROUGH SUMMER. RAKE
AREAS w/ SUR PRIOR TO BIO. REASSESS IN 1991

USCG

DERAEDW. CLINE

DERAEDW. CLINE

NOAA REPRESENTS
USCG.

Comments:

Areas of coat & stain may benefit from bio-treatment;
however these areas are very close to residential stream
and should be treated only w/ landowner's & fish & game's permission.
Washing may be a better solution.

Lab Rep.

GAIL K. EVANOFF

GAIL K. EVANOFF

Comments:

High Resc Priority Areas. Further manual & mechanical
work must continue. Relocate oiled sediments in LTD, Till,
manual removal of oiled sediments in stream. No bio. w/in 100m
of bank

SEGMINT 11/18

SUBDIVISION A

DATE 8/21/90

CHECKLIST

- N Arrow
- Approx Scale
- Seg/Sub Entry
- Oil Dist
- Width
- Length
- % Cover
- Substrate Character
- Est HML/WL
- SSI
- Profile Location(s)
- Profile(s)
- PH Location(s)
- Photo Location(s)

LEGEND

△
PIL No Subsurface Oil

▲
-PIL Subsurface Oil

CT/L
Continuous Distribution

CT/B
Broken Distribution

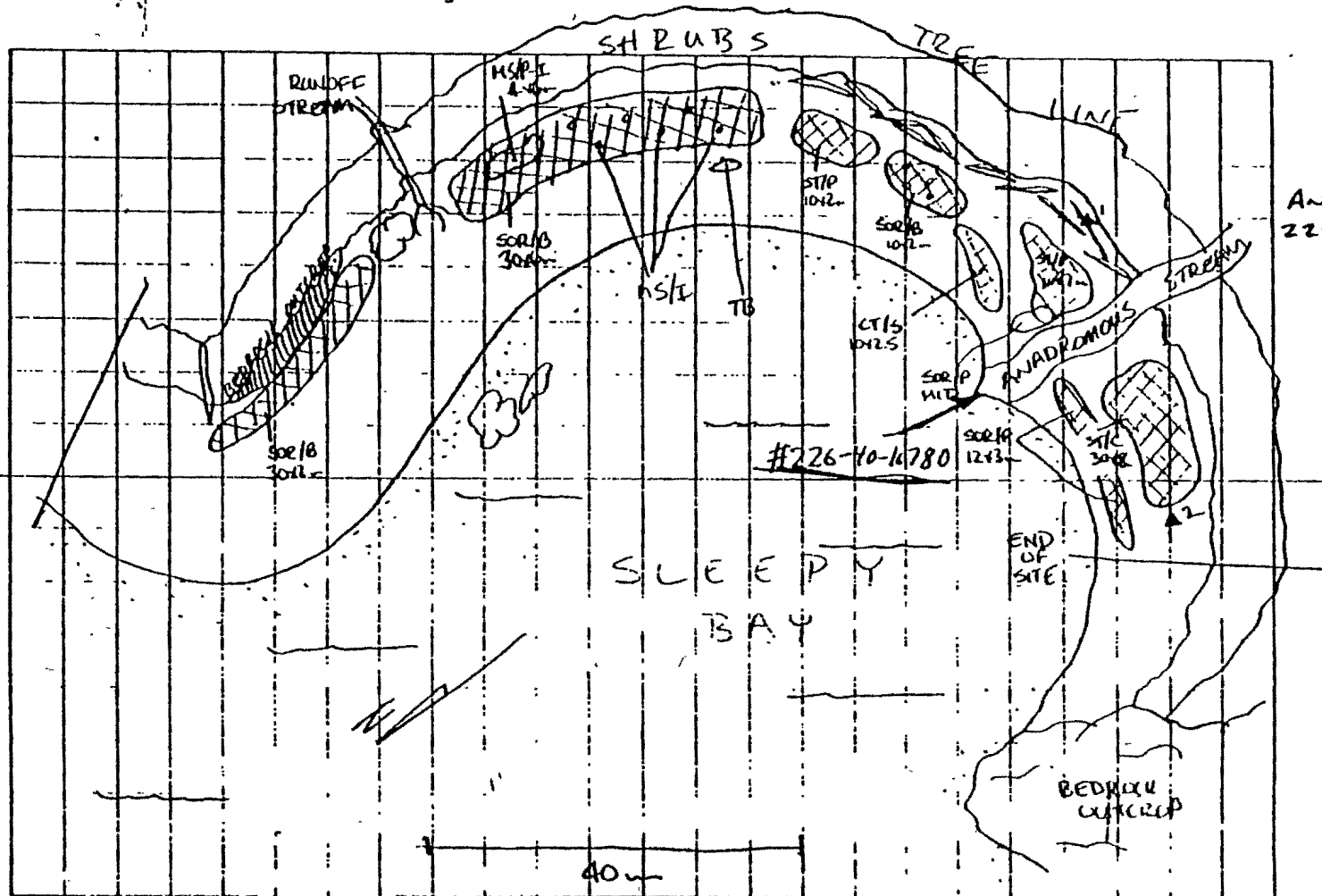
CT/P
Patchy Distribution

CT/S
Splashy Distribution

Other Vegetation

Photo location, direction, and number

XERO MAP



A.S.A.P.

LA 18-a
site 1

August 21, 1990

ADEC recommends the following treatment:

- 1) Manually remove all remaining AP, MS, SOR, as well as subsurface OP and OR oil located NE of NOAA study site.
- 2) Either manually or mechanically relocate the rocks and boulders to expose oil.
- 3) Mechanically relocate SU-UITZ berms to MITZ and upper LITZ from NOAA* study site SW to stream. Same treatment is required on West side of stream. Subsurface oil is OP and OR.
- 4) Bioremediate areas with ADF&G approval.
- 5) Monitor segment closely repeating step 1-4 as needed.

* Chenega Village Corporation (Gail Evanoff) states that CVC does not recognize NOAA study site and requires further treatment.

FIELD SHORELINE COMMENT SHEET

SEGMENT AS / LA-18 SUBDIVISION: A SITE: 10780 DATE 8-21-90

USCG NOAA REPRESENTS USCG

NAME DONALD W. CLINE SIGNATURE ☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Manually remove mousse. Apply biotreatments to stain and coat areas with careful consideration to close proximity to meandering stream. Reassess in 1991.

ADEC

NAME BOB McLEARY SIGNATURE ☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON: CVC does not recognize NOAA test site. Manually remove all AP, SOR, OP, OR at NW end of segment and NW of NOAA test site. At NOAA site, mechanically expose OP and OR submerge oil, relocate down beach face, and wash using Twin Pack system (8 HP-HW hoses, floodbars) use containment booms and skimmers. Remediate treatment areas and areas with residual oil. Following 90 treatment, reassess in '90.

LAND MANAGER

NAME CARL K. EVANOFF SIGNATURE ☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

CVC concurs with ADEC's comments.

Further manual & mechanical work must continue in '90. Reassess in '91.

EXXON

NAME AL SNOOK SIGNATURE ☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

CONTINUE APPLICATIONS OF BIO TREATMENTS THROUGH THIS SUMMER.

RAKE AREAS WHERE SOR REMAINS PRIOR TO BIO. MANUALLY EXPOSE & REMOVE MOUSSE IN 4m x 6m AREA ON EAST END OF SEGMENT. REASSESS IN 1991.

226 100 ANAO STREAM

- STREAM

MENT AS / LA-18 SUBDIVISION: 226-40-16780 SITE: 22 DATE 8-21-90

3CG NOAA REPRESENTS USCG

NAME DONALD W. CLINE SIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

Wash areas of coast & stream. If necessary, apply bio treatments w/ permission of fish & game as well as land owner.

ADEC

NAME Bob McNeelySIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

This stream segment requires further work in '90. ~~mechanically~~ mechanically relocate OP and OR subsurface down beach/so. Using a Twin Post, (8 HP) 1/2" hoses and floodline) wash sediments using containment boom and a skimmer. All '90 work should be done with ADEC approval. Prior to mech. relocation manual removal of AP and SOR is recommended. Reassess in '91.

LAND MANAGER

NAME Gail K. EganoffSIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

CVC concurs w/ ADEC's comments. Bio. under 100 meter guideline -

Reassess in '91.

EXXON

NAME Al SnookSIGNATURE [Signature]☒ YES☐ NO

PRIORITY SITE FOR REASSESSMENT IN 1991

REASON:

CONTINUE TO APPLY BIO TREATMENTS THROUGH SUMMER 1990
SOR AREAS SHOULD BE RAKED PRIOR TO BIO.
Reassess in 1991.

-53-

- 8/24/90 An ADEC Demobilization Report for Inipol and Customblen Treatment was completed by Rowann Hudnall.
- 8/25- Two BAT team reports indicated that: 1) on 8/25/90-
8/26/90 95 pounds of Customblen and 200 gallons of Inipol were applied to site #1; 2) on 8/26/90-230 pounds of Customblen were applied to site #1, and 246 pounds of Customblen to site #2.
- 8/26/90 An ADEC Demobilization Report was completed by Rowann Hudnall. A copy is attached.
- 8/29/90 TAG recommendations listed for LA-18A. Site 1 - Manual pickup of AP and Mousse in 4x6 meter area indicated on sketch (not attached). Reapply bioremediation, check with ADF&G regarding application within the 100 Meter radius of the stream. (M.P.) Site 2 - Manual rake and bioremediate in areas indicated on sketch, check with ADF&G prior to treatment. (M.P.)
- 9/5/90 An ADEC Daily Shoreline Assessment form was completed by M. Cunningham. He also attached comments that basically said that the TAG initialed follow-up cleanup directions (above) were much too specific and restrictive to address the actual and real conditions remaining in LA-18. The small tarmat removed, in his opinion, represented but a small portion of what remained on the beach and additional work is needed.
- 9/9/90 A BAT team report listed 60 pounds of Customblen applied this date. The location extended from approximately 100 meters at the west end of the segment to the boundary between LA-17A and LA-18A and covered 300 square meters. This was the third application, and Customblen pellets from prior treatment were observed.

This segment is listed for reassessment in 1991.

ADEC DEMOBILIZATION REPORT
FOR INIPOL AND CUSTOMBLEN TREATMENT

To: Alaska Department of Environmental Conservation
Oil Spill Response Center
Anchorage, Alaska

Attn: John Bauer
FAX 265-4666

From: _____ (please print)
RE: SEGMENT NUMBER LA 18 SUBSEGMENT NUMBER A-5

ADEC REP Rowann Hudnall USCG REP Don Percy

EXXON REP Frank Box BOAT NAME/SQUAD NUMBER Don Bollinger
Squad 3

Site #	Length (along shore m)	Area m ²	Inipol (gallons)	Customblen (lbs.)
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See Daily Report / OG Report for details

Has work been completed as stated on the work order? If your answer is no please explain in detail how the work performed was different from the work order language.

yes. bio reapplication. Customblen only.

Anad Stream area.

Describe the amount of oil remaining (type, size of area and location).

Continuous subsurface OR/OF UITE, MITZ.

Additional Comments (keep objective)

ADF+G Rick Gustin gave approval by radio for customblen application w/ 20 ft buffer zone by stream.

signature Rowann T. Hudnall
Date and time of demobilization from segment 8/26/90
Shoremon\Demob.bio 55/30/90

ALASKA DEPARTMENT OF FISH AND GAME
 "EXXON VALDEZ" OIL SPILL PROJECT
 VIDEOTAPE LOGS

Date Printed: 01/03/91

Page #: 1

Date	Meter#	Segment#	Station#	Location	Latitude/ Longitude	Audio?	Subject	Comments	Videographer	Roll #
06/28/89	0001 0065	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	-0°-0'-0" -0°-0'-0"	N	BACKHOE TREATMENT	BACKHOE TREATMENT OF ANADROMOUS FISH STREAM.	ROGERS & WESEMAN	89AW001V
07/04/89	0069 0270	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	-0°-0'-0" -0°-0'-0"	N	BACKHOE TREATMENT	BACKHOE TREATMENT OF ANADROMOUS FISH STREAM.	ROGERS & WESEMAN	89AW001V
07/07/89	0286 0470	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	-0°-0'-0" -0°-0'-0"	Y	BACKHOE TREATMENT	BACKHOE TREATMENT OF ANADROMOUS FISH STREAM.	ROGERS & WESEMAN	89AW001V
07/08/89	0475 0839	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	-0°-0'-0" -0°-0'-0"	Y	BACKHOE TREATMENT	BACKHOE TREATMENT, WORKING ON ADJACENT BEACH. RELOCATED GRAVEL OVER ON THE BEACH.	ROGERS & WESEMAN	89AW001V
07/09/89	0840 1133	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	-0°-0'-0" -0°-0'-0"	Y	TREATMENT	LAST DAY OF TREATMENT, POST TREATMENT.	ROGERS & WESEMAN	89AW001V

Date	Meter#	Segment#	Station#	Location	Latitude/ Longitude	Audio?	Subject	Comments	Videographer	Roll #
09/09/89	2217 2356	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	-0°-0'-0" -0°-0'-0"	Y	CATALOGUED SALMON STREAM	HEAVILY OILED CATALOGUED SALMON STREAM. SALMON IN STREAM. VIVERT BOXES. (POST ASSESSMENT).	MICHAEL EAST	89ME002V
08/20/89	0291 0315	LA018	2264016780	SLEEPY BAY	60° 4' 0" 147°50'30"	Y	SAMPLE SITE	AERIAL SHOT OF SLEEPY BAY. STREAM SAMPLE SITE.	RICHARD GUSTIN	89RLG004V
08/20/89	0315 0331	LA018	2264016780	SLEEPY BAY	60° 4' 0" 147°50'30"	Y	INTERTIDAL SITE	LOWER INTERTIDAL SITE.	RICHARD GUSTIN	89RLG004V
08/20/89	0331 0347	LA018	2264016780	SLEEPY BAY	60° 4' 0" 147°50'30"	Y	INTERTIDAL SITE	MIDDLE INTERTIDAL SITE.	RICHARD GUSTIN	89RLG004V
08/20/89	0347 0373	LA018	2264016780	SLEEPY BAY	60° 4' 0" 147°50'30"	Y	SAMPLE	UPPER INTERTIDAL SITE & SAMPLE.	RICHARD GUSTIN	89RLG004V

Date	Meter#	Segment#	Station#	Location	Latitude/ Longitude	Audio?	Subject	Comments	Videographer	Roll #
08/20/89	0373 0389	LA018	2264016780	SLEEPY BAY	60° 4' 0" 147°50'30"	Y	SPAWNING	FISH COMING INTO STREAM AND BEGINNING TO SPAWN IN OILED SUBSTRATE.	RICHARD GUSTIN	89RLG004V
08/20/89	0389 0415	LA018	2264016780	SLEEPY BAY	60° 4' 0" 147°50'30"	Y	SAMPLE	SHOT OF OIL SAMPLE AT BEACH - UPPER INTERTIDAL.	RICHARD GUSTIN	89RLG004V
02/19/90	0001 0295	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	-0°-0'-0" -0°-0'-0"	Y	FRY DIG	VIDEO TAKEN OF FRY SALMON DIG.	TOM W. CROWE	90TC002VW
02/19/90	2945 3029	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	-0°-0'-0" -0°-0'-0"	Y	SHORELINE CONDITIONS	WINTER CONDITIONS REPORT.	TOM W. CROWE	90TC003VW
04/13/90	0180 0412	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	-0°-0'-0" -0°-0'-0"	Y	CONDITION OF OILING	OILING CONDITION ON TOP OF SNOW DURING PRE-ANADSCAT SURVEY.	TOM W. CROWE	90TWC002V

ALASKA DEPARTMENT OF FISH AND GAME
"EXXON VALDEZ" OIL SPILL PROJECT
LOG OF TISSUE AND SEDIMENT SAMPLES

ASC #: 2264016780

SEGMENT #	LATITUDE/ LONGITUDE	SAMPLE ID#	MTX	#CNT	COLLECTOR	RLS#	SAMPLE DATE	SAMPLE TIME	COMMENTS
LA018	60° 3'57" 147°50'15"	89RLG073V -0- 89RLG073VD	SED	2	RICHARD GUSTIN	-0-	08/20/89	1200	LOWER INTERTIDAL 150 METERS DOWN FROM BEACH VEGETATION.
LA018	60° 3'57" 147°50'15"	89RLG074V -0- 89RLG074VD	SED	2	RICHARD GUSTIN	-0-	08/20/89	1200	MID INTERTIDAL 20 METERS FROM LOWER INTERTIDAL. LEFT SIDE OF STREAM LOOKING DOWNSTREAM.
LA018	60° 3'57" 147°50'15"	89RLG075V -0- 89RLG075VD	SED	2	RICHARD GUSTIN	-0-	08/20/89	1200	UPPER INTERTIDAL 30 METERS UP FROM MID INTERTIDAL LEFT SIDE OF STREAM FACING DOWN.
LA018	60° 3'57" 147°50'15"	89RLG076V -0- 89RLG076VD	SED	2	RICHARD GUSTIN	-0-	08/20/89	1200	OIL SAMPLE FROM 15 METERS DOWN STREAM OF UPPER INTERTIDAL 5 METERS OFF STREAMBED TO LEFT FACING DOWNSTREAM.
LA018	60° 3'57" 147°50'15"	89WP008V -0- 89WP008VD	SED	2	RICHARD GUSTIN	-0-	10/22/89	1528	SAMPLE PLOT #1 - LOWER INTERTIDAL BEARING 25° RIGHT SIDE FACING DOWNSTREAM.
LA018	60° 3'57" 147°50'15"	89WP009V -0- 89WP009VD	SED	2	RICHARD GUSTIN	-0-	10/22/89	1533	FIXED SAMPLE PLOT #2 - MID INTERTIDAL IN STREAM CHANNEL, RIGHT SIDE FACING DOWNSTREAM.

ASC #: 2264016780

SEGMENT #	LATITUDE/ LONGITUDE	SAMPLE ID#	MTX	#CNT	COLLECTOR	RLS#	SAMPLE DATE	SAMPLE TIME	COMMENTS
LA018	60° 3'57" 147°50'15"	89WP010V -0- 89WP010VD	SED	2	RICHARD GUSTIN	-0-	10/22/89	1535	FIXED SAMPLE PLOT #3 - 45° MIDDLE INTERTIDAL LEFT SIDE FACING DOWNSTREAM.
LA018	60° 3'57" 147°50'15"	89WP011V -0- 89WP011VD	SED	2	RICHARD GUSTIN	-0-	10/22/89	1540	SAMPLE PLOT #4 - LOWER INTERTIDAL 0° LEFT SIDE FACING DOWNSTREAM.
LA018	60° 3'57" 147°50'15"	90MW030V -0- 90MW030VD	SED	2	MICHAEL WIEDMER	-0-	06/02/90	-0-	SAMPLE FROM WITHIN CHANNEL - UPPER INTERTIDAL ZONE.
LA018	60° 3'57" 147°50'15"	90MW104V -0- -0-	TIS	1	MICHAEL WIEDMER	-0-	05/25/90	1150	UPPER INTERTIDAL ZONE WITHIN CROSS CHANNEL OILED ZONE. LARGE SAMPLE - SPLIT INTO 2 JARS. (FISH)
LA018	60° 3'57" 147°50'15"	90MW104VB -0- -0-	TIS	1	MICHAEL WIEDMER	-0-	05/25/90	1150	UPPER INTERTIDAL ZONE WITHIN CROSS CHANNEL OILED ZONE. LARGE SAMPLE WAS SPLIT INTO TWO JARS. (FISH)
LA018	60° 3'57" 147°50'15"	90MW105V -0- -0-	TIS	1	MICHAEL WIEDMER	-0-	05/25/90	1240	UPPER INTERTIDAL WITHIN THE CROSS CHANNEL OIL BAND. (FISH)

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Date printed: 02/22/91

DATE	TIME	SEGMENT#	STATION#	LOCATION	REASON FOR TAKING PHOTO	TAKEN BY	ROLL #	FRAME
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM TREATMENT - END OF BANK GRAVEL REPLACEMENT, HALF WAY DOWN THE STREAM CHANNEL.	AIMEE WESEMAN	89AW005V	12
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	PUSHING OILY BEACH GRAVELS AWAY FROM EAST BANK OF ANADROMOUS FISH STREAM.	AIMEE WESEMAN	89AW005V	13
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	PUSHING OILED BEACH GRAVELS AWAY FROM ANADROMOUS FISH STREAM AREA.	AIMEE WESEMAN	89AW005V	14
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM AT LOW TIDE. AIMEE WESEMAN NO TREATMENT WAS TO OCCUR IN LTZ.	AIMEE WESEMAN	89AW005V	15
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	STANDING ON EAST BANK OF ANADROMOUS FISH STREAM LOOKING WEST TOWARD LA-19 WHERE OMNI-BOOM WAS TREATING SEGMENT (POST-TREATMENT OBSERVATION OF LA 18).	AIMEE WESEMAN	89AW005V	16
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	POST TREATMENT OBSERVATION OF ANADROMOUS FISH STREAM.	AIMEE WESEMAN	89AW005V	17
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	POST TREATMENT OBSERVATIONS OF ANADROMOUS FISH STREAM. LAURIE KEEFER, DEC; RICK THOMAS, USCG; BOB HULL, DEC.	AIMEE WESEMAN	89AW005V	18
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	EAST BANK OF ANADROMOUS FISH STREAM. POST-TREATMENT OBSERVATIONS.	AIMEE WESEMAN	89AW005V	20

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	EASTERN SIDE OF ANADROMOUS FISH STREAM - REMOVED 1-2 FEET OF OILED GRAVEL DOWN BEACH - PHOTO SHOWS EDGE OF EXCHANGED GRAVEL WHERE NO WASHING OCCURED.	AIMEE WESEMAN	89AW005V	21
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	BEACH TO THE EAST OF THE ANADROMOUS FISH STREAM. AREA WHERE OILED GRAVEL PUSHED BACK FROM THE STREAM WAS DEPOSITED - NO WASHING OCCURRED IN THIS AREA	AIMEE WESEMAN	89AW005V	22
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	WORK CREW IN SWASH ZONE ON EASTERN SIDE OF ANADROMOUS FISH STREAM.	AIMEE WESEMAN	89AW005V	23
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	SHORELINE IMMEDIATELY EAST AND ADJACENT TO ANADROMOUS FISH STREAM. AREA WHERE WORK CREWS DEPOSITED OILED GRAVEL PUSHED BACK FROM STREAM, NOT WASHED.	AIMEE WESEMAN	89AW005V	24
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	LOOKING EAST AT SHORELINE IMMEDIATELY ADJACENT TO ANADROMOUS FISH STREAM. TWO FEET OF OILED GRAVEL FROM THE STREAMBANK OVERLAYS BEACH - NOT WASHED.	AIMEE WESEMAN	89AW005V	25
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	AFTER TREATMENT OF ANADROMOUS FISH STREAM - LOWER PORTION OF TREATED AREA AND LTZ.	AIMEE WESEMAN	89AW005V	26
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	AFTER TREATMENT - LOOKING FROM EAST OF THE ANADROMOUS FISH STREAM TOWARD THE WEST (LA 19).	AIMEE WESEMAN	89AW005V	27

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	AFTER TREATMENT - LOOKING FROM EAST OF THE ANADROMOUS FISH STREAM TOWARD THE WEST BANK OF THE STREAM.	AIMEE WESEMAN	89AW005V	28
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM AFTER TREATMENT.	AIMEE WESEMAN	89AW005V	29
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM AFTER TREATMENT - MITZ.	AIMEE WESEMAN	89AW005V	30
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM AFTER TREATMENT - EAST BANK, UPSTREAM FROM THE BRIDGE.	AIMEE WESEMAN	89AW005V	31
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM AFTER TREATMENT - WEST BANK, UPSTREAM FROM THE BRIDGE.	AIMEE WESEMAN	89AW005V	32
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM - BANKS AFTER TREATMENT.	AIMEE WESEMAN	89AW005V	33
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM - BANKS AFTER TREATMENT.	AIMEE WESEMAN	89AW005V	34
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM - WEST BANK AFTER TREATMENT.	AIMEE WESEMAN	89AW005V	35
07/09/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	ANADROMOUS FISH STREAM - WEST BANK AFTER TREATMENT.	AIMEE WESEMAN	89AW005V	36

-39-

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

DATE	TIME	SEGMENT#	STATION#	LOCATION	REASON FOR TAKING PHOTO	TAKEN BY	ROLL #	FRAME
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT.	AIMEE WESEMAN	89AW012V	02
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT.	AIMEE WESEMAN	89AW012V	03
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT (WEST SIDE).	AIMEE WESEMAN	89AW012V	04
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT (WEST SIDE).	AIMEE WESEMAN	89AW012V	05
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT (WEST SIDE).	AIMEE WESEMAN	89AW012V	06
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT (WEST SIDE).	AIMEE WESEMAN	89AW012V	07
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT (EAST SIDE).	AIMEE WESEMAN	89AW012V	08
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT (EAST SIDE).	AIMEE WESEMAN	89AW012V	09
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT (EAST SIDE).	AIMEE WESEMAN	89AW012V	10
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT (EAST SIDE).	AIMEE WESEMAN	89AW012V	11
08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	HOLE DUG TO SHOW OILY SUBSURFACE.	AIMEE WESEMAN	89AW012V	12

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Date printed: 02/22/91

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08/03/89	-0-	LA018A	2264016780	LATOUCHE ISLAND, SLEEPY BAY	REOILING AFTER TREATMENT (EAST SIDE).	AIMEE WESEMAN	89AW012V	13

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

DATE	TIME	SEGMENT#	STATION#	LOCATION	REASON FOR TAKING PHOTO	TAKEN BY	ROLL #	FRAME
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	UPLANDS - WEST SIDE OF STREAM	AIMEE WESEMAN	89AW017V	01
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	UPLANDS - WEST SIDE OF STREAM.	AIMEE WESEMAN	89AW017V	02
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING UPSTREAM BEFORE WORK WAS STARTED.	AIMEE WESEMAN	89AW017V	03
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST SIDE ABOVE LOG BRIDGE. OILED AREA IS TO BE REMOVED MANUALLY.	AIMEE WESEMAN	89AW017V	04
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING DOWNSTREAM PRIOR TO TREATMENT.	AIMEE WESEMAN	89AW017V	05
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING DOWNSTREAM PRIOR TO TREATMENT.	AIMEE WESEMAN	89AW017V	06
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING DOWNSTREAM PRIOR TO TREATMENT.	AIMEE WESEMAN	89AW017V	07
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	THE FIRST BUCKET REMOVED FROM THE WEST BANK. THIS IS THE UPPER REACHES OF THE OILED AREA THAT WAS REACHABLE BY THE BACKHOE.	AIMEE WESEMAN	89AW017V	08
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING EAST TO WEST - OILED GRAVELS BEING DUG UP AND REMOVED.	AIMEE WESEMAN	89AW017V	09
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST SIDE - JUST BEGINNING TREATMENT.	AIMEE WESEMAN	89AW017V	10
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EASTSIDE - BEFORE TREATMENT.	AIMEE WESEMAN	89AW017V	11

PHOTOS.ALL - ADF&G Habitat Photo Documentation

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06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EASTSIDE - BEFORE TREATMENT.	AIMEE WESEMAN	89AW017V	12
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EASTSIDE - UPPER INTERTIDAL ZONE BEFORE TREATMENT.	AIMEE WESEMAN	89AW017V	13
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WESTSIDE - MANUAL TREATMENT ABOVE WHERE BACKHOE COULD REACH.	AIMEE WESEMAN	89AW017V	14
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	BOOMING AT END OF FIRST DAYS WORK.	AIMEE WESEMAN	89AW017V	15
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	STRINGING BOOM AT END OF FIRST DAYS WORK.	AIMEE WESEMAN	89AW017V	16
06/25/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	DEC SCOT OFF "SILVER SPIDER" - PAN KEYES, WES GHORMLEY, AND CINDY CLAGETT.	AIMEE WESEMAN	89AW017V	17
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST BANK - SECOND DAY - FOREMAN WILLIE WALKER.	AIMEE WESEMAN	89AW017V	18
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	SECOND DAY - WEST BANK.	AIMEE WESEMAN	89AW017V	19
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	BOOMING AT END OF SECOND DAY.	AIMEE WESEMAN	89AW017V	20
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST BANK - BOOMING AT END OF SECOND DAY.	AIMEE WESEMAN	89AW017V	21
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST BANK - BOOMING AT END OF SECOND DAY.	AIMEE WESEMAN	89AW017V	22

PHOTOS.ALL - ADF&G Habitat Photo Documentation

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06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	BOOMING ON SECOND DAY. PHOTO ALSO SHOWS OILING IN MID- INTERTIDAL ZONE.	AIMEE WESEMAN	89AW017V	23
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	END OF SECOND DAY - MID- INTERTIDAL ZONE.	AIMEE WESEMAN	89AW017V	24
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST SIDE - BOOMING AT END OF SECOND DAY.	AIMEE WESEMAN	89AW017V	25
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST SIDE - BOOMING AT END OF SECOND DAY.	AIMEE WESEMAN	89AW017V	26
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST SIDE - BOOMING AT END OF SECOND DAY OF TREATMENT.	AIMEE WESEMAN	89AW017V	27
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST SIDE - STREAM BANK AFTER SECOND DAY OF TREATMENT.	AIMEE WESEMAN	89AW017V	28
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST SIDE - BACKHOE PARKED FOR DAY - GARBAGE LEFT.	AIMEE WESEMAN	89AW017V	29
06/26/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST SIDE - BACKHOE PARKED FOR DAY - GARBAGE LEFT.	AIMEE WESEMAN	89AW017V	30
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST SIDE - SHORELINE TREATMENT ON THIRD DAY.	AIMEE WESEMAN	89AW017V	31
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST SIDE - TREATMENT ON THIRD DAY.	AIMEE WESEMAN	89AW017V	32
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST SIDE - SHORELINE TREATMENT ON THIRD DAY.	AIMEE WESEMAN	89AW017V	33

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST SIDE - SHORELINE TREATMENT ON THIRD DAY.	AIMEE WESEMAN	89AW017V	34
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING UPSTREAM AT TREATMENT ACTIVITIES.	AIMEE WESEMAN	89AW017V	35
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST SIDE - TOP OF OILED AREA REACHABLE BY BACKHOE.	AIMEE WESEMAN	89AW017V	36
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST SIDE AFTER THIRD DAY OF TREATMENT.	AIMEE WESEMAN	89AW017V	37

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	BEACH EAST OF STREAM WHERE OILY STREAM BANK GRAVEL WAS DEPOSITED.	AIMEE WESEMAN	89AW018V	01
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	BACKHOE TRANSPORTING OILED STREAM-BANK GRAVEL AWAY FROM STREAM TOWARD LA017.	AIMEE WESEMAN	89AW018V	02
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	BACKHOE TRANSPORTING STREAM-BANK GRAVEL AWAY FROM STREAM TOWARDS LA017.	AIMEE WESEMAN	89AW018V	03
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST BANK OF CATALOGUED ANADROMOUS FISH STREAM.	AIMEE WESEMAN	89AW018V	06
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	TREATMENT ON WEST BANK OF STREAM BY BACKHOE.	AIMEE WESEMAN	89AW018V	07
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	TREATMENT ON WEST BANK OF STREAM.	AIMEE WESEMAN	89AW018V	08
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	TREATMENT ON EAST BANK OF STREAM.	AIMEE WESEMAN	89AW018V	09
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	TREATMENT ON EAST BANK OF STREAM.	AIMEE WESEMAN	89AW018V	10
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	TREATMENT ON EAST BANK OF STREAM.	AIMEE WESEMAN	89AW018V	11
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	TREATMENT ON EAST BANK OF STREAM - LOOKING UPSTREAM.	AIMEE WESEMAN	89AW018V	12
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	TREATMENT ON EAST BANK OF STREAM.	AIMEE WESEMAN	89AW018V	13

PHOTOS.ALL - ADF&G Habitat Photo Documentation

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06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING DOWNSTREAM.	AIMEE WESEMAN	89AW018V	14
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	BOOM CREW WORKING ALONG EAST BANK.	AIMEE WESEMAN	89AW018V	15
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST SIDE OF STREAM - UPPER INTERTIDAL ZONE.	AIMEE WESEMAN	89AW018V	16
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST SIDE OF STREAM IN UPPER INTERTIDAL ZONE - BOOM CREW SETTING UP BOOMING.	AIMEE WESEMAN	89AW018V	17
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EASTERN SHORELINE OF LA018 LOOKING TOWARDS LA017 WHERE WORKERS ARE WAITING FOR TRANSPORT TO BERTHING VESSELS.	AIMEE WESEMAN	89AW018V	18
06/27/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING EAST TO WEST - END OF DAY BOOMING.	AIMEE WESEMAN	89AW018V	19
06/28/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	EAST SIDE OF CATALOGUED ANADROMOUS FISH STREAM.	AIMEE WESEMAN	89AW018V	20
06/28/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	WEST SIDE - OILED STREAM BANK.	AIMEE WESEMAN	89AW018V	21
06/28/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	OILED STREAM BANK - UPSTREAM ON WEST SIDE.	AIMEE WESEMAN	89AW018V	22
06/28/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING UPSTREAM ON WEST BANK.	AIMEE WESEMAN	89AW018V	23

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Date printed: 02/22/91

DATE	TIME	SEGMENT#	STATION#	LOCATION	REASON FOR TAKING PHOTO	TAKEN BY	ROLL #	FRAME
06/28/89	-0-	LA018A	2264016780	SLEEPY BAY, LATOUCHE ISLAND	BACKHOE DIGGING IN OILED STREAMBANK ON WEST SIDE.	AIMEE WESEMAN	89AW018V	24

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - SEDIMENT SAMPLE, PLOT 1.	BEN, EAST, GUSTIN	89WP002V	04
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - SEDIMENT SAMPLE, PLOT 1, DUPLICATE.	BEN, EAST, GUSTIN	89WP002V	05
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - SEDIMENT SAMPLE, PLOT 2.	BEN, EAST, GUSTIN	89WP002V	06
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - SEDIMENT SAMPLE, PLOT 2, DUPLICATE.	BEN, EAST, GUSTIN	89WP002V	07
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - SEDIMENT SAMPLE, PLOT 3.	BEN, EAST, GUSTIN	89WP002V	08
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - SEDIMENT SAMPLE, PLOT 3, DUPLICATE.	BEN, EAST, GUSTIN	89WP002V	09
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - SEDIMENT SAMPLE, PLOT 4.	BEN, EAST, GUSTIN	89WP002V	10
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - SEDIMENT SAMPLE, PLOT 4, DUPLICATE.	BEN, EAST, GUSTIN	89WP002V	11
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - PHOTO SCAN FROM TRANSIT POINT 256° (UPSTREAM).	BEN, EAST, GUSTIN	89WP002V	12
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - PHOTO SCAN FROM TRANSIT POINT 302°.	BEN, EAST, GUSTIN	89WP002V	13
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - PHOTO SCAN FROM TRANSIT POINT 336°.	BEN, EAST, GUSTIN	89WP002V	14

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - PHOTO SCAN BEN, EAST, GUSTIN FROM TRANSIT POINT 0° (TRANSECT LINE).		89WP002V	15
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - PHOTO SCAN BEN, EAST, GUSTIN FROM TRANSIT POINT 47°.		89WP002V	16
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - AERIAL AT BEN, EAST, GUSTIN 500' FROM RIGHT BANK FACING DOWNSTREAM.		89WP002V	17
10/22/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STUDY SITE #LA018678HH - AERIAL AT BEN, EAST, GUSTIN 500' FROM RIGHT BANK FACING DOWNSTREAM.		89WP002V	18

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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07/17/90	1430	LA018	-0-	LATOUCHE ISLAND - SLEEPY BAY	BIOREMEDIATION, PARTY BOAT WITH HAZING BALLOONS. ANOTHER ROCK WASHER BEACH. THESE BALLOONS ARE MAKING ASSES OUT OF ALL OF US.	DOUG HILL	90DDH021H	01
07/17/90	1430	LA018	-0-	LATOUCHE ISLAND - SLEEPY BAY	BIOREMEDIATION, PARTY BOAT WITH HAZING BALLOONS. ANOTHER BEACH FOR THE ROCK WASHER. THESE BALLOONS ARE MAKING ASSES OUT OF ALL OF US.	DOUG HILL	90DDH021H	02
07/17/90	1430	LA018	-0-	LATOUCHE ISLAND - SLEEPY BAY	BIOREMEDIATION, PARTY BOAT WITH HAZING BALLOONS. ANOTHER BEACH FOR THE ROCK WASHER. THESE BALLOONS ARE MAKING ASSES OUT OF ALL OF US.	DOUG HILL	90DDH021H	03
07/17/90	1530	LA018	-0-	LATOUCHE ISLAND - SLEEPY BAY	MOUTH OF ANADROMOUS FISH STREAM WHICH NEEDS FURTHER WORK. OILED COBBLE/GRAVEL IN CHANNEL AND POOLED MOUSSE ON BEACH ADJACENT TO STREAM.	DOUG HILL	90DDH021H	08

-75-

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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06/12/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Anadromous fish stream (226-40-16780) and oiled stream banks.	JACK WINTERS	89JFW009V	01
06/12/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Anadromous fish stream (226-40-16780) and oiled stream banks.	JACK WINTERS	89JFW009V	02
06/12/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Pooled mousse	JACK WINTERS	89JFW009V	03
06/12/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Pooled mousse	JACK WINTERS	89JFW009V	04

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	THIS PHOTO SHOWS THE EXCAVATION AT LA 18. OILED GRAVEL NEAR THE STREAM WAS MOVED TO THE LOWER TIDAL ZONE. (EAST BANK OF THE STREAM).	LEE ROGERS	89LBR002V	29
07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	CLOSE UP OF GRAVEL MOVED AWAY FROM THE STREAM TO THE LOWER TIDAL ZONE.	LEE ROGERS	89LBR002V	30
07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	THE PHOTO SHOWS THE EXCAVATION DONE ON THE WEST BANK OF THE STREAM.	LEE ROGERS	89LBR002V	31
07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	THE PHOTO SHOWS THE STREAM BANKS WHERE THE EXCAVATION WAS DONE. (LOOKING WEST)	LEE ROGERS	89LBR002V	32
07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	THE PHOTO SHOWS A BRIDGE AND A WALKWAY AROUND THE STREAM. (LOOKING SOUTH)	LEE ROGERS	89LBR002V	33
07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	CLOSE UP OF GRAVEL MOVED AWAY FROM THE STREAM TO THE LOWER TIDAL ZONE.	LEE ROGERS	89LBR002V	34
07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	THIS PHOTO SHOWS THE EXCAVATION BEING DONE ON THE WEST BANK OF THE STREAM.	LEE ROGERS	89LBR002V	35
07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	CLOSE UP OF GRAVEL THAT HAS BEEN MOVED AWAY FROM THE STREAM TO THE LOWER TIDAL ZONE.	LEE ROGERS	89LBR002V	36
07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	THIS PHOTO SHOWS THE GRAVEL THAT HAS BEEN MOVED AWAY FROM THE STREAM TO THE LOWER TIDAL ZONE.	LEE ROGERS	89LBR002V	37

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Date printed: 02/22/91

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07/02/89	1500	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	THIS PHOTO SHOWS THE EXCAVATION SITE WHERE GRAVEL NEAR THE STREAM WAS MOVED TO THE LOWER TIDAL ZONE.	LEE ROGERS	89LBR002V	38

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Date printed: 02/22/91

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07/11/89	-0-	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	SEDIMENT SAMPLING SITE IN STREAM FLOODPLAIN CHANNEL, WEST SIDE.	MARILYN SIGMAN	89MJS011V	16

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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06/29/89	-0-	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING UPSTREAM FROM EAST BANK. NOTE: SLUMPAGE OF OILED SEDIMENTS INTO CHANNEL ON LEFT.	MARILYN SIGMAN	89MJS012V	16
06/29/89	-0-	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING DOWNSTREAM FROM EAST BANK. NOTE: PLACEMENT OF SORBENTS ABOVE OILED ZONE RATHER THAN BELOW.	MARILYN SIGMAN	89MJS012V	17
06/29/89	-0-	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING DOWNSTREAM FROM FOOT BRIDGE ABOVE VEGETATION LINE ON BANKS.	MARILYN SIGMAN	89MJS012V	18
06/29/89	-0-	LA018	2264016780	SLEEPY BAY, LATOUCHE ISLAND	LOOKING DOWNSTREAM FROM WEST BANK. NOTE: OILY BOOM AT WATERLINE.	MARILYN SIGMAN	89MJS012V	19

-80-

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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07/02/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STREAM WITH CONTAINMENT AND SNARE BOOMING.	MARILYN SIGMAN	89MJS013V	29
07/02/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	NEGATIVE BLANK/UNDEVELOPED.	MARILYN SIGMAN	89MJS013V	32
07/02/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	OILED STREAM SEDIMENTS IN CHANNEL UPSTREAM OF TREELINE.	MARILYN SIGMAN	89MJS013V	33
07/02/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	STREAM CHANNEL OUTLET. NOTE: BOOMING.	MARILYN SIGMAN	89MJS013V	34
07/02/89	-0-	LA018	-0-	SLEEPY BAY, LATOUCHE ISLAND	DEWATERED LOWER SECTION OF STREAM AT LOW TIDE, DUE TO DROUGHT CONDITIONS.	MARILYN SIGMAN	89MJS013V	35

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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09/19/89	-0-	LA018A	-0-	LATOUCHE ISLAND, SLEEPY BAY	TWIN OTTER PLANE WRECK.	RICK GUSTIN	89RLG009V	01
09/19/89	-0-	LA018A	-0-	LATOUCHE ISLAND, SLEEPY BAY	TWIN OTTER PLANE WRECK.	RICK GUSTIN	89RLG009V	02
09/19/89	-0-	LA018A	-0-	LATOUCHE ISLAND, SLEEPY BAY	TWIN OTTER PLANE WRECK.	RICK GUSTIN	89RLG009V	03

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Date printed: 02/22/91

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05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Spike location for transect done east of catalogued stream within Sleepy Bay. Spike near base of fallen tree. (Blurry).	ROBIN WILLIS	89RMW003V	29
05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Location of spike in base of downed tree to the east of catalogued stream within Sleepy Bay. Spike designates starting point of transect.	ROBIN WILLIS	89RMW003V	30
05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect location - looking from low water mark toward spike location.	ROBIN WILLIS	89RMW003V	31
05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect - Plot #1	ROBIN WILLIS	89RMW003V	32
05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect - Plot #2	ROBIN WILLIS	89RMW003V	33
05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect - Plot #3	ROBIN WILLIS	89RMW003V	34
05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect - Plot #4	ROBIN WILLIS	89RMW003V	35
05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect - Plot #5	ROBIN WILLIS	89RMW003V	36
05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect - Plot #6	ROBIN WILLIS	89RMW003V	37

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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05/22/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect - Plot #7	ROBIN WILLIS	89RMW003V	38

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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05/23/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect - Plot #8 (close-up)	ROBIN WILLIS	89RMW004V	01
05/23/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Sleepy Bay Transect - Plot #8	ROBIN WILLIS	89RMW004V	02

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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06/29/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	As the tide came in it filled a depression created by the backhoe. The depression was located a little east of the streambank.	ROBIN WILLIS	89RMW005V	01
06/29/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Sheen created as the tide came in and seeped into the depression to the east of the streambank.	ROBIN WILLIS	89RMW005V	02
06/29/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Black oil and mousse on sediments directly east of the stream.	ROBIN WILLIS	89RMW005V	03
06/29/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Looking from LA-18 toward work crew on LA-17.	ROBIN WILLIS	89RMW005V	04
06/29/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Work crew taking garbage to vessel for removal as they moved off LA-17 for the day.	ROBIN WILLIS	89RMW005V	05
06/29/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Illustrates the placement of pompoms at the catalogued stream.	ROBIN WILLIS	89RMW005V	09
06/29/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Location of pompoms and containment (protective) boom placed around the catalogued stream within Sleepy Bay.	ROBIN WILLIS	89RMW005V	10
06/30/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Location of booms as we found them the morning after a storm. Photo illustrates how far inland the oily boom material was carried.	ROBIN WILLIS	89RMW005V	11

-90-

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Date printed: 02/22/91

DATE	TIME	SEGMENT#	STATION#	LOCATION	REASON FOR TAKING PHOTO	TAKEN BY	ROLL #	FRAME
06/30/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	East of catalogued stream, skirted boom was moved inland and buried during previous evenings storm.	ROBIN WILLIS	89RMW005V	12
06/30/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Placement of new pompoms after previous evenings storm moved and thoroughly saturated existing strands. New bridge had to be installed after storm.	ROBIN WILLIS	89RMW005V	13
06/30/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Jersy Joe, Exxon, and Pam Keyes, DEC.	ROBIN WILLIS	89RMW005V	14
07/01/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Location of catalogued stream mouth during low tide. Photo taken at upper middle intertidal area. Trying to document change in location of mouth.	ROBIN WILLIS	89RMW005V	15
07/01/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Location of stream mouth during low tide. Photo taken at lower middle tidal zone. Trying to tract variations in location of stream mouth.	ROBIN WILLIS	89RMW005V	16
07/01/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Location of stream mouth during low tide. Photo taken at lower intertidal zone. Photo taken to help determine if mouth of stream is moving east.	ROBIN WILLIS	89RMW005V	17

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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07/04/89	0700	LA018	2264016780	Sleepy Bay, LaTouche Island	USFS and Coast Guard representatives off RAT boat are present. Low tide prior to initiation of work under the second permit.	ROBIN WILLIS	89RMW008V	01
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Low tide. Mouth of stream to right. Boom grounded. Stream runs subsurface for >50 feet. (Photo taken from the upper middle intertidal zone).	ROBIN WILLIS	89RMW008V	02
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Low tide. Boom grounded. Stream runs subsurface for >50 feet. (Photo taken from lower middle intertidal zone).	ROBIN WILLIS	89RMW008V	03
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Low tide;boom grounded. Stream runs subsurface >50 feet. Mouth of stream is located toward right edge of picture. (Photo taken at lower tidal zone).	ROBIN WILLIS	89RMW008V	04
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	First scoop from east bank of catalogued stream (226-40-16780) under second permit restrictions. Stake near backhoe designates downstream limit of wk	ROBIN WILLIS	89RMW008V	05
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Workers removing oily sediment from bank of stream where it is too narrow for big equipment, plus oil was in streambed.	ROBIN WILLIS	89RMW008V	06

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Backhoe removing clean sediment from lower intertidal zone: beach to west of stream. Clean fill to replace oiled streambank sediments being removed.	ROBIN WILLIS	89RMW008V	07
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Close-up view of clean sediments being removed from the lower intertidal zone to the west of the stream.	ROBIN WILLIS	89RMW008V	08
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Backhoe in foreground removing oiled west streambank. Backhoe at lower intertidal zone collecting clean sediments.	ROBIN WILLIS	89RMW008V	09
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Stake marks lower extent of bank oiling to be removed. Sediment behind stake is clean for bank replacement. Photo is looking west toward LA-19.	ROBIN WILLIS	89RMW008V	10
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Backhoe removing oiled west streambank from stake upstream. Heavily oiled beach to west of stream is also visible.	ROBIN WILLIS	89RMW008V	11
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Backhoe removing oiled sediment from west streambank. Heavily oiled sediments on east streambank visible under and around pompoms.	ROBIN WILLIS	89RMW008V	12

PHOTOS.ALL - ADF&G Habitat Photo Documentation

Date printed: 02/22/91

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07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Pompom placed to collect sheen/oiling from oiled streambank near upstream bridge. Oiled sediments were manually removed.	ROBIN WILLIS	89RMW008V	13
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Heavily oiled patch of sediments upstream from placement of bridge. Oiled sediments removed manually and pompoms placed to collect sheen/seepage.	ROBIN WILLIS	89RMW008V	14
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Heavily oiled patch upstream from bridge placement. Oiled sediments were manually removed and pompoms placed to collect sheen/seepage.	ROBIN WILLIS	89RMW008V	15
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Untreated heavily oiled patch upstream from bridge placement.	ROBIN WILLIS	89RMW008V	16
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Heavily oiled sediments upstream from bridge placement.	ROBIN WILLIS	89RMW008V	17
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Sheen/seepage in pool where heavily oiled sediments had been removed from the bank on the west side of the stream; upstream from the bridge.	ROBIN WILLIS	89RMW008V	18
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Sheen/seepage in pool where heavily oiled sediments had been removed from the bank on the west side of the stream; upstream from the bridge.	ROBIN WILLIS	89RMW008V	19

PHOTOS.ALL - ADF&G Habitat Photo Documentation

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DATE	TIME	SEGMENT#	STATION#	LOCATION	REASON FOR TAKING PHOTO	TAKEN BY	ROLL #	FRAME
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Pompoms placed at bridge to catch sheen/seepage occurring due to removal of heavily oiled sediments along west stream bank.	ROBIN WILLIS	89RMW008V	20
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Placement of booms around mouth of stream. Absorbant boom was placed to catch sheens created by treatment; skirted boom to prevent oil entry.	ROBIN WILLIS	89RMW008V	21
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Appearance of west bank of stream after first day of work under second permit. Tide was in.	ROBIN WILLIS	89RMW008V	22
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Oiled beach west of stream and the drop area for the oiled sediments that were removed from the west streambank.	ROBIN WILLIS	89RMW008V	23
07/04/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Location of containment boom during higher tides. (At low tide the boom is grounded in its current location).	ROBIN WILLIS	89RMW008V	24

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07/05/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Not developed.	ROBIN WILLIS	89RMW009V	01
07/05/89	-0-	LA018	-0-	Sleepy Bay, LaTouche Island	Overexposed - Discarded.	ROBIN WILLIS	89RMW009V	02
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Clean west bank and oily east bank of catalogued anadromous fish stream (226-40-16780) at low tide.	ROBIN WILLIS	89RMW009V	03
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Backhoe removing oily sediment from east bank of catalogued stream (226-40-16780) at low tide.	ROBIN WILLIS	89RMW009V	04
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Backhoe removing oily sediment from east bank of catalogued stream (226-40-16780) at low tide.	ROBIN WILLIS	89RMW009V	05
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Heavy mousse/oil and detritus uncovered when the east bank of the catalogued stream (226-40-16780) was moved by the backhoe.	ROBIN WILLIS	89RMW009V	06
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Backhoe removing oily sediment from east bank of catalogued stream (226-40-16780) during low tide.	ROBIN WILLIS	89RMW009V	07
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Gravels/sediments uncovered when the backhoe removed the top layer of the east bank of the catalogued stream (226-40-16780).	ROBIN WILLIS	89RMW009V	08

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07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Work crews raking west bank of catalogued stream (226-40-16780) free of extra sediments; crews on east bank are using pompoms to absorb oil.	ROBIN WILLIS	89RMW009V	09
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Blurry - work crews raking west bank of catalogud stream (226-40-16780); crews on east bank are using pompoms to absorb as much of the oil as possible	ROBIN WILLIS	89RMW009V	10
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Area from which clean sediments are being removed to reestablish western stream bank of catalogued stream (226-40-16780).	ROBIN WILLIS	89RMW009V	11
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Work crews raking west bank of stream (226-40-16780), filling & smoothing; crews on east bank are shoveling heavily oiled area & pompoming any sheen.	ROBIN WILLIS	89RMW009V	12
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Semblance of road being formed as sediments are transported from LTZ to stream bank.	ROBIN WILLIS	89RMW009V	13
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Work crews on west bank of catalogued stream (226-40-16780) smoothing and contouring streambank as backhoe deposited clean sediment.	ROBIN WILLIS	89RMW009V	14

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07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Area on west bank of stream (226-40-16780) above bridge, cleaned up previous day. Had pooling and sheening still being picked up by pompoms.	ROBIN WILLIS	89RMW009V	15
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Oiled patch on east bank of stream (226-40-16780) above bridge. Surface sediments removed and pompoms placed to collect sheen/seepage.	ROBIN WILLIS	89RMW009V	16
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Blurry - Oiled patch on east bank of stream (226-40-16780) above bridge. Surface sediments removed and pompoms placed to collect sheen/seepage.	ROBIN WILLIS	89RMW009V	17
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Backhoe bringing clean sediment from LTZ to refill west bank of catalogued stream (226-40-16780).	ROBIN WILLIS	89RMW009V	18
07/05/89	-0-	LA018	2264016780	Sleepy Bay, LaTouche Island	Stream at Sleepy Bay (226-40-16780); Backhoe replacing stream bank with clean gravel on west side. Stake in foreground is upstream mark for removal.	ROBIN WILLIS	89RMW009V	19