

United States
Department of
Agriculture

Forest
Service

Region 10

Tongass National Forest
Petersburg Ranger District
P.O. Box 1328
Petersburg, AK 99833

Reply To: 2638 Contracts
2639 Monitoring

Date: Oct. 15, 1990

Subject: LTF Permit Monitoring

To: Forest Supervisor

The following report summarizes the results of the 1990 LTF lost bark monitoring. As required by the LTF permits, lost wood solids accumulations were mapped at Rowan Bay (Chatham Strait 60), and Thomas Bay (Frederick Sound 28). Allen Benitz was contracted to map lost wood accumulations. The diving was conducted from July 28 to August 3, 1990. The C.O.R. report is on file at the Petersburg District office.

SITES

Attached are diagrammatic maps for the two sites examined. The results of the monitoring, including inferences, have been plotted. Accumulations of wood solids should be interpreted as a probable maximum accumulation estimated from data points.

METHODS

Each LTF was examined by a SCUBA diver for lost wood solids as required by permit stipulation. A white sinking line, marked every 10 meters, tied to the bulkhead and anchored off shore was used to locate data points. At each data point the diver measured the depth of wood deposits with a graduated rod and recorded the measurements in centimeters on a plexiglass sheet.

RESULTS

Rowan Bay

As found in past inspections the soft bottom and poor visibility of Rowan Bay resulted in difficulty obtaining accurate measurements of bark accumulations. It was difficult to locate the point where the wood solids ended and the soft bottom started. This complicated the measurement because wood solids were suspended in the silt. In places the silt has a gelatinous consistency. This condition is not restricted to the LTF area, but can be found out in the bay away from the LTF site. This may over estimate lost wood accumulations in the short run but should allow for a more accurate estimate in the long run. Accumulations of wood solids have increased significantly since the last inspection conducted in 1988. Rowan Bay has poor flushing and will continue to accumulate wood solids as long as the LTF is used. Approximately 86% of the 32.6 acres inspected had a continuous coverage of wood solids greater than 10



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Tongass National Forest
Stikine Area
P.O. Box 309
Petersburg, AK 99833

GVA

Reply To: 5460

Date: October 31, 1990

U.S. Army Engineer District, Alaska
ATTN: Regulatory Branch
P.O. Box 898
Anchorage, AK 99506-0898

~~720111~~
1-750228

Dear Sir:

Enclosed please find the monitoring results from our 1990 dive at at Rowan Bay log dump on Kuiu Island (Chatham Strait 60).

Between 1988 (the last dive), and this one, approximately 60 million board feet of logs were put in the water at Rowan Bay.

The results of this latest dive indicate, at this site, the ramp type dump does no better at keeping bark out of the water than the previous A-frame type did.

Sincerely,

RONALD R. HUMPHREY
Forest Supervisor

Enclosure

RECEIVED

DEC 21 1990

Department of Environmental Conservation
Southeast Regional Office

RECEIVED

NOV 05 1990

REGULATORY BRANCH
Alaska District, Corps of Engineers

2210



centimeters. This represents a total area of approximately 28 acres. Approximately 19% of the area inspected had a continuous coverage of wood solids equal to or greater than 100 centimeters, compared to the 1988 dive of 1%. This 19% represents a total area of approximately 6 acres.

Thomas Bay

All transects at this site were reported to contain no wood solids. The previous inspection of this LTF in 1986 indicated that 0.01 acres of the 13.1 acre site had a wood solid accumulation greater than 10 centimeters. Because of the close proximity to the Patterson River, and the heavy tidal action of this site, it is not unrealistic that this site could have been completely cleaned of all wood deposits. Decomposition may also have played a key role in the cleaning of this LTF site.

PRECISION AND ACCURACY

The accuracy of the monitoring and methods is subjectively rated good. Due to irregular material (wood solids) and substrates (mud, boulders, etc) it is a somewhat subjective process of reporting depth accumulation. Further, there is a qualitative difference between 10 centimeters of branches or boles as opposed to 10 centimeters of bark chips. In mud bottom situations it is difficult to establish a base from which to measure wood accumulation, and in reduced visibility estimates must at times be entirely tactile (through a dry-suit SCUBA layer of fabric).

The precision of the monitoring and methods is subjectively rated fair. Due to lateral displacement of the transect line by bottom currents, setting of transects with a compass, irregular bottom contours and the comments regarding accuracy, it is subjectively judged to be only a generally repeatable procedure.

RECOMMENDATION

Experience with the 1990 SCUBA monitoring of the Rowan Bay and Thomas Bay LTF sites suggests that further monitoring of the Thomas Bay Transfer Facility will not be necessary unless the facility is reopened for log transfer purposes. However, I feel that because of the marked increase in wood solids accumulations at the Rowan Bay LTF, further monitoring efforts should be continue on a bi-annual basis. If wood solids accumulations continue to increase at the current rate, I feel that it may be necessary to take corrective actions.

If additional information or clarification is needed please contact John Edgington at 772-3871.

PETER TENNIS
District Ranger

enclosures

101590 1538 fwl 2638 jm

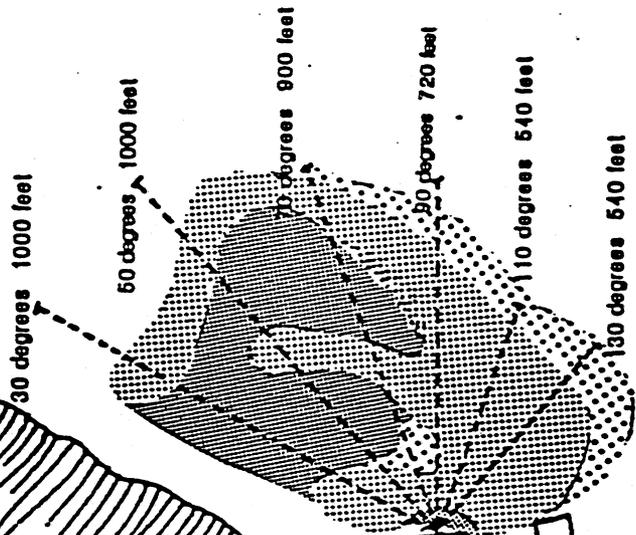
.. ROWAN BAY

Area of wood Solids accumulation 0-40 cm deep

Area of wood Solids accumulation 40-100 cm deep

Area of wood Solids accumulation +100cm deep

.. DIVING TRANSECTS

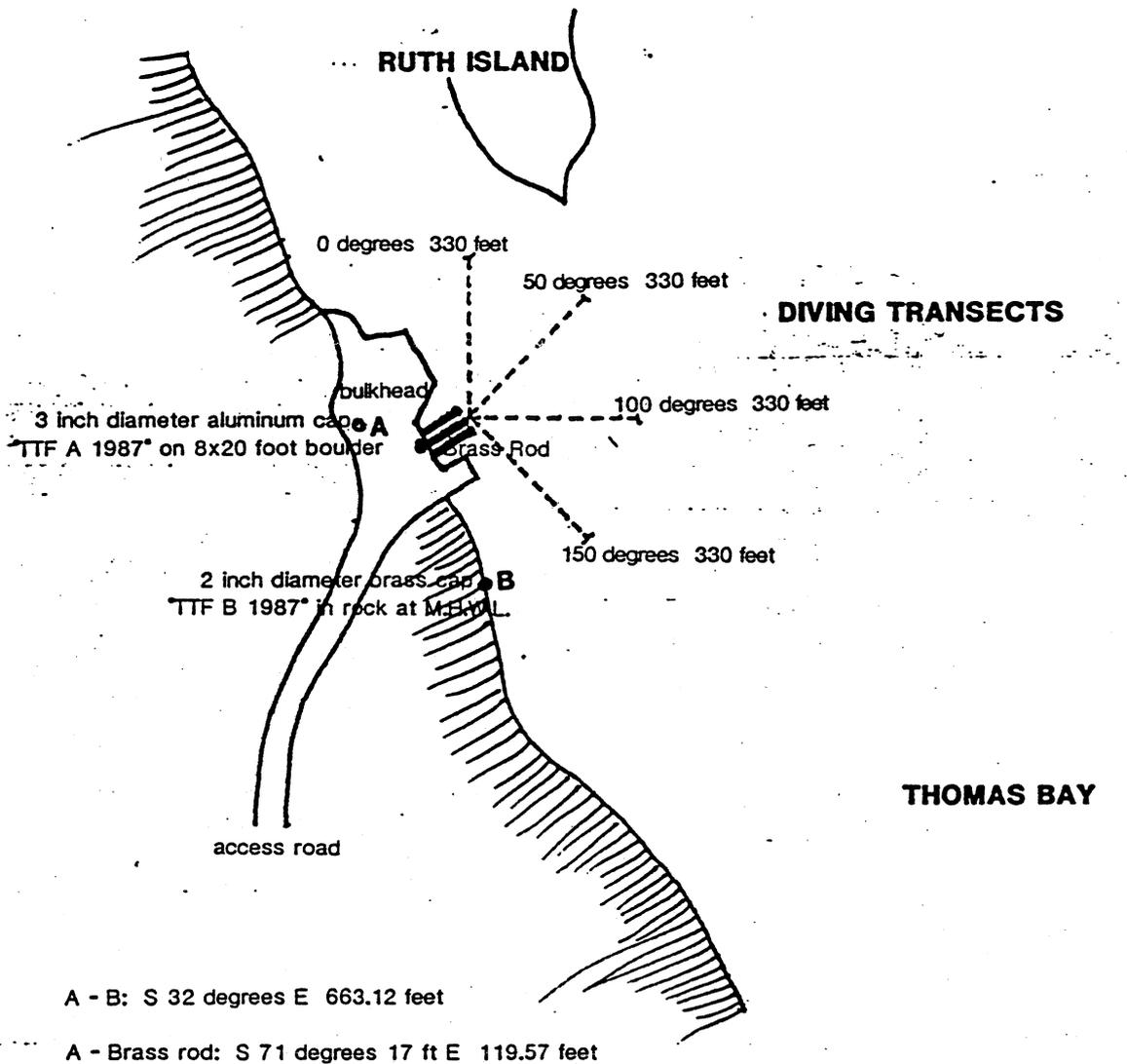


ROWAN BAY LTF

.. 1" = 400 feet

1990 monitoring

N



DIVING TRANSECTS

THOMAS BAY

A - B: S 32 degrees E 663.12 feet

A - Brass rod: S 71 degrees 17 ft E 119.57 feet

THOMAS BAY LTF

1" - 400 feet

BARK ACCUMULATION (cm)

LTF SITE Rowan Bay

USFS REP. J. Edgington

CONTRACT # 40-0112-0-0258

CONTRACTOR A. Benitz

STOPS	TRANSECTS							
	Meters	1	2	3	4	5	6	7
1	10	0 R	64	94	0	0 R	0 R	
2	20	87	50	88	108	110	48	
3	30	67	45	72	102	110	50	
4	40	55	30	35 +	90	70	52 +	
5	50	62	35 +	50	62 +	52 +	80	
6	60	54	28	38	45	38	52	
7	70	85	32	40	52 +	42	45 +	
8	80	130	48	42 L	48	15 +	40	
9	90	125	80 +	38	62	50 +	68	
10	100	96	95	68 +	58 L	45	55	
11	110	130 +	98 +	35 +	60	58	40	
12	120	125	100	80	70	68 +	50 +	
13	130	140	85 +	95	72	45	30	
14	140	148	120	85	80 +	25	45	
15	150	132	85	95 +	45	40	0	
16	160	125	87 +	110	68	25	15	
17	170	120	115	90 +	40	20 *	25	
18	180	124	75	68	15 L		0 *	
19	190	110	92	40	20			
20	200	52	82	0	2			

Start	_____	_____	_____	_____	_____	_____	_____
End	_____	_____	_____	_____	_____	_____	_____
Depth	_____	_____	_____	_____	_____	_____	_____
Orient.	<u>N10W</u>	<u>N10E</u>	<u>N30E</u>	<u>N50E</u>	<u>N70E</u>	<u>N90E</u>	_____
Date	_____	_____	_____	_____	_____	_____	_____

Contractor Signature _____

Forest Service Signature _____

Date _____

- Depths are in centimeters
 * - End of transect dive
 + - Branches
 L - Log
 R - Rock

BARK ACCUMULATION (cm)

LTF SITE Rowan Bay

(continuation sheet)

CONTRACT # 40-0112-0-0258

STOPS	TRANSECTS							
	Meters	1	2	3	4	5	6	7
21	210	40 +	110	0	0			
22	220	76	100	0	0			
23	230	92	135	0	0			
24	240	70	126	0	0 *			
25	250	56	100 +	0				
26	260	65 *	125	0				
27	270		110 +	0				
28	280		104 *	0				
29	290		82					
30	300		80					
31	310		72 *					
32								
33								
34								
35								
36								
37								
38								
39								
40								

Start							
End							
Depth	<u>N10W</u>	<u>N10E</u>	<u>N30E</u>	<u>N50E</u>	<u>N70E</u>	<u>N90E</u>	
Orient.							
Date							

Contractor Signature _____

Forest Service Signature _____

Date _____

Depths are in centimeters

* - End of transect dive

+ - Branches

L - Log.

R - Rock