CHEMICAL REHABILITATION, POST-TREATMENT REPORT

Project Name _____ Project Number _____

Date Submitted _____

Lake or Stream Arc T. 4W R. 11W S. 12,

County Kenai Pen. Borough

Date of Chemical Treatment July 24, 1965

1. Surface Area at Treatment 16 (acres) Water Volume 137.4 Acre-ft.

   Miles of Tributaries Treated N/A Stream flow _____ cfs.

2. Miles of Stream Treated N/A Stream flow _____ cfs.

   Miles of Tributaried Treated N/A Stream flow _____ cfs.

3. Toxicant Used Rotenone - liquid & powder

4. Amount and Concentration of Toxicant Used:
   30 gal liquid - 2.5% 425 lbs. powder - 8.5%
   Lake _____ Stream _____

5. Method used in distributing the Toxicant:
   outboard motor (powder) and portable pump (liquid)

6. Cost of Toxicant $ _____

7. Condition of water on date of treatment:

Depth or flow (feet)	Temperature (°F)	pH	Dissolved Oxygen Content
15	65.5	6.1-6.4	UNK

TDS M.O. Alkalinity 20-35 ppm

8. Species and estimated numbers of fish eradicated:

   Lake: Stickleback - (abundant)

   Tributaries: N/A

POPULATION CONTROL

CHEMICAL RECLAMATION PLANS

For each body of water to be reclaimed with fish toxicant, present the following:

1. PHYSICAL CHARACTERISTICS

(a) Name of water Arc County Kenai Pen. Borough

(b) Surface Area 16 Acres (Max.) 15 Average Depth 8.6 feet

Surface Area 16 Acres (when treated)

(c) Volume 137.4 Acre feet Type of outlet None

(d) Miles of stream N/A Stream flow N/A

2. FISHERY CHARACTERISTICS

(a) Population composition (approx. quantity and species)

Sticklebacks - abundant

Sample method used variable mesh gill nets

(b) Utilization N/A

Harvest rate N/A

(c) Most recent survey dated March 20, 1965

3. RECLAMATION PLAN

(a) Toxicant Rotenone (Common Name) Percent or weight Active Ingredient 2.5% liquid 8.5% powder

Application rate (Active Ingred.) 1.1 PPM

(b) Method of Application outboard motor (powder) & portable pump (liquid) Time July 1965 (Month)

3. Reclamation Plan (Cont'd.)

(c) Objective: (1) Complete kill Yes or Partial (Percent) 8-10

(d) Estimated Toxicity Period N/A weeks

(e) Lake was reclaimed before in Year Toxicant used none need - no outlets

(f) Measures to protect downstream resources present

(If none needed, specify why)

(g) Expected duration of beneficial effects forever years.

4. PUBLIC CONSIDERATIONS

(a) Is water used locally for domestic, industrial, or irrigation purposes? No

Clearance required? NO Obtained from

(b) Is water State owned? Yes (Yes or No) If not, explain how public will be assured access.

(c) If the area to be affected contains any rare, endangered, or endemic species, describe the measures to be undertaken for their protection.
N/A

(d) Procedure for salvage and disposal of fish killed Sticklebacks not utilized

(e) Remarks

Attitude of public favorable

Volumetric Data for Arc Lake

$698{,}055 \div 2$	$524{,}722 \times 5 =$	3,056,943	cu.	ft.
		- 11,660	vol. of	island
		3,045,283	cu.	ft.
$524{,}722 \div 2$	$292{,}500 \times 5 =$	2,043,070	cu.	ft.
$292{,}500 \div 2$	$56{,}944 \times 5 =$	873,610	cu.	ft.
$22{,}500 \times 1 =$		22,500	cu.	ft.
	Total Volume	5,984,463	cu.	ft.

$62.4 \times 5{,}984{,}463 =$ 373,430,491 lbs of H_2O

373 lbs rotenone @ 1 ppm
410 lbs rotenone w/10 percent error

surface acreage 16 acres (16.02)
max. depth 16 feet

9. Period of Toxicity Not checked - probably similar to Sport Lk.-- 8-10 wks.

10. Method of determination of effectiveness:
visual observations

11. Detoxification required N/A. If so, report on effects recorded on downstream fishery.

12. Fish Stocking:

Date	Species	Size (inches)	Pounds	Number
1966	RB	1,160/lb	5½ lbs.	6,380
1968	RB	210/lb	24 lbs.	5,000

13. Status of fishery, if applicable (creel census, gill or trap net) growth. Record method of sampling.
7/30/67 - RB - Average length = 259.3 mm Fish/hour = .18
9/27/67 - RB - Average length = 288.6 mm Fish/hour = .27

14. Comments on angler use (before and after treatment)
No sport fishing before treatment - moderate fishing after treatment.

15. Public reaction to project (before and after treatment)
favorable

16. Additional Remarks A complete kill of sticklebacks was obtained at the time of treatment and none have been observed since.