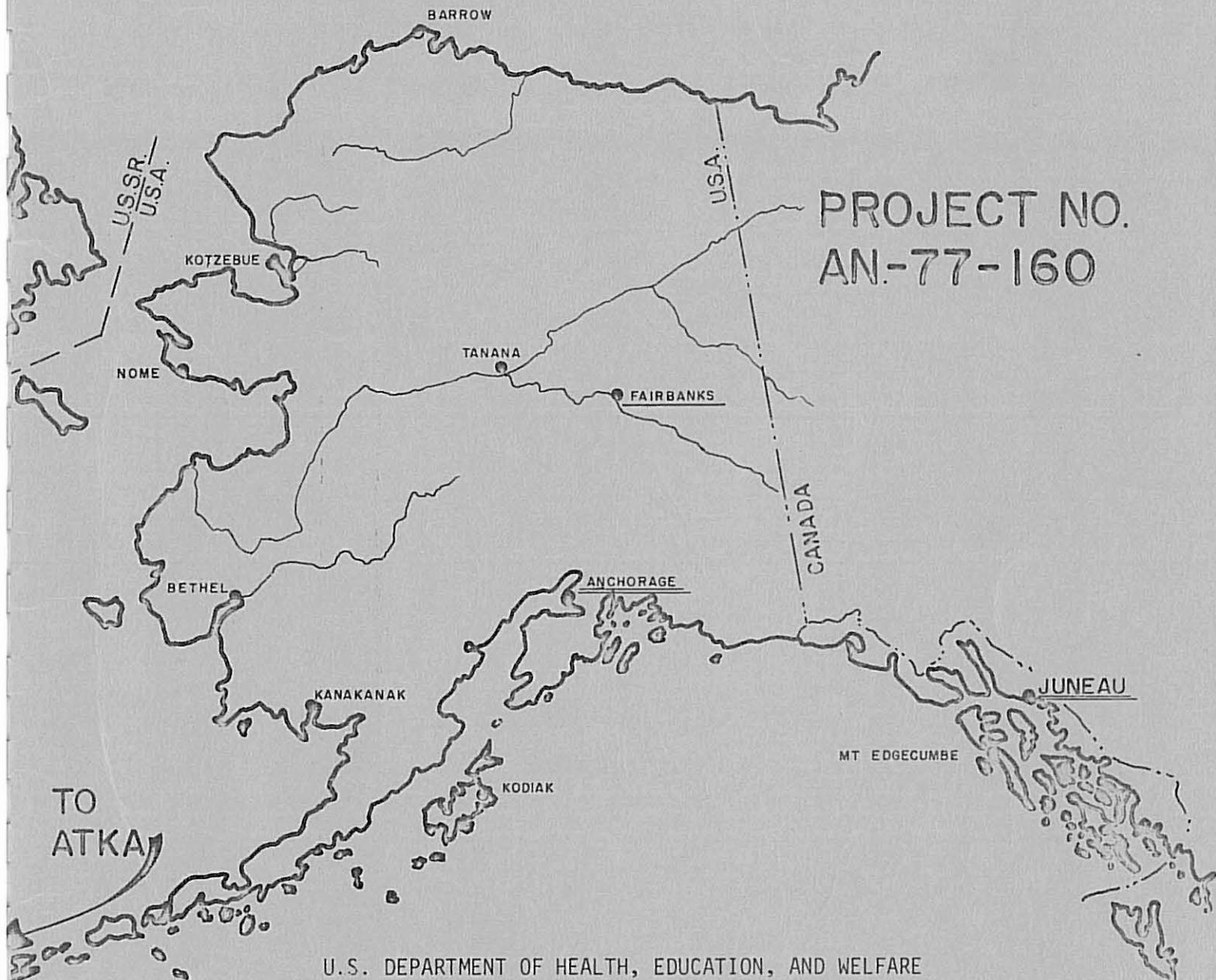


FINAL REPORT

SANITATION FACILITIES CONSTRUCTION

FOR

ATKA, ALASKA



U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH SERVICES ADMINISTRATION
INDIAN HEALTH SERVICE
ALASKA AREA NATIVE HEALTH SERVICE
ENVIRONMENTAL HEALTH BRANCH
ANCHORAGE, ALASKA

FINAL REPORT
SANITATION FACILITIES CONSTRUCTION
VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

FINAL REPORT
SANITATION FACILITIES CONSTRUCTION
VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

DATE OF REPORT:
June 1980

INTRODUCTION:

The Village of Atka, through its Village Council, submitted a project proposal to the Indian Health Service (IHS) on October 16, 1971, requesting assistance in the construction of sanitation facilities for the village's residents. Funds were authorized under Public Law 86-121 (OMB 13.229) in August 1977. Design and technical supervision were provided by the IHS. Construction was performed by force account using local labor.

Atka residents received piped water distribution and sewage collection systems with service connections to 25 houses. A 30,000 gallon wood stave water storage tank was constructed, and chlorination and fluoridation equipment was provided. A gravity sewage collection system with a direct ocean outfall 50 feet offshore was installed, and maintenance equipment was transferred to the village. The total cost of the project was \$491,000 (rounded to nearest thousand), or \$19,640 per house for each of the 25 houses served.

The sanitation facilities and the responsibility for their operation and maintenance were transferred to the village in June 1979. Operator training was provided during construction, through training programs and periodic visits by IHS technical personnel.

GENERAL INFORMATION:

The Village of Atka is on the east coast of Atka Island in the Andreanof Islands, part of the Aleutian Island chain, approximately 1,100 miles southwest of Anchorage and 140 miles east of Adak. The village is the farthest west Alaskan Native community. Atka is surrounded by mountains, volcanoes (some still active) and hot springs. Except for typical alpine tundra, the island has little vegetation and is entirely treeless. The climate is maritime. Detailed climatic and soil information is available in the project summary prepared for this project dated August 1977, and appended.

Access to the island is by infrequent barge service or by small aircraft. An airstrip built during World War II is not usable, and there is no regularly scheduled air service to the island, although some small areas near the strip are capable of accepting very light aircraft of the Cessna 180 class. The Bureau of Indian Affairs (BIA) North Star barge makes one supply run to the village each year.

Transportation on the island is nonexistent; all travelling is done on foot. The school owns a pick-up truck, the only vehicle in town. The community's only telephone is in the Village Council office in the school.

The 1970 census listed the population at 88; a 1964 Public Health Service (PHS) sanitarian report acknowledged 100 persons in the community, and a design population of 100 was used in planning for sanitation facilities. Reports vary from 60 to about 85 persons in the village at any one time.

Atka was organized under the Indian Reorganization Act (IRA) and has a five-member council; the council president serves a two-year term. The village is in the Anchorage PHS Service Unit.

Community and public buildings include an Aleutian Regional School, two general stores, a Russian Orthodox church, PHS clinic, post office and community hall. For financial reasons, there is no community-wide electric power. The school operates two 35-kw generators alternately, and one resident has a Pelton Wheel providing power to his home.

The economy is fairly evenly divided between a cash and subsistence lifestyle. Fishing, hunting and sealing provide the traditional subsistence basis.

PROJECT HISTORY:

The community of Atka burned down completely during World War II. The U.S. Navy rebuilt the community. Besides constructing new housing, the Navy developed a water supply which consisted of a small plank dam across one of the nearby creeks, wood-stave transmission pipe to the community, and water service lines for each house. The houses were equipped with sinks, lavatories, and flush toilets. Wastewater was piped directly from the houses into two streams, flowing through town, through wood-stave drain lines. Both streams empty into Nazan Bay.

The BIA provided for the construction of six new houses and the renovation of seven existing houses in Atka in 1976.

In August 1977, the IHS prepared a project summary for Atka recommending construction of a new dam approximately 200 feet upstream from the existing

structure. It was designed to alleviate the problem of low pressure to houses at higher elevations. Installation of 1,000 linear feet (lf) of buried PVC transmission line to terminate at a new 30,000-gallon wood-stave storage tank was proposed. Construction of a small treatment building to house chlorination and fluoridation equipment and also provide some storage area was proposed.

The distribution system consisting of 2,600 lf of 4-inch PVC distribution line would replace the rotted line through town, and copper service lines would provide domestic water service. The largest single problem in Atka was the practice of discharging raw sewage into the streams flowing through town. Because of a lack of available land for either a septic tank or a package biochemical treatment plant, a gravity collection system of approximately 2,000 lf to a direct ocean outfall 50 feet offshore was recommended. No solid waste disposal improvements were planned other than to supply each household with garbage cans, and to transfer maintenance vehicles to the village. Estimated construction costs were \$641,000.

A Memorandum of Agreement (MOA) was signed in September 1977 by IHS and in January 1978 by the village.

In July 1978, \$28,000 was added to project funds for Atka; this was the result of payment by the City of Sand Point for a Case 1150B tractor which had been intended for use at Atka.

Construction began in early August 1978, finishing ahead of schedule in early November 1978, despite delivery delays and difficulties in reaching the island. Because of the efficiency with which the job was completed, and because the

project was under budget, project foreman Edsel Williams was cited for a performance recognition award.

A final inspection in October 1978 showed minor corrections and additions and several design and construction changes for possible future projects.

A Transfer Agreement, signed in May and June 1979 by the village and IHS, respectively, conveyed all facilities to Atka.

Table I - Chronology of Events

<u>Event:</u>	<u>Date:</u>
Project Proposal Submitted	October 1971
Project Summary Prepared	August 1977
Project Approved and Funds Allocated	August 1977
Memorandum of Agreement Signed	September 1977
Construction Began	August 1978
Construction Completed	November 1978
Transfer Agreement Signed	June 1979

SUMMARY OF FACILITIES INSTALLED:

Tables II and III list facilities, both community and domestic, installed under Project AN-77-160 for residents of Atka. Following is a brief description of those facilities:

Water: A dam structure, intake, and spillway were constructed in a stream near the village. Water is transmitted through 1,000 lf of 6-inch PVC pipe to a water treatment building where chemicals are added; the water is then pumped to 25 service connections through 2,600 lf of 4-inch water main. A 30,000 gallon wood-stave tank provides additional storage. A 960 sq. ft. treatment

building houses filters, chemical treatment equipment, heating stove and water heater, and a bathroom with a lavatory, shower and flush toilet. Lavatories and flush toilets were also installed in 11 of the houses.

Wastewater: Wastewater is collected from the 25 service connections via gravity. The sewer main consists of 2,000 lf of 6-inch PVC pipe with 18 manholes and is connected to 1,000 feet of 6-inch PE outfall line which extends 50 feet into the ocean. The sewer system has no treatment facilities; however, it was determined that the 25 families of Atka will generate a very small amount of sewage and the tidal action at the point of discharge would provide ample dispersal of wastes.

Solid Waste Disposal: There are no solid waste disposal facilities constructed; however, a John Deere 450C tractor with backhoe/loader was transferred to the village for maintenance of existing disposal facilities. Each of the 25 houses also was provided with a garbage can.

TABLE II - COMMUNITY FACILITIES INSTALLED

<u>Facility:</u>	<u>Functional Description:</u>
Water Source	Dam structure, intake and spillway.
Water Distribution	1,000 lf of PVC pipe, 6-inch 2,600 lf of PVD water main, 4-inch 25 service connections
Water Storage	One each - water storage tank, wood stave, 30,000 gallons
Water Treatment	One each - Water treatment building, 960 sq. ft., containing: Two each - pressure filters One each - chlorinator One each - fluoridator One each - bathroom w/flush toilet, lavatory and shower One each - heating stove One each - water heater
Sewage Collection	2,000 lf of sewer main, PVC, 6-inch with 18 manholes 1,000 lf of outfall pipe, high molecular weight, PE, 6-inch 25 service connections
Equipment (heavy duty)	One each - Tractor, John Deere 450C, s/n 294750T, w/baekhoe/loader, voucher no. 78-06-0044
Equipment (light duty)	One each - Generator, Homelite, gas-powered, voucher no. 78-06-0048 One each - Chain saw, s/n 281000177, voucher no. 78-06-0048 One each - Saw, Homelite XL98, multi-purpose, gas-powered, voucher no. 78-06-0048 One each - Air compressor, portable, s/n 03148-251416 One each - Bench grinder, electric, s/n 531-21820, voucher no. 78-06-0054 One each - Gas heater, Herman Nelson, voucher no. 78-06-0013 One each - Complete set of handtools, including ratchets, sockets, open end and box end wrenches, screwdrivers, adjustable wrenches, etc.

TABLE III - DOMESTIC FACILITIES INSTALLED

<u>Facility:</u>	<u>No. of Units:</u>	<u>Dwellings Served:</u>
3/4-inch water service connection	1	25
Lavatory	1	11
Sewer service line	1	25
Flush toilet	1	11
Garbage cans	1	25

PROJECT COST SUMMARY:

Table IV is a breakdown of the construction costs of Project AN-77-160. The total cost of the Atka sanitation facilities construction project was \$490,600. The development of a new water source and pumphouse construction accounted for nearly a third of the total construction costs. Other major project costs included water and sewer mains. The cost of the Atka sanitation facilities averaged \$19,624 per house for the 25 houses served.

TABLE IV - PROJECT COST SUMMARY

<u>FUNDS ALLOCATED:</u>		<u>EXPENDITURES:</u>		
<u>Description:</u>	<u>Amount:</u>	<u>Description:</u>	<u>Amount:</u>	<u>% of Total:</u>
Headquarters	\$641,000	Water source	\$ 58,600	11.9*
Contributions (City of Sand Point)	28,000	Water storage	8,900	1.8
Total funds	\$669,000	Pumphouse	94,500	19.3
Total expenditures	490,600	Water treatment	3,000	0.6
Account balance	\$178,400	Fire hydrants	7,700	1.6
Accounts transferred to projects AN-77-180, AN-77-177, AN-77-172 and Area Account 099	\$178,400	Water mains	65,000	13.3
Account balance	-0-	Domestic water service	25,000	5.1
		Domestic sewer service	25,000	5.1
		Sewer main & outfall	108,900	22.2
		Manholes	2,500	0.5
		Domestic plumbing	28,500	5.8
		Domestic refuse	3,000	0.6
		Community refuse	10,000	2.0
		Equipment/parts/ maintenance	50,000	10.2
			\$490,600	100.0%

*Labor is broken down into each item line.

Unit cost per dwelling - $\frac{\$490,600}{25} = \$19,624$

CONCLUSION:

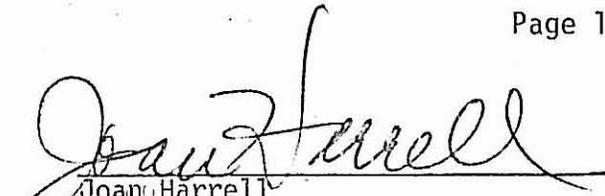
Sanitation facilities at Atka had consisted of World War II vintage structures. The original system was beginning to break down, develop leaks and generally was unsatisfactory to residents of the village. Among the problems with the original system was the discharge of raw sewage into a stream or streams close to the village. In addition, the water source had become inadequate. With the construction of six new houses and renovation of seven others, it became necessary to address the problem of an outgrown sanitation facility. Construction of the new houses was completed in the summer of 1976 and plans were made to furnish the village with a new system.

A complete piped water distribution and sewage collection system was realized under Project AN-77-160. A pumphouse and a water storage tank were constructed and maintenance equipment was transferred to the village for a total cost of \$491,000 (rounded to nearest thousand), or \$19,640 per house for 25 houses.

The facilities were conveyed to the village in June 1979. Residents accepted transfer of the system and agreed to enact appropriate ordinances and/or regulations to insure continued operation, maintenance and repair of the sanitation facilities. The village further agreed to collect established service charges from all users connected to the facilities, using the funds for fuel, electricity, operator wages, equipment repairs and other necessary items to properly administer the facilities.

PREPARED BY:

8/1/80
Date


Joan Harrell
Writer-Editor

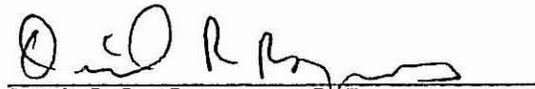
REVIEWED BY:

8/5/80
Date


Joseph G. Hugo, P.E.
Chief, Planning and Training
Unit

CONCURRED BY:

8-7-80
Date


Daniel R. Rogness, P.E.
Chief, Sanitation Facilities
Section

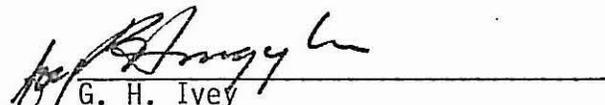
RECOMMENDED BY:

8/11/80
Date


William L. Ryan, Ph.D., P.E.
Sanitary Engineer Director
Environmental Health Branch

APPROVED BY:

8-12-80
Date


G. H. Ivey
Director
Alaska Area Native Health Service

TRANSFER AGREEMENT
BETWEEN
THE INDIAN HEALTH SERVICE
AND
THE VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

TRANSFER AGREEMENT
BETWEEN
THE INDIAN HEALTH SERVICE
AND
THE VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

WHEREAS, the United States of America, acting through the Indian Health Service, Department of Health, Education, and Welfare, hereinafter called IHS, under and pursuant to the provisions of Public Law 86-121 (OMB 13.229), and the Village of Atka, Alaska, hereinafter called the Village, acting through the Village Council, entered into an agreement executed for the IHS on September 27, 1977, and for the Village on January 11, 1978, regarding the provisions of sanitation facilities in the Village, and

WHEREAS, the project provided for in this agreement has been completed except the following items to be completed after the project is transferred but before June 1, 1979:

1. Installation of float valve on tank inlet;
2. Placement of warning signs on valves (where necessary) to open and close slowly;
3. Reseeding of all disturbed ground;
4. Provide 50 and 100 foot sewer snakes;
5. Provide reel for fire hose; and
6. Construct fence around reservoir.

IHS will notify the Village in writing upon completion of the aforesaid items, and

WHEREAS, the domestic water supply and waste disposal facilities and the appurtenances thereto and the materials, supplies, and equipment provided for and incorporated therein pursuant to that agreement are the property of the IHS, and

WHEREAS, the parties desire to provide for and assure the proper and efficient maintenance and continued operation of said water supply and waste disposal facilities, and

WHEREAS, under Section 7(a)(4) of Public Law 86-121, the IHS is authorized to transfer the completed facilities with or without a monetary consideration, and under such terms and conditions as in its judgment are appropriate, having record to the contributions made and the maintenance responsibility undertaken, and the special health needs of the Native people.

NOW THEREFORE, in accordance with the terms of said agreement, and pursuant to Section 7(a)(4) of Public Law 86-121:

1. The IHS hereby transfers, assigns, and conveys to the Village without a monetary consideration and under the terms and conditions set forth in the aforesaid agreement, all of the right, title, and interest of the IHS in all community facilities and appurtenances thereto constructed under this project, including all materials, supplies, and equipment provided for and incorporated in such facilities. These facilities include, but are not limited to:

- a. Dam structure, intake, and spillway;
- b. Transmission line consisting of 1,000 feet of 6-inch PVC pipe;
- c. 30,000 gallon wood stave water storage tank;
- d. Approximately 2,600 lf of 4-inch PVC water main; with 25 service connections;

- e. Approximately 2,000 lf of 6-inch PVC sewer main with 18 manholes and 25 service lines;
- f. Approximately 1,000 lf of 6-inch high molecular weight polyethylene ocean outfall pipe; and
- g. A 40 by 24 foot water treatment and shop building. Water treatment equipment includes two pressure filters, chlorinator and fluoridator. Included in the shop area are a maintenance and storage garage, bathroom with flush toilet, lavatory and shower, heating stove and water heater.

2. The following items of equipment are transferred to the Village in order to operate and maintain said sanitation facilities:

- a. One each - tractor, John Deere 450CA, S/N 294750T, with backhoe/loader, voucher number 78-06-0044;
- b. One each - generator, Homelite, gas-powered, voucher number 78-06-0048;
- c. One each - chain saw, S/N 281000177, voucher number 78-06-0048;
- d. One each - saw, Homelite XL 98, multi-purpose, gas operated, voucher number 78-06-0048;
- e. One each - air compressor, portable, S/N 03148-251416, voucher number 78-07-0001;
- f. One each - bench grinder, electric, S/N 531-21820, voucher number 78-06-0054; and
- g. One each - gas heater, Herman Nelson, voucher number 78-06-0013.

3. The following miscellaneous hand tools are transferred to the Village in order to operate and maintain said facilities:

One each - complete set of hand tools including ratchets, sockets, open end and box end wrenches, screwdrivers, adjustable wrenches, etc.

4. The Village hereby accepts such transfer under the terms and conditions set forth in the aforesaid agreement and agrees to operate, maintain, and repair such community facilities as the property of the Village so as to keep the facilities in an effective and operating condition.

5. The IHS hereby transfers, assigns, and conveys to the head of each household without a monetary consideration and in accordance with the provisions of Section 7(a)(4) of Public Law 86-121, all of the right, title, and interest of the IHS in all individual facilities constructed as part of the project, including all materials, supplies, and equipment provided for and incorporated in such facilities. These facilities include, but are not limited to, the following:

- a. 25 each - 3/4-inch copper water service lines (one per dwelling);
- b. 25 each - sewer service lines (one per dwelling);
- c. Domestic plumbing in 11 dwellings; and
- d. 25 each - garbage cans with racks (one per dwelling).

6. The Village agrees to enact appropriate ordinances or regulations and establish appropriate service charges, under the terms and conditions set forth in the aforementioned agreement, to insure continued operation, maintenance and repair of sanitation facilities. The Village further agrees to collect the established service charges from all users hooked to the sanitation facilities, and to use these funds for the fuel, electricity, operator wages, equipment repairs and other necessary operations and maintenance items in order to properly administer these facilities.

IN WITNESS WHEREOF, the parties have subscribed their names.

FOR THE VILLAGE OF ATKA, ALASKA

5-8-79
Date

Ymiko Anigauff
President, Village Council of Atka,
having been duly authorized by the
Village Council to enter into this
agreement on behalf of the Village of
Atka as evidenced by the resolution made
by the Village Council of Atka, Alaska

RECOMMENDED APPROVAL

6/4/79
Date

Henry F. Warden III
Henry F. Warden III, Chief
Area General Services Branch

FOR THE INDIAN HEALTH SERVICE

6-5-79
Date

G. H. Ivey
G. H. Ivey, Director
Alaska Area Native Health Service
Public Health Service, Department of
Health, Education, and Welfare

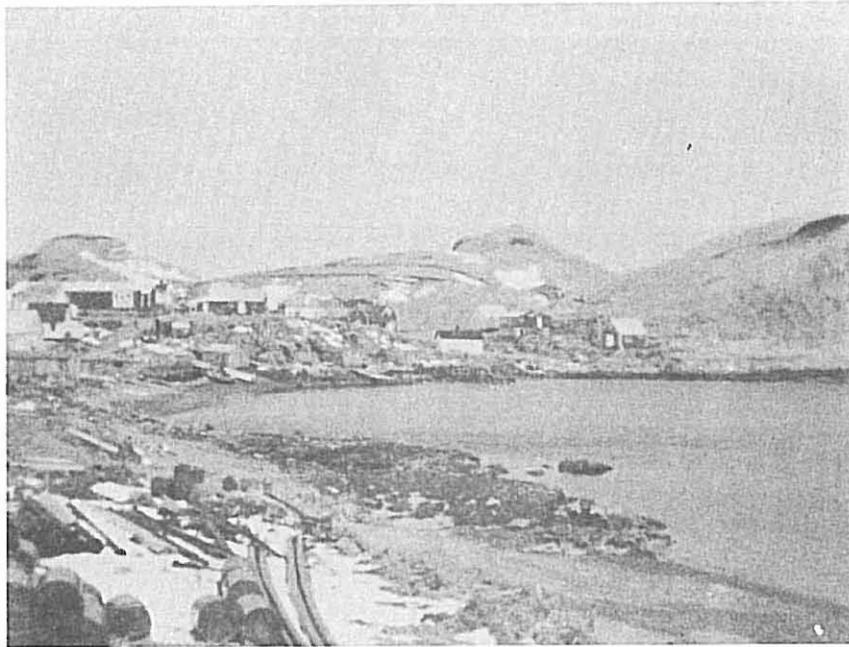


FIGURE 1 - Atka is the farthest west Alaskan Native community. The community has very limited access and communication facilities. These factors hindered the delivery of project materials.

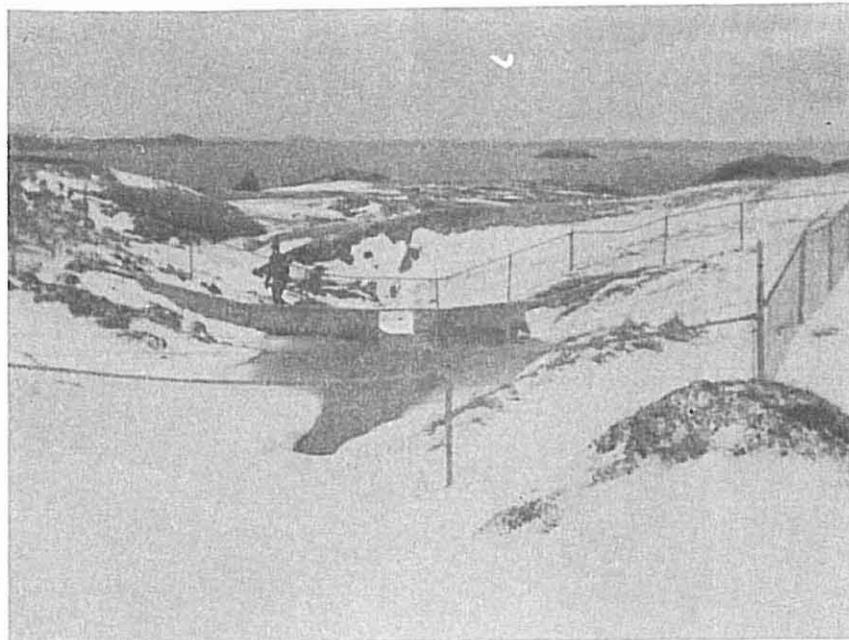


FIGURE 2 - A new water source was developed during the project which consisted of a dam structure, intake gallery and spillway constructed in a stream near the village.



FIGURE 3 - The 960 sq. ft. pumphouse is located above the community and provides for water treatment and storage facilities.



FIGURE 4 - A 30,000 gallon water storage tank was constructed during the project to provide the community with additional water storage above what is maintained in the dam.

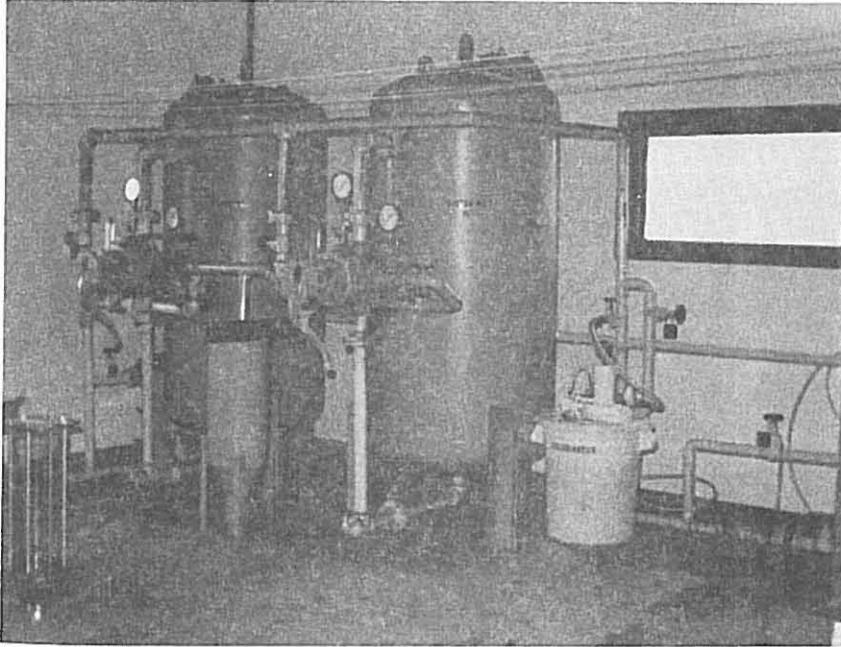


FIGURE 5 - The raw stream water is treated through filtration and with chlorine and fluoride.



FIGURE 6 - The sewer system consists of 25 service connections, 2,000 lf of sewer main with 18 manholes and 1,000 lf of ocean outfall line which extends 50 feet into the ocean.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
DIVISION OF INDIAN HEALTH

FORM APPROVED
BUDGET BUREAU NO. 68-R 700
(See reverse for
instructions and information)

PROJECT PROPOSAL FOR PROVISION OF SANITATION FACILITIES (P.L. 86-121)

1. NAME AND ADDRESS OF INDIAN TRIBE OR GROUP

ATKA VILLAGE, ALEUTIAN ISLAND * ATKA, ALASKA

2. DESCRIPTION OF TYPE OF FACILITIES NEEDED

Water system improvements including source Dam and treatment,
sewage collection and treatment facilities and refuse collection
and dispose system.

3. IS THERE A COMPREHENSIVE PLAN FOR IMPROVING SANITATION FOR YOUR RESERVATION OR COMMUNITY

YES NO

4. IF ITEM 3 IS YES, DOES THE PROPOSED PROJECT FIT INTO THE PLAN

YES NO

5. IF ITEM 3 IS NO, DOES YOUR TRIBE OR GROUP INTEND TO ADOPT A PLAN

YES NO

6. COULD YOUR TRIBE OR GROUP MAKE A CONTRIBUTION TOWARD THE PROJECT OF

FUNDS YES NO LABOR YES NO OTHER (Specify)

7. WILL YOUR TRIBE OR GROUP BE WILLING TO ASSUME RESPONSIBILITY FOR OPERATION AND MAINTENANCE OF FACILITIES WHEN COMPLETED

YES NO

8. DOES YOUR TRIBE OR GROUP HAVE LAWS OR REGULATIONS WHICH WILL HELP IN THE MAINTENANCE OF SANITARY FACILITIES THAT WOULD BE ACQUIRED

YES NO

9. IF ITEM 8 IS NO, WOULD YOUR TRIBE OR GROUP BE WILLING TO ADOPT SUCH REGULATIONS

YES NO

10. NAME AND ADDRESS OF ORGANIZATION AND OFFICIAL THAT WILL BE DESIGNATED TO REPRESENT YOUR TRIBE OR GROUP IN DEALING WITH THE PUBLIC HEALTH SERVICE

Atka Village Council
Larry Dirks Sr. President
Atka Aleutian Isl. Alaska FPO Seattle, 98791

11. REMARKS (Include pertinent comments not covered above)

Our present water system is from a surface source and is not treated.
Sewage is discharged right into the streams.

12. DATE

October 16, 1971

13. SIGNATURE AND TITLE OF PERSON COMPLETING THE PROJECT PROPOSAL

Larry W. Dirks Sr. (village Council President)

14. TO BE COMPLETED BY PUBLIC HEALTH SERVICE REPRESENTATIVE

FORWARD 3 COPIES OF THIS PROPOSAL TO:

Robert Fortune
MEDICAL OFFICER IN CHARGE, Robert Fortune, M.D., Service Unit Director, ANMC

(Name and Address of Indian Health Facility)

114



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

March 29, 1976

ALASKA AREA NATIVE HEALTH SERVICE
BOX 7-741
ANCHORAGE, ALASKA 99510

Refer to: A-OEH

Mr. Mike Smigaroff, President
Atka Rural Branch Village Council
Atka, Alaska 99502

Dear Mr. Smigaroff:

Based on the provisions of Public Law 86-121 and the project proposal submitted to Indian Health Service through the city council, the Indian Health Service has initiated planning of water and sewer facilities for your community. In order to accomplish planning of water and sewer facilities the parties mutually agree:

1. The village will make available to Indian Health Service representatives, upon request, all information that the village has available on ground water, land status, rights-of-way and other pertinent information.
2. The village grants the IHS permission to enter and cross village lands for the purpose of carrying out engineering feasibility studies, erecting an equipment shelter, erecting a well house, soil boring and other tests.
3. The village will make available to the Indian Health representative, an enclosed storage area for housing materials and/or equipment and office space during the duration of engineering feasibility studies, soil borings and/or other tests.
4. The IHS will provide all studies, planning and testing without charge to the village. When completed, the IHS will furnish the village with all findings and recommendations.

Your signature affixed to the bottom of this letter will constitute an agreement between the IHS and the village of Atka for execution of the planning for water and sewer facilities. Please sign and return the original and three copies. You may keep one copy for your file.

Sincerely,

G.H. Ivey
Director

Alaska Area Native Health Service

Mike Smigaroff
President, Village Council

PROJECT SUMMARY
SANITATION FACILITIES CONSTRUCTION
VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

PROJECT SUMMARY
SANITATION FACILITIES CONSTRUCTION
VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

PREPARED BY
E. Crispin Kinney
Sr. Asst. Health Services Officer
Field Engineer

Frank Cahill
Writer-Editor
Planning & Training

CONCURRED BY
William L. Ryan, Ph.D., P.E.
Senior Sanitary Engineer
Chief, Sanitation Facilities
Construction Branch

RECOMMENDED BY
Fred M. Reiff, P.E.
Sanitary Engineer Director
Office of Environmental Health

APPROVED BY
G. H. Ivey
Director
Alaska Area Native Health Service

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION
INDIAN HEALTH SERVICE
ALASKA AREA NATIVE HEALTH SERVICE
OFFICE OF ENVIRONMENTAL HEALTH

PROJECT SUMMARY
SANITATION FACILITIES CONSTRUCTION
VILLAGE OF ATKA, ALASKA

PROJECT NO. AM-77-160
PUBLIC LAW 86-121

TABLE OF CONTENTS

<u>CONTENTS</u>	<u>PAGE</u>
INTRODUCTION	1
PROJECT HISTORY	1
GENERAL INFORMATION	3
A. Description	3
B. Access	4
C. Population and Public Administration	5
D. Housing and Public Facilities	5
E. Economy	6
FLOOD HAZARD EVALUATION	7
SITE INVESTIGATIONS	7
EXISTING SANITATION FACILITIES	7
A. Water	7
B. Wastewater Disposal	8
C. Solid Waste Disposal	8
PROPOSED FACILITIES	8
A. Water	8
B. Sewer	9
C. Solid Waste	10
PARTICIPATION	13
SYSTEMS OPERATION AND MAINTENANCE	13

PROJECT SUMMARY
SANITATION FACILITIES CONSTRUCTION
VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

Summary Date
August 1977

INTRODUCTION

The village of Atka, Alaska, submitted a project proposal to the Indian Health Service (IHS) of the U.S. Public Health Service (PHS) on October 16, 1971, requesting assistance in improving the existing water system and providing a sewage collection and disposal system. Because unsafe water supplies and sewage disposal facilities are contributing factors in the incidence of infectious disease, and the availability of potable water will improve personal hygiene and help reduce the disease rate, the IHS is authorized by Public Law 86-121 (OMB 13.229) to plan and carry out the construction. The proposed piped water and sewer system will serve a total of 25 existing homes, including six new BIA-HIP houses. This project summary includes a preliminary engineering evaluation, recommendations and funding requirements for the proposed facilities.

PROJECT HISTORY

During World War II Atka burned completely. The U.S. Navy rebuilt the community, providing wood frame houses and a water supply consisting of a small plank dam across one of the nearby creeks, wood-stave transmission pipe to the community, and water service lines to houses. Houses were equipped with sinks, lavatories, and flush toilets. Waste water was piped directly

into the two creeks flowing through town, through wood-stave drain lines. Both creeks empty into Nazan Bay.

The Bureau of Indian Affairs (BIA) has since added a 2-inch galvanized iron transmission line to the dam paralleling the original wood-stave line. This line provides water to the school and five houses. The dam was also improved at that time. By 1968, the school had added a hypochlorinator and pressure system to their building's water system. For wastewater treatment they installed a septic tank discharging effluent into the creek. With construction of a new school in 1969, the hypochlorinator was abandoned, and the septic tank replaced with a larger tank featuring an absorption field rather than discharge directly to the creek.

At the suggestion of the PHS sanitarian, the community fenced the reservoir behind the dam. Some families replaced leaky wood-stave sewage drain lines with acrylonitrile-butadiene-styrene (ABS) pipe, though continuing to direct the flow of raw sewage into the creek.

The PHS has provided medical assistance and examinations, and through their sanitarians, has provided technical suggestions for improving sanitary practices in the community, but was unable, due to funding limitations, to begin initiation of a P.L. 86-121 sanitation facilities construction project until 1976. In October, 1976 two sanitary engineers visited Atka to gather preliminary design information.

The BIA approved construction of six new houses and improvement of seven existing houses in September 1974. Construction was completed in the summer of 1976.

GENERAL INFORMATION

A. Description: Atka is located on Nazan Bay, on the east coast of Atka Island, in the Andreanof Islands of the Aleutian Island chain. At 52° 12' north latitude, 174° 12' west longitude, Atka is approximately 1100 air miles southwest of Anchorage and 140 miles east of Adak. It is the farthest west Alaskan Native community.

Atka's climate is maritime, with small seasonal temperature variations. Precipitation is moderate, but cloudiness and fog are common. Winds average 17 to 20 mph, making blizzard snow conditions common in winter. The following data, though approximate, is generally applicable to the site.

Climatological Data

Mean annual precipitation, inches.28
Mean annual snowfall, inches50
Mean annual temperature, °F.38
Thawing index, °days2500
Freezing index, °days.750
Design freezing index, 1 yr in 10.1750

The Aleutian Islands, of which Atka Island is one, constitute a 1,500 mile long chain of Eocene volcanoes jutting sharply up from ocean depths of over 2,000 fathoms. Korovin volcano, on Atka Island about 16 miles north of the community of Atka, is active today, having erupted as recently as 1830. A second volcano, Mt. Sarishef is also active on Atka Island, so are two other volcanic vents. The whole island is mountainous and was heavily glaciated during Pleistocene time, leaving deep fiords and valleys. A hot spring a few miles above the head of Korovin Bay, on the northwest side of the island, is reported to boil furiously at times.

Bedrock of porphyritic basalts shows columnar jointing and can be easily scattered. At the townsite, bedrock lies below two to twelve feet of

volcanic ash, the only soil. The ground is wet year-round and does not drain well. There is no permafrost in the Aleutian Islands.

Topographically, the area about Nazan Bay is rolling hills with generally steep slopes. Within the first 500 feet inland from the sea, the ground rises from sea-level to 200 feet in elevation. Terrain in town varies from 10% slopes to 80% slopes. Though the edge of the town comes down to sea level at the beach on both ends of the village, cliffs drop 50 feet to the sea.

Atka Island is entirely treeless. Vegetation in the lower ground within the town is moist tundra dominated by sedges, especially in tussocks. Higher ground behind the community is predominately barren alpine tundra.

B. Access: Atka is reached by air transportation to Adak, is 140 miles further west. From Adak, transportation is by a Navy tug boat which makes a mail and supply trip about once every three (3) weeks. This trip takes 10 to 12 hours one way. Tug reservations are made through the BIA and U.S. Navy. The primary supply source for Atka is the BIA owned barge, North Star, which stops once a year. Atka has only one dock, located about 4 miles North of the Village. It was built during World War II and is now deteriorated and is structurally incapable of holding large loads. For this reason the North Star anchors in Nazan Bay and supplies are lightered to the village in landing crafts.

An airstrip was built by the Army during WWII, but has since deteriorated. It is no longer usable, though there are areas near the strip where a small plane (185 or 206) could possibly land. There is, however, no scheduled or charter air service to Atka at present.

The community's only telephone is located in the City Council office in the old school (#767-8001). A number of residents own citizen's band radios for communication within the community. The city receives good AM radio reception from mainland stations in the evenings.

A gravel road runs from one end of Atka city to the other and continues about five miles north. It was built by the Army during WWII and is now washed out in places. The school owns the only automobile in town, and old pickup truck, and though there are a few motorcycles, most transportation within Atka is on foot. Most residents own skiffs for ocean travel.

C. Population and Public Administration: The population of Atka is 88, according to the 1970 census. All except the school teacher are Atka Aleut. A gradual decline in population has been evident since 1960, with population figures for that year at 119. In 1964 a PHS sanitarian's report acknowledges 100 residents, and, though 1970 census figures are 88, the 1976 field study suggests that the current maximum population is 86. Most commonly 60-65 people are in town, due to men being gone in summer to fish, and high school-aged children leaving the community during the school year. To allow for some future development, a design population of 100 has been established.

Atka is a village organized under the Indian Reorganization Act (IRA) with five member village council governing. The council president serves a 2-year term. Atka is part of the Aleut League Regional Corporation. The village is served by the Anchorage Service Unit of the Public Health Service.

D. Housing and Public Facilities: During World War II, the military built 22 houses in Atka. They were all of wood frame construction, set on

pilings. None have experienced serious settling, but three have become substandard. In 1976, the BIA completed work on six new houses as part of a housing program which included some repair work on seven older houses. In all, 25 habitable houses are in Atka, though only 17 are occupied at present.

The Aleutian Regional School district operates an elementary school in Atka. Sixteen students attended during the 1975-76 school year. The community supports two general stores, one owned and operated by the Village Corporation and the other privately owned. A Russian Orthodox Church is located in the center of the village. Atka also has a PHS clinic, and uses the old school building for a community hall. The post office is also located in the old school building.

There is no community-wide electrical power in Atka. The school operates two-35 Kilowatt generators alternately, providing power to the school, the teachers' quarters, and the community hall. One resident has installed a Pelton Wheel to provide power to his house. In 1972 there was considerable interest in developing the community's substantial hydroelectric potential, but the required capital was a stumbling block.

Fuel storage facilities in Atka are owned by the school and the Village Corporation. The corporation sells fuel oil for \$49 per 55-gallon drum.

E. Economy: Atka's economy is divided between a cash economy based on fishing (generally around the Kodiak Island waters) and a subsistence economy based on hunting, fishing, and sealing near Atka. Villagers sometimes leave to find work in other towns temporarily. The work force is estimated at 30 people.

No other projects are planned for Atka at present. Further development at Atka seems unlikely.

FLOOD HAZARD EVALUATION

The Flood Plain Management Service of the U.S. Army Corps of Engineers does not rate flood hazard at Atka, probably due to lack of sufficient information. They do note a teleseismic tsunami is possible. Villagers confirm that a tsunami struck in 1955, but the extent of damage was not reported.

Erosion is not considered a problem.

SITE INVESTIGATIONS

Other than the standard preliminary engineering studies done by the IHS, no studies have been done at Atka.

EXISTING SANITATION FACILITIES

A. Water: The community's water source is a 10,000-gallon reservoir held by an old plank dam across the northern stream flowing through Atka. The reservoir is located about 600 feet from the northwest edge (the closest part) of town. The stream it impounds had a flow measured at about 1500-gallons per minute in October, 1976. Villagers report that the stream has provided ample water on a year-round basis. Pressure to the houses is adequate with the reservoir at an elevation of approximately 118 feet.

Water from the reservoir is piped to the village through an 8-inch diameter wood-stave pipe to service lines of galvanized iron one-inch or less in diameter serving 14 houses. A second transmission line of 2-inch galvanized iron pipe delivers water to the school and five other houses.

The wood-stave line is buried for much of its length, but is supported on a wood trestle across some ravine areas. Where exposed it shows much

evidence of past leaks and patchwork, with some leaks still existing. The exposed line is not insulated.

A second reservoir on the south creek also has a wood-stave transmission line leading to the village. Water from this pipe is not used for drinking, but drives one resident's Pelton wheel. Water is used without treatment of any kind. Chemical analysis indicates that it is of excellent quality.

B. Wastewater Disposal: Eight of the original houses and all six of the new BIA houses have flush toilets. Houses without the flush toilets uses honeybuckets. All sewage is discharged through wood-stave, ABS, or a combination of pipe types to the swift-flowing stream which flushes it out to the sea. Some of the sewer lines are broken in places.

The school uses a 2,000 gallon septic tank for the sewage from its toilets. Effluent from the septic tank flows into six consecutive overflow boxes within its drainfield. The tank has not been pumped in the eight years it has operated.

C. Solid Waste Disposal: The village dump is located about one mile north of town on the old runway. The school pickup truck is used as the collection vehicle, and villagers are serious about keeping Atka neat and clean, so they do make use of the dump. They have no equipment for landfill operation. The dump is not fenced.

PROPOSED FACILITIES

A. Water: Although pressure in town from the existing dam is generally adequate, at the higher houses it is marginal. If the water level in the reservoir was to drop, the higher houses would probably suffer from

low pressure. To help relieve this potential problem, it is proposed to build a new dam approximately 200 feet upstream from the existing structure. A small steep ravine area composed of volcanic ash and areas of rock which fractures easily should provide a good site for this structure. Dam height will be 15 feet. Structure to be either wood or log crib type construction, or possibly a culvert material type. No exact figures due to lack of topographic map, but it is estimated 60,000 to 100,000 gallons of water will be impounded. Water level behind this dam will be approximately 20 feet higher than in the existing dam.

Approximately 1,000 LF of 6" PVC transmission main will be installed between the new dam and the NW edge of town. It will be entirely buried. Route will be around north side of a large knoll between the north-west edge of town and the present dam.

The 30,000 gallon wood stave storage tank will be built adjacent to the transmission main. A small treatment building (probably 12 feet by 16 feet) will house a small filter unit chlorinator, and fluoridator. These facilities will be located upon receipt of detailed topographic information. All treatment building facilities will be operated on gravity pressure or flow basis due to lack of electricity.

Approximately 2600 LF of 4" PVC distribution system will replace the existing line through town. Fire hydrants for flushing sewer lines will be installed at 4 to 5 strategic points in town. 3/4 inch copper service lines will be installed to all houses.

B. Sewer: Probably the largest single problem in Atka is the current discharge of raw sewage into the streams flowing through town. Some pools

exist in the lower reaches of the streams. Sewage gathers in these and creates a significant health and environmental nuisance. Children and animals playing in and near the water are subjected to odors and direct contact with harmful bacteria.

To help alleviate this situation a gravity sewage collection system will be installed in Atka. It will consist of approximately 2,000 lineal feet of 6-inch PVC main line. About 18 manholes will be required. Four inch service lines will connect each unit to the main.

A number of sewerage alternatives were considered for Atka. A package biological or bio-chemical treatment plant would be prohibitively expensive when shared among only 25 families, and would require frequent sophisticated maintenance which would often be simply unavailable in this remote location.

There is no land available for a lagoon site in Atka without, again, prohibitively high costs for pumping sewage uphill behind the community. Even a septic tank of sufficient size for the village would necessarily be located in a high density area near the beach, creating a possible hazard in case of overflow. Capital costs for required rock excavation, sludge disposal site, and provision of pumping and hauling equipment for the sludge would also be inordinately high.

Because Atka's 25 families will generate a very small amount of sewage, and the island is separated from all other occupied land by at least 120

miles of ocean, and since dilution of the sewage in this expanse of ocean will be extreme, a direct ocean outfall will be constructed to carry all sewage by gravity to the ocean depths 50 feet offshore. Tidal action at this point will provide ample dispersal of wastes.

C. Solid Waste: Garbage cans (12) will be provided for each house. A small pickup truck will be furnished to the town for use in hauling garbage to the dump site. No improvements are intended for the dump. Its distance from town, coupled with the small amounts of garbage generated by 100 people or less, the vast amount of area around the present site, and lack of animal nuisance at the dump seem to indicate no need for improvements. A small Bobcat type unit with a loader and backhoe attachment will be left in the village after construction for use in covering the dump and performing repairs and routine maintenance on the system.

ATKA COST ESTIMATE:

WATER

1. New dam structure including intake & spillway	\$20,000
2. 30,000 gallon wood-stave storage tank	15,000
3. Water treatment building including all appurtenances	30,000
4. 6-inch transmission main 1,000 LF @ \$30	30,000
5. 4-inch distribution system 2,600 LF @ \$25	65,000
6. 3/4-inch copper service lines 25 A \$1,000	25,000
7. Rock excavation 100 yd ³ @ \$60	<u>6,000</u>
	SUBTOTAL Water
	\$191,000

SEWER

1. 6-inch gravity main 2,000 LF @ \$40	\$80,000
2. Manholes - 18 @ \$2,500	45,000
3. Service lines - 25 @ \$1,000	25,000
4. Ocean outfall - 6-inch 1,000 LF @ \$40	40,000
5. Rock excavation - 200 yd ³ @ \$60	12,000
6. House plumbing - 11 units @ \$1,500	<u>28,500</u>
	SUBTOTAL Sewer
	\$230,500

SOLID WASTE

1. Garbage cans & racks - 25 @ \$120	\$3,000
2. Garbage collection vehicle - LS	10,000
3. Loader/backhoe for maintenance	15,000
4. Shop building (600 Sq. Ft.)	<u>35,000</u>
	SUBTOTAL Solid Waste
	\$63,000

WATER	\$191,000
SEWER	230,500
SOLID WASTE	<u>63,000</u>
Subtotal	\$484,500
+15% Engineering	<u>72,675</u>
Subtotal	\$557,175
+15% Contingencies	<u>83,576</u>
TOTAL	\$640,751
Rounded to nearest thousand	\$641,000

Total cost per house - $\frac{\$641,000}{25} = \$25,640$

PARTICIPATION

The Indian Health Service (IHS), part of the U.S. Public Health Service and the Village of Atka are the principal participants in this project.

The IHS will provide the capital funds and engineering required to design and construct the sanitation facilities modifications.

The Village of Atka, through its village council, will pass and enforce the necessary ordinances to regulate the proposed utility systems; operate and maintain the systems; collect sufficient fees from the users to make the systems self-supporting; provide manpower for the construction (to be paid at rates agreed upon by the village council and the IHS); and select individuals capable and willing to be trained to operate and maintain the systems.

SYSTEMS OPERATION AND MAINTENANCE

The water supply system, sewage disposal facilities and solid waste disposal facility are to be operated and maintained by the village.

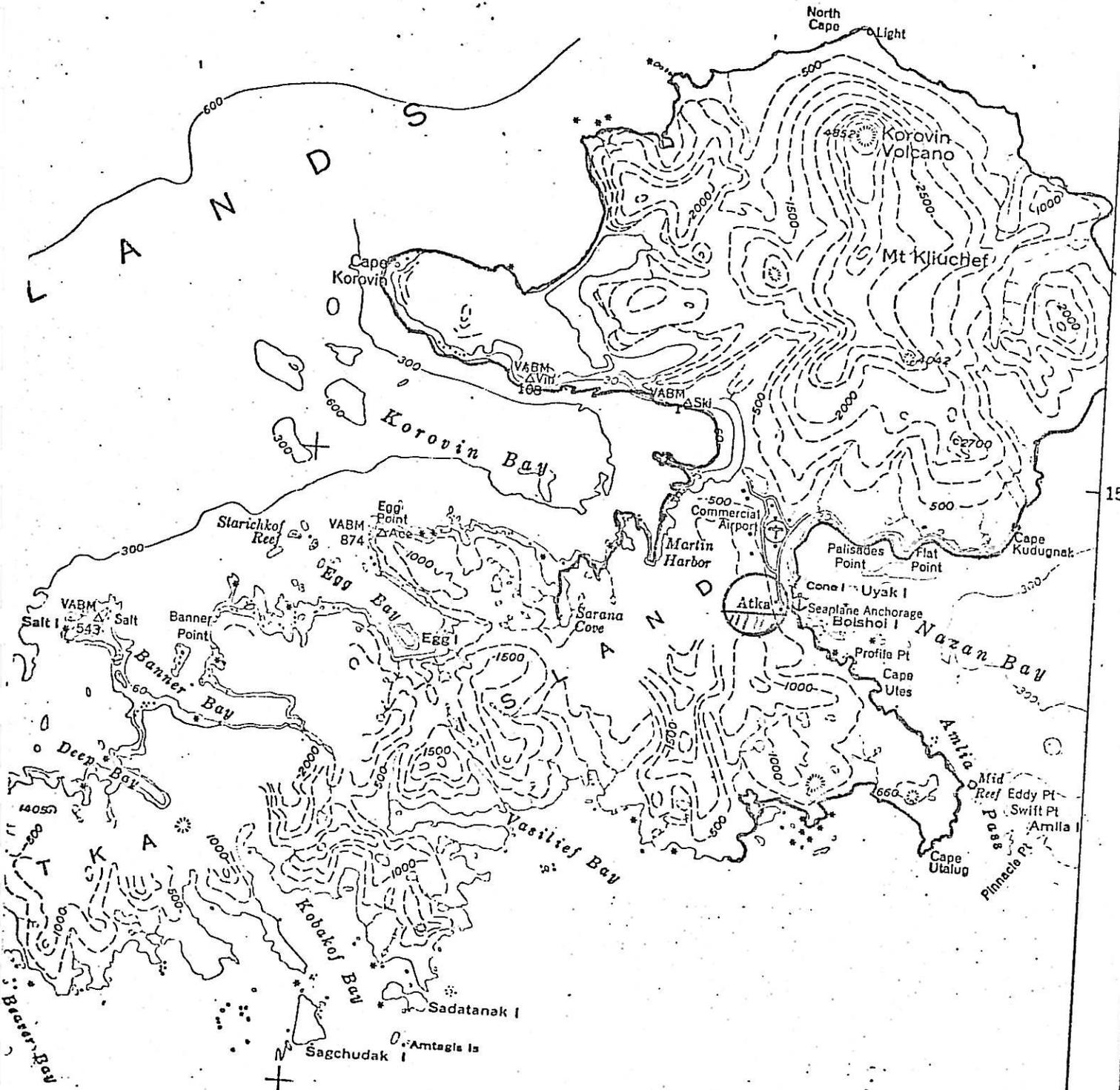
In order to promote effective operation and maintenance procedures, the IHS will assist the village in:

- A. Drafting appropriate village utilities regulatory and operational ordinances;
- B. Establishing a utility organization and appropriate utilities use charges;
- C. Training personnel in the proper operation and maintenance procedures for the utilities;
- D. Developing a realistic utilities operation and maintenance budget, including capital fund appropriations for system component repair and replacement costs.

In addition, the IHS will provide an operation and maintenance manual and will be available as a utilities consultant. However, the responsibility for the operation and maintenance of the transferred sanitation facilities is solely that of the village.

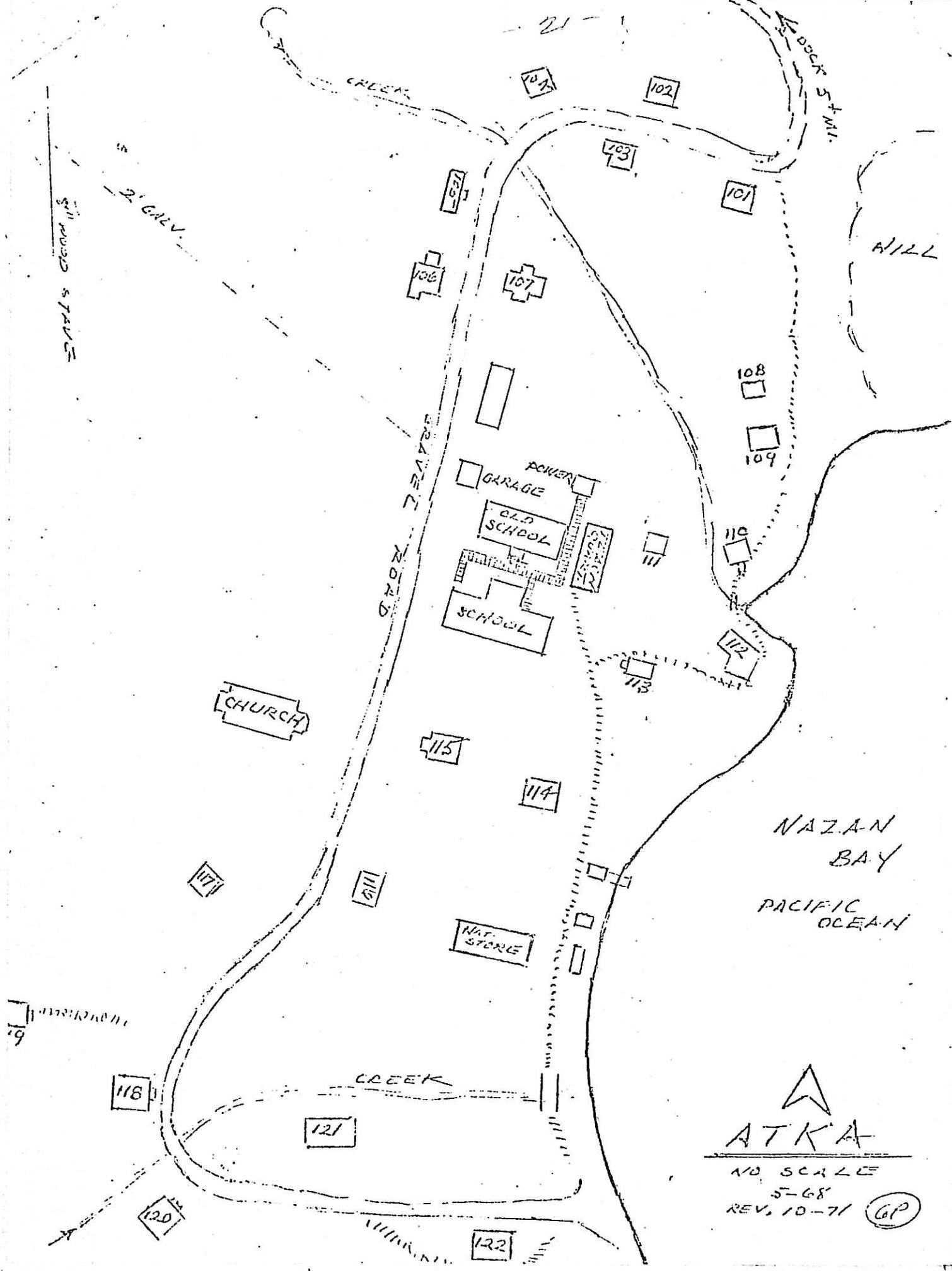
O&M Cost Estimate

	<u>Per Month</u>
Total system maintenance - all facilities	
1. Electricity	\$ 0
2. Chemicals - chlorine & fluoride for water treatment	6
3. Fuel - assume yearly average of 20 gal. per month to heat treatment building @ \$49 per 55 gallon	18
4. Labor - Water - ½ hour per day to check tank, reservoir and treatment bldg. = 15 hr/month Sewer - 4 man days per year to clean lines Solid Waste - 10 man hrs/month to collect garbage and cover the dump TOTAL = 28 hrs/month	
Assume \$8/hr. wages - 28 hours @ \$8	224
5. Repair and replacement fund	<u>25</u>
TOTAL	\$273
$\frac{\$273}{25 \text{ homes}} = \$11/\text{month}$	

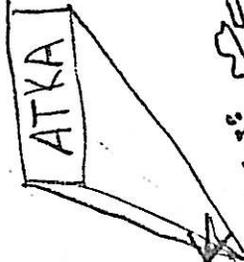
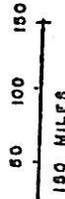
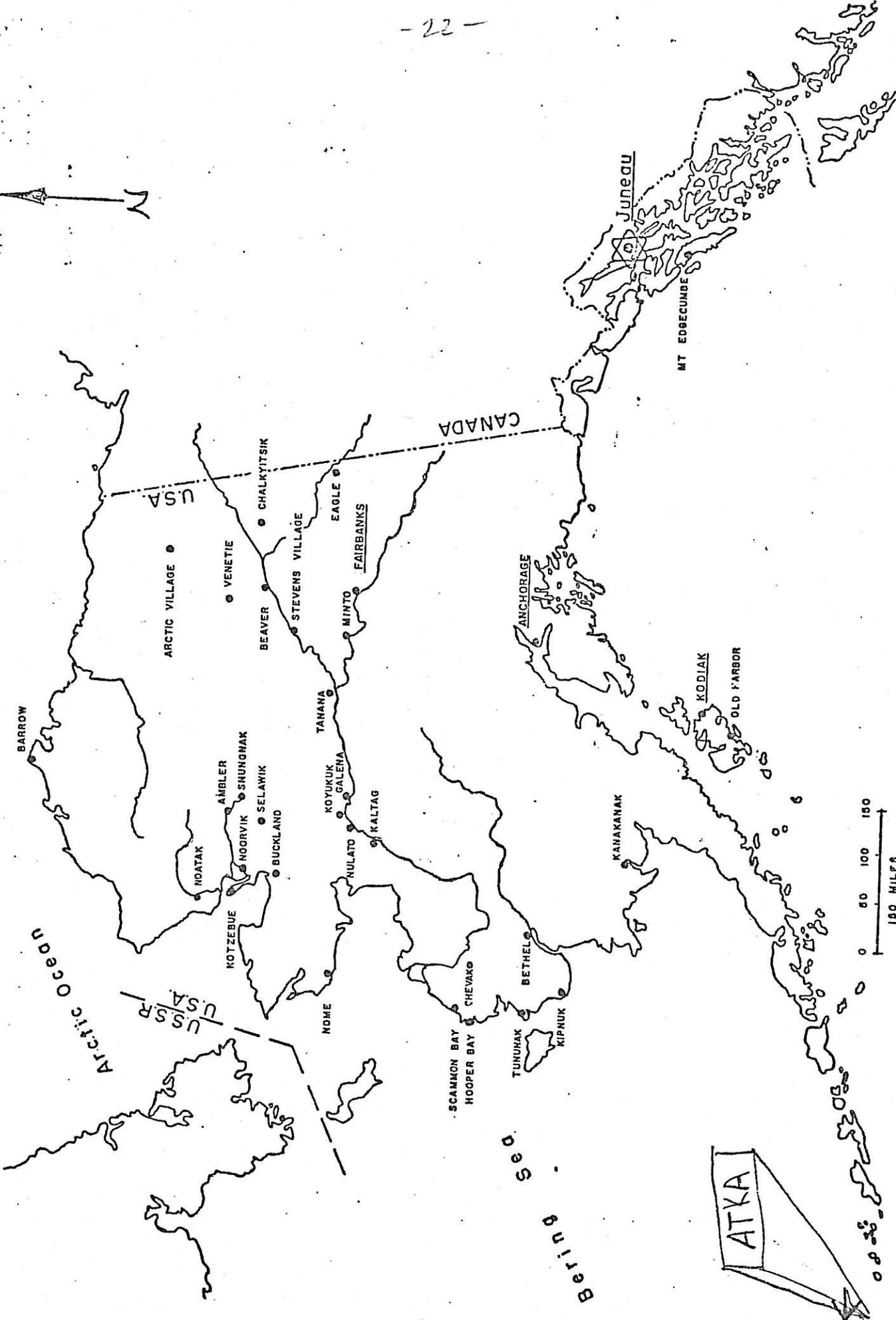
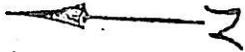


15'

52°




ATKA
 NO SCALE
 5-68
 REV. 10-71 (GP)



PREPARED BY:

9/20/77
Date

E. Crispin Kinney
E. Crispin Kinney
Sr. Asst. Health Services Officer
Field Engineer

9/17/77
Date

Frank Cahill
Frank Cahill
Writer-Editor
Planning & Training

CONCURRED BY:

9-21-77
Date

W. L. Ryan
for William L. Ryan, Ph.D., P.E.
Senior Sanitary Engineer
Chief, Sanitation Facilities
Construction Branch

RECOMMENDED BY:

9/23/77
Date

Fred M. Reiff
Fred M. Reiff, P.E.
Sanitary Engineer Director
Office of Environmental Health

APPROVED BY:

9/23/77
Date

G. H. Ivey
G. H. Ivey, Director
Alaska Area Native Health Service

INDIAN HEALTH SERVICE
ALASKA AREA OFFICE
SANITATION FACILITIES PROJECT

PROJECT APPROVAL

DATE: August 11, 1977

<u>Assigned Project Number</u>	<u>Project Title and Date</u>	<u>Estimated Cost</u>
AN-77-160	Sanitation Facilities Construction for the Village of Atka, Alaska	IHS.....\$ 641,000 Tribal.....\$ Others.....\$ Total.....\$ 641,000

Under and pursuant to Public Law 86-121 and the authority delegated to me, I hereby approve for initiation the sanitation facilities project outlined in the attached project summary described above. Negotiation of agreements related to project execution, contribution and responsibilities for operation and maintenance of the planned facilities may now be initiated. Negotiations shall be based upon the project summary as approved. Indian Health Service commitments shall not exceed the estimate set forth above except as increases in such estimate may be subsequently authorized by the Area Director or others designated by him for such purpose.

The assigned project number shall be utilized on all correspondence and documents related to this project.

E. Crispin Kinney is hereby designated as Project Engineer and shall be responsible for the coordination of all activities related to the execution of the project.

Refer to fund transfer document No. _____

Fund Certification

DATE

Funds in the amount of the IHS estimated cost are available in the Area, but have not been specifically reserved for this project.

Area FMO

cc: Admin. Off., OEH, AANHS
Project File, OEH
Chief, SFCBr., OEH
Service Unit Director
Director, IHS, Attn.: Director OEH
Area Financial Management Officer, AANHS

Approval Recommended

D. R. Rogers
Chief, Sanitation Facilities
Construction Branch

Concurrence

Frank M. Ruff
Office of Environmental Health

Approved

D. H. Arley
Area Director

Indian Health Service
Sanitation Facilities Construction
under P.L. 86-121

PROJECT SCHEDULE

Date: 8/11/77

Alaska Area

PROJECT TITLE Sanitation Facilities

PROJECT NUMBER AN-77-160

AND Construction

LOCATION Atka, Alaska

ESTIMATED COST

PROJECT DESCRIPTION Complete water
and sewer system for community.

IHS \$ 641,000

TRIBAL \$ _____

OTHER \$ _____

TOTAL \$ 641,000

NO. HOMES TO BE SERVED _____

DATE PROJECT APPROVED _____

<u>ACTION ITEM</u>	<u>TARGET DATES</u>	<u>REMARKS</u>
MEMORANDUM OF AGREEMENT SIGNED	<u>9/15/77</u>	_____
ENGINEERING DESIGN INITIATED	<u>9/1/77</u>	_____
ENGINEERING DESIGN COMPLETED	<u>12/15/77</u>	_____
STATE HEALTH DEPARTMENT REVIEW	<u>1/15/78</u>	_____
RIGHTS OF WAY REQUESTED	<u>10/15/77</u>	_____
PROCUREMENT INITIATED	<u>2/1/78</u>	_____
CONSTRUCTION INITIATED	<u>5/15/78</u>	_____
RECRUITMENT	<u>3/1/78</u>	_____
TRAINING	<u>Throughout project</u>	_____
CONSTRUCTION COMPLETED	<u>12/15/78</u>	_____
FACILITIES TRANSFERRED	<u>6/1/79</u>	_____

Crispin Kinney
Project Engineer

D. C. R. Rogers 9-26-77 DATE
Chief, Sanitation Facilities Construction

ALASKA AREA
GENERAL PROJECT SUMMARY OUTLINE AND REVIEW FORMAT

Service Unit Anchorage Alaska City or Village Atka
 Title Sanitation Facilities Construction
 Prepared By E. Crispin Kinney Date August 1977
 Reviewed By _____ Date _____

1. INTRODUCTION

Purpose, type of project, number and type of housing units and authority. X

2. PROJECT HISTORY

Events, approvals and dates. Project proposal date, assigned project numbers. X

3. GENERAL INFORMATION

Location: Geography, Service Unit, U.S. Survey Nos. Proximity to major cities, description of town layout. X

Climate: Temp., precip., wind, seismicity, permafrost X

Population: Census date, forecasts, seasonal and long term trends, % Native and tribe. X

Government: Municipal class & form, Native political, legal assistance retained by community. X

Facilities: Industrial, commercial, educational, government transport, recreational. X

Non-Sanitation Utilities: Power, fuel, communications, (phone, radio, TV, paper, teletype), organization of them. X

Local Resources: Village and area income base, revenue sharing, taxes, natural materials, equipment X

Construction geology & ground water (brief) X

Construction considerations X

Condition of Homes: 2500 card info, observations and IHS or BIA surveys X

Community Planning: Comprehensive, OEDP, 701, etc. X

Transportation: Land, air, water modes for mail, people and freight, schedules, local vehicles. X

Previous IHS Projects: Project No. & brief description. X

Future Projects Affecting IHS: EDA, RDA, AVEC, Corps, BIA. X

4. DISEASES OF ENVIRONMENTAL SANITATION SIGNIFICANCE

5. EXISTING SANITATION FACILITIES

Water:

Sewerage:

Solid Waste:

Sanitation Organization: Operators, equipment, ordinances, service charges, effectiveness X

6. NEW AND/OR EXISTING HOUSING LOCATIONS

7. STUDIES

Other which have been done X

8. RECOMMENDED SANITATION FACILITIES

Water: Source, transmission, treatment, storage, distribution, water use, quality, quantity, water supply law
Sewer: Collection, treatment, water pollution law, flow rate and strength
Solid Waste: Collection, disposal, law requirements

X

X

X

9. FLOOD HAZARD EVALUATION

Corps, NWS, NOAA, local info

X

10. OEH Environmental Assessment (Include copy)

X

11. CONTRIBUTIONS

City: Cash, material, labor, storage, equip., etc.
Housing authority, BIA, HUD, State W&S Grants
AFN, Regional Native Corp., etc.

X

12. COST ESTIMATE OF RECOMMENDED FACILITIES

Water*
Sewer*
Solid Waste*
Cost per design unit
*Cost breakdown by agency responsibility

X

13. OPERATION & MAINTENANCE

Organization and estimated cost

X

14. MAPS

X

15. PRELIMINARY DESIGN ANALYSIS SHEETS

X

16. SIGNATURE SHEET

X

I.	Type	No. Homes	IHS Cost	IHS Cost/Home	Total Cost	Total Cost/Home
	Initial					
	Exist.	19	487,160	25,640	487,160	25,640
	HUD					
	HIP	6	153,840	25,640	153,840	25,640
	Other					
	Initial					
	Total	25	641,000	25,640	641,000	25,640
	Design					
	Total					

II. Type of Facility (No. of homes in each)

CW 25 CS 25 CR 25
IW IS IR
Other

PRELIMINARY DESIGN ANALYSIS
SEWAGE COLLECTION AND TREATMENT SYSTEMS

COMMUNITY Atka RESERVATION _____
POPULATION SERVED

PRESENT: NO. HOMES 25 NO. PERSONS 85
DESIGN: NO. HOMES 25 NO. PERSONS 100 GROWTH FACTOR 18%

SEWAGE FLOW EXPECTED

PRESENT POPULATION: 75 GPCD AVERAGE DAILY TOTAL 6375 GPD
DESIGN POPULATION: 75 GPCD AVERAGE DAILY TOTAL 7500 GPD

SEWAGE COLLECTION SYSTEM

MIN. VELOCITY: LATERAL 2.0 FPS INTERCEPTOR _____ FPS OUTFALL 2.0 FPS
2000 FT. 6" MATERIAL PVC _____ FT. 10" MATERIAL _____
_____ FT. 8" MATERIAL _____ FT. _____ " MATERIAL _____
MAXIMUM DISTANCE BETWEEN MANHOLES 300 FT. NUMBER OF LIFT STATIONS _____

SEWAGE TREATMENT FACILITY

SEWAGE STABILIZATION LAGOON
MIN. FLOW IN RECEIVING STREAM _____ CFS NO STREAMFLOW _____ DAYS/YR.
DOWNSTREAM USE OF RECEIVING STREAM WATER _____
EVAPORATION RATE _____ IN./YR. PRECIPITATION _____ IN./YR.
CAPACITY: DESIGN _____ AC. NO. CELLS _____ INITIAL _____ AC. NO. CELLS _____
RETENTION TIME: DESIGN _____ DAYS INITIAL _____ DAYS
BOD LOADING: DESIGN _____ POUNDS/ACRE INITIAL _____ POUNDS/ACRE
OPERATING DEPTH: MAX. _____ FT. MINIMUM _____ FT. FENCING REQD. _____ LIN.
PREVAILING WIND DIRECTION _____ NEAREST DWELLING _____ FT.

SEPTIC TANK SYSTEMS

SEPTIC TANK VOLUME (TOTAL) _____ GAL. NUMBER OF TANKS _____
DISPOSAL METHOD FOR SEPTIC TANK EFFLUENT _____
SOIL PERCOLATION RATE _____ MIN./IN.
REQD. AREA: SOIL ABSORP. FIELD _____ SQ. FT. SUB-SURF. SAND FILTER _____ SQ. FT.

OTHER TREATMENT FACILITY (SPECIFY) ocean outfall

PREPARED BY: Max Schmiede APPROVED BY: [Signature]
DATE: 8/11/77 DATE: 9-21-77

WATER SUPPLY AND DISTRIBUTION SYSTEMS

COMMUNITY Atka RESERVATION _____
POPULATION SERVED

PRESENT: NO. HOMES 25 NO. PERSONS 85
DESIGN: NO. HOMES 25 NO. PERSONS 100 GROWTH FACTOR 18%

WATER CONSUMPTION (FOR SYSTEM DESIGN)

PRESENT POPULATION: 80 GPCD AVERAGE DAILY TOTAL 6,800 GPD
DESIGN POPULATION: 80 GPCD AVERAGE DAILY TOTAL 8,000 GPD
DESIGN MAXIMUM FLOW 24,000 GPD

WATER SOURCE

TYPE OF SUPPLY Surface (Stream) REQUIRED YIELD 6 GPM
NUMBER OF WELLS NA DIAMETER _____ IN. AVERAGE DEPTH _____ FT.
PUMP CAPACITY REQUIRED _____ GPM T.D.H. _____ FT. PUMP CYCLE _____ HR.
PUMP TYPE _____ PUMPHOUSE SIZE _____ SQ. FT.
PUMPHOUSE MATERIAL: _____

RECOMMENDED TREATMENT (SPECITY) Filtration Chlorination
Fluoridation

WATER STORAGE

TYPE AND MATERIAL: GROUND Wood Stave ELEVATED _____
CAPACITY: REQUIRED 30,000 GAL. ACTUAL 30,000 GAL.
DIMENSIONS: 20'dia. 14'H ELEVATED HEIGHT NA F

SYSTEM PRESSURE

STATIC: MAXIMUM 60 PSI MINIMUM 35 PS
WORKING: MAXIMUM 55 PSI MINIMUM 20 PS

DISTRIBUTION SYSTEM (PIPELINE LENGTH)

_____ FT. 1" MATERIAL _____ 1,000 FT. 6" MATERIAL _____
_____ FT. 1-1/2" MAT. _____ FT. 8" MATERIAL _____
_____ FT. 2" MATERIAL _____ FT. 10" MATERIAL _____
_____ FT. 3" MATERIAL _____ FT. " MATERIAL _____
2,600 FT. 4" MATERIAL PVC FT. " MATERIAL _____

PREPARED BY: Max Schmiede

APPROVED BY: [Signature]

DATE: 8/11/77

DATE: 9-21-77

PRELIMINARY DESIGN ANALYSIS
SOLID WASTE COLLECTION AND DISPOSAL SYSTEMS

COMMUNITY Atka RESERVATION _____

POPULATION SERVED

PRESENT: NO. HOMES 25 NO. PERSONS 85

DESIGN : NO. HOMES 25 NO. PERSONS 100 GROWTH FACTOR 18%

NO. HOMES HAVING APPROVED STORAGE 25 TYPE CONTAINER(S) 32 gal.

SOLID WASTE EXPECTED

PRESENT POPULATION 4.0 PPCD AVERAGE DAILY TOTAL 340 PPD

DESIGN POPULATION 4.0 PPCD AVERAGE DAILY TOTAL 400 PPD

ESTIMATED B.T.U. VALUE/HR. N/A AVERAGE UNCOMPACTED DENSITY _____ PC

SOLID WASTE COLLECTION SYSTEM

TYPE VEHICLE Pickup CAPACITY _____ CY COMPACTION RATIO _____

NO. COLLECTIONS PER WEEK 1 DISTANCE TO DISPOSAL SITE 1 MILES

NO. CONTAINERS REQUIRED FOR PROJECT 50 TYPE CONTAINERS 32 gal.

SOLID WASTE DISPOSAL FACILITY

1) PREPROCESSING REQUIRED: TYPE EQUIP _____ CAPACITY REQUIRED _____ H

2) THERMAL DEGRADATION: TYPE INCINERATOR _____ CAPACITY _____ P

TYPE AUXILIARY FUEL REQUIRED _____ AIR/FUEL RATIO _____

DESIGN OPERATIONAL TEMP _____ RETENTION TIME _____

AIR POLLUTION CONTROL DEVICES REQUIRED _____

3) SANITARY LANDFILL: TYPE FILL Volcanic ash LAND REQUIRED <1.0 ACRES

TYPE COVER MATERIAL Volcanic ash REQUIRED COMPACTION EQUIP _____

SOURCE COVER MATERIAL _____ DISTANCE TO SITE _____ MILES

COMPACTED REFUSE DENSITY _____ PCY DESIGN LIFE OF FILL 20 YEAR

4) OTHER: (EXPLAIN)

PREPARED BY Max Schmiede DATE 8/11 APPROVED BY [Signature] DATE 9-21-77

PROJECT DATA SYSTEM
INFORMATION SHEET

PROJECT NAME Atka PROJECT NO. AN-77-160

- 1) Type of Project - Housing, Regular, or Special (circle one)
- 2) Indian, Aleut, or Eskimo (circle one)
- 3) Election District Anchorage
- 4) Type of Homes Served, Number of Each, and Services Provided
(HUD, BIA, ASHA, Tribal, Other, Existing, Non-residential,
Non-native)
6 BIA
19 Existing

- 5) Total IHS Funds 641,000
- 6) Total Cash Contributions _____
- 7) Estimated Cash Value of In-kind contributions _____
- 8) Project Engineer Kinney Date Assigned _____

MARGINAL IMPACT STATEMENT

Reconstruction of Water Supply and Sewage Disposal Systems

VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

OCTOBER 1977

Brian G. Tomlinson Sr
Lynn P. Wallace, Ph.D., P.E.
Sr. Sanitary Engineer
Chief, Planning & Training Section

10-31-77
Date

Daniel R. Rogness
Daniel R. Rogness, P.E.
Acting Chief, Sanitation Facilities
Construction Branch

11-1-77
Date

David P. Miller
David Miller
Regional Environmental Officer
DHEW, Region X

11/14/77
Date

U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION
INDIAN HEALTH SERVICE
ALASKA AREA NATIVE HEALTH SERVICE
OFFICE OF ENVIRONMENTAL HEALTH

MARGINAL IMPACT STATEMENT

Reconstruction of Water Supply and Sewage Disposal Systems

VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

DESCRIPTION OF THE PROPOSED ACTION:

The Indian Health Service (IHS), as authorized by Public Law 86-121 (OMB 13.229), in cooperation with the Village of Atka, Alaska, proposes rebuilding Atka's water supply and sewage disposal systems. Available funds are allotted for sanitation facilities construction for Indian and Alaskan Native groups to improve the overall health of the groups and to support low-income housing programs sponsored by the State or Federal government. The sum of \$641,000 has been requested to fund the following:

1. Construction of a wood or log crib dam 15 feet high impounding 60,000 to 100,000 gallons of water;
2. Installation of a buried water transmission line running 1,000 feet from the dam to town;
3. Erection of a 192 sq. ft. water treatment building;
4. Installation of 2,000 feet of buried water main replacing the existing water mains;
5. Installation of water and sewer service lines to 25 houses;
6. Installation of 2,000 feet of buried sewer main;
7. Installation of sewage outfall lines.

Construction time is estimated at one working season.

The proposed water and sewage facilities will serve 25 existing houses.

THE ENVIRONMENT AFFECTED:

Atka is a small village (population 88) located on Nazan Bay on the east coast of Atka Island in the Aleutian Island chain. The Aleutians are volcanic islands rising sharply from Pacific Ocean depths of 2,000 fathoms. Atka Island, approximately 350 miles from the western end of this 1,000 mile chain, includes two volcanoes and two volcanic vents. Korovin volcano, about 16 miles north of the Village of Atka, erupted last in 1830.

Atka Island encompasses approximately 450 square miles along its 65-mile length. It is very mountainous, and geologically-recent glaciation has left deep valleys and fiords. Bedrock is composed of basalt and lies within ten to 12 feet of the surface around the village. Volcanic ash is the only soil. The terrain around the village consists of steep hills rising from a short beach to several feet high. Along both sides of the village steep cliffs drop 50 feet to Nazan Bay.

Atka's climate is maritime, with only minimal temperature variation from summer to winter, an average temperature of 38⁰F., and moderate precipitation. Cloudiness and fog are common, as are brisk winds of 17 to 20 mph, creating blizzard conditions in winter.

Atka Island is entirely treeless. Moist lowland areas support grasses, sedges, and low brushes. Higher elevations support low-lying alpine vegetation.

The Village of Atka is a small Aleut community accessible only by chartered

float plane or by Navy tug boat from Adak Naval base 150 miles west. The navy makes this mail and supply run every three weeks, weather permitting. A village telephone is located in the village council office, and AM radio can be received from the mainland during evenings. One gravel road exists in Atka. It was built by the Navy during World War II, and runs about five miles from the beach through town and beyond.

Twenty-two houses were built by the military after World War II to replace those lost when Atka was bombed. In 1976 the Bureau of Indian Affairs built six new houses and repaired seven others. Twenty-five houses are currently habitable in Atka, though only 17 are presently occupied. Atka has no community electrical power.

Atka's economy is based on commercial fishing and subsistence fishing and sealing. Future development at Atka seems unlikely.

The Aleutian Island Wildlife Refuge takes in all of Atka Island except the Native-owned lands surrounding the townsite. The chief concern of the Aleutian Island Wildlife Refuge is providing protection for ground-nesting birds.

Atka's water supply is a reservoir of about 10,000 gallons held by an old plank dam across the northern stream flowing through Atka. The dam is about 1,000 yards northwest of town, about 118 vertical feet uphill. Water from the reservoir flows through a wood-stave transmission line down the hill to town and through one-inch galvanized iron water service lines to the houses. The transmission line is buried along most of its route, but supported

by a trestle across several ravines. Exposed portions of the pipe show leaks and other signs of wear. The water from this creek is of excellent chemical quality, shows no signs of bacterial contamination, and is in adequate supply throughout the year.

Fourteen houses in Atka have flush toilets. Sewage flows by gravity through patchwork pipes to the swift-flowing stream that runs through town. The stream quickly flushes wastes out to Nazan Bay and the ocean. Houses without toilets use honeybuckets. Honeybucket wastes are also dumped in the stream.

The Atka school uses a 2,000-gallon septic tank to treat and discharge its liquid wastes. Effluent from the septic tank flows through six consecutive overflow boxes and a drainfield.

An unfenced village dump is located about one mile north of town on the old military runway. Villagers are serious about keeping the community clean. They haul garbage in the school truck.

ENVIRONMENTAL EFFECTS:

Natural Systems:

Land Related Environments: The total land area involved in the project, including the entire village area where pipes will be buried, the transmission main corridor, and the land area taken by the expanded water reservoir, will be smaller than 16 acres. This action will be excluded from many impacts involving land-related environments by its small size. Land use in Atka will not be affected, since the project involves only a replacement of existing

sanitation facilities with very similar facilities. Because of the high bedrock and poor soil conditions there is essentially no groundwater at Atka, so the action cannot interfere with the groundwater system. All excavated areas will be re-vegetated to prevent wind and water erosion.

Water Related Environments: Two aspects of the proposed project involve water bodies. The northern stream flowing through Atka serves as the present water source with the water supply line intake at a small wooden dam. A new dam capable of holding back up to 100,000 gallons of water is to be built about 200 yards upstream from the existing dam. This relatively small impoundment (compared to the stream's estimated low flow of 1,250 gallons per hour) will not affect the stream's area or significantly affect its form. The effect on siltation and particulate concentration in the stream will be minimal. This stream does not harbor any species of anadromous fish.

The second water body involved is the ocean waters of Nazan Bay. Because of Atka's remoteness and the technical and economic impossibility of providing sewage treatment, domestic liquid wastes will be directed by gravity flow to discharge in water at least 20 feet in depth approximately 500 feet from shore. Tidal action will draw a minimum of 3,000,000 gallons of water through the discharge area each day. This quantity of water will reduce the minimal discharge from this small community (approximately 17 pounds biochemical oxygen demand (BOD) per day) to less than 0.1 parts per million, a quantity too small to measure. Bacterial decomposition in the oxygen-rich waters of Nazan Bay will be rapid.

Air Related Environments: The proposed action will not meet any of the initial criteria for air-related impacts.

Special Environments: The proposed action will not meet any of the initial criteria for special environments. There is no tundra in Atka.

Containments: The proposed action does not meet the initial criterion for storage of contaminants.

Energy: The proposed action does not meet any of the initial criteria for energy transmission or concentration.

Populations:

Plant Populations: The proposed action does not meet any of the initial criteria for impacts on plant populations. Any excavated area will be re-vegetated.

Animal Populations: The proposed action does not meet any of the initial criteria for impacts on animal population.

Human Populations: The proposed action does not meet any of the initial criteria for impacts on human population.

Technological Systems:

Extension Systems: The proposed facilities constitute a new water supply and sewage disposal system for the residents of Atka. Both systems have been designed with a growth rate of 13% and are thus

excluded from consideration under initial criteria 4.16 and 4.17.

Project construction should not disrupt the existing water or sewage system for more than 24 hours before such service can be provided by the new systems. If it should, good water could be easily procured by residents from the same stream that serves as the present water source.

Maintenance Systems: The proposed action will not meet any of the initial criteria for maintenance systems.

Intermediary Systems: The proposed facilities have been designed to operate without electricity and without a great use of fuel. Operation and maintenance costs will cover water treatment chemicals (chlorine and fluorides), fuel to heat the treatment building, and pay for a part-time operator. The total should not exceed \$11 per family per month.

Resource Allocation: The proposed action will not meet any of the initial criteria for resource allocation.

Human Values:

Historic Properties: Three sites listed on the Alaska Heritage Resource Survey are within the construction area. To clarify the boundaries of these sites and avoid any possible impact during construction, the IHS commissioned Douglas Veltrie, Instructor of Anthropology at Anchorage Community College and author of previous archaeological research on Atka, to conduct archaeological testing in the project area. Mr. Veltrie's report recommends that construction

not take place within the boundaries of the three areas and provides clear definition of these areas. Since all piping will be underground, no visual change of or from the sites will be evident. No destruction, alteration, or change in use of the sites will occur.

Archaeological Preservation: Archaeologist Veltrie's report included examination of 54 test pits and clearings made in the field. He notes that the Atka site is a relatively new one, the community having moved from Korovinski on the other side of the island about 1860. Veltrie did find prehistoric remains (prior to Russian contact) in one area near the beach at the center of town. He was able to define the limits of this area of interest with test pits, and has recommended that excavation in the designated area not take place.

Natural Preserves: The Aleutian Island Wildlife Refuge protects ground-nesting wildfowl throughout this area, including all of Atka Island excepting the Village of Atka and adjacent Native lands. The proposed dam is close enough to town to avoid encroaching on the wildlife refuge. As a precautionary measure, however, the refuge supervisor has been advised of the project, and IHS will obtain a permit from the U.S. Fish and Wildlife Service (administrator of the refuge) before construction begins.

Atka is part of a large area in the Aleutian Islands that has been proposed as a wilderness area under the National Wilderness Preservation Act. Should this proposal become law, initial criterion 1.21 would be

met. Because this project is basically restorative in nature and strictly avoids any significant changes in size or scope of the existing sanitation systems, the project will neither alter the use of the wilderness area nor destroy or change any part of it.

Environmental Law: A permit for the discharge of effluent from the sewage collection system will be obtained from the State Department of Environmental Conservation. Otherwise, the project will not violate any State, Federal or local environmental law.

STATEMENT OF NON-SIGNIFICANCE:

Considering the analysis above, the environmental impact of the proposed action will be marginal and not significant. Two initial criterion (2.35 and 1.21) have been met. Considering criterion 2.35 (human or animal waste into surface aquatic environments). DHEW significance criteria state that "Natural systems have an automatic ability to regain balance..." and that once the cause and effect sequence has been traced through the system, a determination may be made about the nature of the new balance reached. Based on the previous discussion, it can be determined that:

I (a) "Each system or species is capable of absorbing the change because the change occurs within the limits of its normal fluctuation patterns and thus there would be no significant effect and an MIS should be issued."

In discussing initial criterion 1.21 (use of National Wilderness site), the significance criterion for the use of National Preserves, states:

C.II.(a): Environments which are identified as natural preserves have been so identified for a specific reason. Such preserves would be significantly affected if the proposed action would alter the use of the preserve or would temporarily alter the use of any part of the preserve for more than five years. The temporary alteration includes the time required for natural restoration to occur.

III: Significance is a point along a scale of temporary or permanent change in the way in which an ecosystem functions within an environment and is related specifically to the relative value placed on the environments under consideration. An ecosystem will always achieve balance eventually, though perhaps in an entirely new form. If (a) the ecosystem achieves balance and regains its essential characteristics, the events in the interim must be taken into account.

IV: If it is determined that the magnitude of change is not significant, then an MIS should be written.

Because the project proposed differs in only minor respects (size of dam is increased slightly, a small water treatment building is added) from the existing sanitation system, the project will not affect the ecosystem balance in the wilderness area as a completed system. The construction "events in the interim" should be examined for their potential impacts,

Because the dam to be built will be of wood, only a small bulldozer will be needed at the dam site. A backhoe will be used to perform excavation for the water transmission main installation. Much of this transmission main will follow under the existing gravel road, which will be returned to its original condition. The short excavation route and cat trail from the dam to the road (about 200 yards) will be revegetated and will return to its original state within two years. All other impacts of construction will be limited to the immediate town and will be over the conclusion of construction.

CONCLUSION:

The proposed action clearly will not meet any significance criteria. Considering the preceding analysis of potential impact on each environmental category the proposed project will not result in significant environmental impact.

REGION X HEW

INITIAL CRITERIA CHECKLIST

APPLICANT Office of Environmental Health, AANHS
(name & address) 3350 Commercial Drive
Anchorage, AK 99501

DATE October 1977

BRIEF PROJECT DESCRIPTION Atka - Project No. AN-77-160
Reconstruction of Atka's water supply and sewage disposal
system including replacement of the existing water reservoir
dam.

PROJECT OFFICER Lynn P. Wallace, Ph.D., P.E.
(& Title) Sr. Sanitary Engineer
Chief, Planning & Training Section

SIGNATURE Brian G. Tomlinson for 10-31-77

9/22/76

I. Human Values

A. Historic Properties

1. destroys property
2. alter property
3. relocate objects
4. change access to site
5. change use of property
6. change general use of district
7. visual change - - view from site
8. visual change - - view of site
9. destroy structures more than 50 years old

Yes	No	Info Needed
	X	
	X	
	X	
	X	
	X	
	X	
	X	
	X	
	X	
	X	

B. Archeological Preservation

1. alter or destroy archeological sites

	X	
--	---	--

C. Natural Preserves

1. use of Natural Landmarks sites
2. use of sites under National Wilderness Preservation Act or Wild or Scenic Rivers Act
3. use of natural preserve
4. affects endangered or threatened species
5. utilize product from endangered species

	X	
X		
	X	
	X	
	X	

D. Environmental Laws

1. existing air and water quality laws
2. existing land use laws
3. existing odors and noise laws
4. existing visual environment law

	X	
	X	
	X	
	X	

II. Natural Systems

A. Land-Related Environments

1. Land Use (affecting less than 16 acres excluded)

- a) introduce technological use
- b) introduce more intensive technical use
- c) charted underground space

Yes	No	Info Needed
	X	
	X	
	X	
	X	

2. Land Form

- a) affect stability (less than 16 acres excluded)
- b) affect earthquake fault
- c) underground disposal of wastes (existing waste systems excluded)
- d) interfere with underground water system
- e) future changes may be necessary to protect action
- f) use or destruction of barriers protecting coastal lands
- g) increase water erosion (less than 16 acres excluded)
- h) increase wind erosion (less than 16 acres excluded)

	X	
	X	
	X	
	X	
	X	
	X	
	X	
	X	

3. Land Composition (Topsoil)

- a) destroy or deny access of more than 100 acre-ft.
- b) remove and affect vegetation (less than 16 acres excluded)
- c) change ambient substance concentration (less than 16 acres excluded)
- d) introduce foreign or artificial substance (less than 16 acres and approved waste disposal sites excluded)

	X	
	X	
	X	
	X	

Yes No Info Needed

- e) increase trash and/or waste materials (less than 16 acres & approved waste disposal sites excluded)

	x	
--	---	--

B. Water-Related Environments (water bodies of less than 1 acre and running water less than 100 yds. excluded)

1. Aquatic Environment

- a) introduces technological use
- b) reduces surface area

	x	
	x	

2. Aquatic Form

- a) affect rate of natural change
- b) increase wave action or turbulence
- c) causes erosion into (siltation) water body
- d) increase floods

	x	
	x	
	x	
	x	

3. Aquatic Composition

- a) changes volume
- b) causes erosion into (particulate concentration) water body
- c) increase human or domesticated animal wastes
- d) change concentration of naturally occurring substances
- e) introduce artificial or foreign substance

	x	
	x	
x		
	x	
	x	

C Air-Related Environments (100,000 vehicle miles or less per annum in 16 acres or less excluded)

1. Air Space Use

- a) interfere with bird migration routes
- b) introduces pollutant (less than 1000 parked vehicles or traffic increase of 2,000 per hour)

	x	
	x	

3. Air Form

Yes No Info Needed

a) change weather

	x	
--	---	--

4. Air Composition

a) violation of stack emission standards

	x	
--	---	--

b) introduce gaseous substances other than ambient substance

	x	
--	---	--

c) increase ambient substances by more than one percent

	x	
--	---	--

d) increase pollutant concentration by more than 5 % in (1 hr.)

	x	
--	---	--

e) increase pollutant concentration by more than 30 % for (1 sec.)

	x	
--	---	--

f) increase pollutant concentration by more than one % in any 1 hr., mi.³)

	x	
--	---	--

g) increase substances in stratosphere

	x	
--	---	--

h) introduce artificial substances into ionosphere or exosphere

	x	
--	---	--

D. Special Environments (fresh water wetlands less than 1/4 acre and desert, tundra, and alpine areas less than 1 acre excluded)

1. Change water level in wetland or hot spring

	x	
--	---	--

2. Change temperature in wetland, hot spring or coral area

	x	
--	---	--

3. Introduce artificial or foreign substance into wetland, hot spring, desert, tundra, alpine, or coral area

	x	
--	---	--

4. Change concentration of naturally occurring substance in wetland, hot spring

	x	
--	---	--

5. Uses, creates, or destroys wetland, hot spring, desert, tundra, alpine, or coral area

	x	
--	---	--

E. Contaminants

1. Temporary storage of

	x	
--	---	--

F. Energy (aquatic areas less than 1 acre and human population less than 50 excluded)

1. Energy Transmission

- a) introduce or increase electromagnetic activity which may alter physiology, genetic make-up or behavior pattern
- b) change resistance of atmosphere to extraterrestrial wave spectrum
- c) create sound levels affecting human communication
- d) generates shock waves

Yes	No	Info Needed
	x	
	x	
	x	
	x	

2. Energy Concentration

- a) changes albedo (less than 16 acres excluded)
- b) changes air-land heat exchange (less than 16 acres excluded)
- c) change air or ground temp. affecting animal behavior (less than 160 acres excluded)
- d) change temperature of aquatic environment (less than 1 acre excluded)

	x	
	x	
	x	
	x	

III. Populations

A. Plant Populations

1. Natural Functioning (land area less than 160 acres and water bodies less than one acre or 100 yards running water are excluded)

- a) introduces species
- b) increases non-indigenous species
- c) decrease indigenous species
- d) change genetic makeup

	x	
	x	
	x	
	x	

2. Domestic Use

- a) destroy plant population requiring 60 years to return

	x	
--	---	--

- b) utilize commercial material from plant species
- c) decrease species of commercial value

		Needed
		x
		x

B. Animal Populations

1. Animal Functioning (same exclusion as plant functioning)

- a) introduces species
- b) introduce or increase pathogenic micro-organism
- c) increases non-indigenous species
- d) decrease indigenous species
- e) increase or decrease specie population
- f) change behavior patterns
- g) change physiology
- h) create genetic change

		x
		x
		x
		x
		x
		x
		x
		x

2. Domestic Use

- a) Utilize commercial material from animal specie
- b) decrease species of commercial value

		x
		x

C. Human Populations

1. Human Population Characteristics (less than 100 inhabitants and less than 160 acres excluded)

- a) introduce permanent or continual increase
- b) change population density
- c) change number of annual transients (commuters)
- d) increase population such that new service unit needed
- e) change physiology
- f) develop capability for genetic change

		x
		x
		x
		x
		x
		x

2. Technological Resource

- a) decrease number employed
- b) decrease enrollment in schools
- c) alter number entering a profession

Yes	No	Info Needed
	x	
	x	
	x	

IV Technological Systems

A. Extention Systems

1. Disruption/Reduction (less than 100 population and less than 160 acres with less than 10,000 poulation excluded)

- a) disrupt water supply for more than 24 hours
- b) disrupt heat for more than 14 hours
- c) disrupt sewage system for more than 24 hours
- d) disrupt solid waste service for more than 4 service days or 2 weeks
- e) reduce amount of food, water, energy, or shelter for more than 2 weeks
- f) disrupt food supply for more than 72 hours.

	x	
	x	
	x	
	x	
	x	
	x	

2. Creation (excluded if action uses at least 80 % of system capacity or is designed for less than 100 population)

- a) creates or expands electrical power plant
- b) creates or expands water treatment and distribution system
- c) creates or expands water treatment and collection system

	x	
	x	
	x	

3. As a Resource

- a) Uses more than 5 % of remaining electric power or natural gas in system (less than 1,000 kWh and 3500 CFH gas excluded)

	x	
--	---	--

- b) uses more than 5% of water kept in reserve (less than 5,000 GPD excluded)
- c) uses more than 5% of remaining capacity of sewage system (less than 500 excluded)
- d) Uses more than 5% of remaining capacity of solid waste disposal system (less than one ton per day excluded)

	x	
	x	
	x	

B. Maintenance Systems

1. Protective Services

- a) increase utilization of fire and police services
- b) decreases personnel or equipment of fire or police services
- c) delay utilization of police services by more than 15 min.
- d) render emergency health unavailable for more than one hour
- e) reduce stock of biologicals to prevent or inhibit human epidemics

	x	
	x	
	x	
	x	
	x	

2. Recovery Services

- a) decrease ratio of medical personnel or hospital beds to population
- b) decrease hospital use

	x	
	x	

3. Care Systems

- a) decrease care service use

	x	
--	---	--

C. Intermediary Systems

1. Transportaion

- a) establishes transportation service or extends existing service by more than one mile
- b) changes entry or exit point
- c) increases cost

	x	
	x	
	x	

Yes No Info Needed

- d) increases transportation time
- e) closes transportation service for more than one week
- f) reduces remaining roadway system capacity

	x	
	x	
	x	

2. Communication

- a) denies access to service for more than two weeks
- b) extends telephone or telegraph service more than one mile
- c) interfere with two way communication
- d) increases messages transmitted by a system

	x	
	x	
	x	
	x	

3. Economic Exchange

- a) causes decrease of income of human population
- b) decrease revenues or increase costs of human settlement

	x	
	x	

D Resource Allocation

1. Land

- a) addition of technological use (less than 10 acres excluded)
- b) addition of technological use to open underground space (less than 1,000 cu. yds. excluded)
- c) adjacent land use pre-empted

	x	
	x	
	x	

2. Mineral and Fossil Fuel Use

- a) affects accessibility of mineral deposits
- b) inhibits use of recycled materials
- c) increases amount of mineral or fossil fuel being mined
- d) increases consumption of mineral or fossil fuel

	x	
	x	
	x	
	x	

e) requires use of protected natural resource

Yes	No	Info Needed
	x	

3. Waste Production

a) increases use of non-recyclable materials

	x	
--	---	--

b) recyclable materials not recycled

	x	
--	---	--

4. Water Use (water body less than 1 acre and running water less than 100 yd. excluded)

a) requires reallocation of use

	x	
--	---	--

b) requires reallocation of water rights

	x	
--	---	--

c) decrease existing technological water use

	x	
--	---	--

d) reduces technological use

	x	
--	---	--

5. Air Space Use

a) interference with other uses

	x	
--	---	--

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

USE PERMIT AGREEMENT

The Public Health Service, through the Alaska Area Native Health Service Property Management Officer and Administrative Officer, Office of Environmental Health, and under the authority of Section 7(a)(3) of Public Law 86-121 73 Stat. 267 hereby grants permission to RCA, the temporary use of the following described personal property for which the Public Health Service is responsible and accountable:

Bucyrus Erie Crane, Model No. 25B, S/N 123220

Provided that RCA hereby agrees:

1. That the aforesaid equipment will be used exclusively in connection with the construction of the satellite communications station at Sand Point. This usage will be beneficial, that upon termination of use for this purpose or at the discretion of the Public Health Service, RCA will return said property to the custody of the PHS in as good condition as when received, except for ordinary wear and tear incidental to the use of such equipment. This usage will be beneficial to the Government because of the improved communications which will be made possible to and from Sand Point with the construction of the communication station. This will aid in communications regarding the recently completed sanitation facilities construction project as well as those regarding medical problems. The Government-owned equipment is needed for the above purposes since the required equipment is not available from other local private or commercial sources.

2. That RCA will maintain and repair the equipment so as to keep it in good operating condition and will take reasonable measures to protect it against adverse weather conditions, theft, and vandalism.

3. That only persons trained to operate the specific equipment, and authorized in writing by the Office of Environmental Health, will be allowed to operate this equipment at the expense of RCA.

4. That RCA assumes all risks of and agrees to indemnify and save harmless the United States from any and all claims of whatsoever kind and character because of personal injury or death or damage to property which may arise out of, or any manner result from, or be connected with, the operation or use of any or all of the equipment furnished pursuant to this Use Permit Agreement.

5. That ownership of the agreement shall remain in the Public Health Service.

6. That this Use Permit Agreement shall be valid for a period of one month commencing on the date executed by the Alaska Area Native Health Service Property Management Officer and Administrative Officer, Office of Environmental Health and may be renewed for additional periods of not more than one year each upon written request of the Village and written concurrence of the Public Health Service.

7. That RCA will reimburse the Public Health Service at the rate of \$30.00 per hour for use of the above equipment. Charges will be based on actual operating time, subject to a minimum charge of 3 hours per day.

8. Borrower's use of equipment under this agreement will not involve removal of said equipment from Sand Point, Alaska.

9. Borrower use of equipment is subject to revocation/termination by the Government.

For RCA

RCA
accepts custody of the aforesaid
equipment subject to the above
provisions

For the United States of America

Rob. D. Dumbler, Acting A-65
Signature *4/4/78*

Property Management Office (Accountable
Officer)
Alaska Area Native Health Service
and

Lloyd Keeloch
Signature

Mr WACS Engr, RDA Alameda
Title

P. P. ...
Signature

Administrative Officer (Custodial Officer)
Office of Environmental Health
Alaska Area Native Health Service
for the Surgeon General of the Public
Health Service, Department of Health,
Education, and Welfare

4-4-78

April 5, 1978
Date

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

PERSONAL PROPERTY - LOAN RECORD

LENDING AGENCY'S NAME, ORGANIZATION AND ADDRESS: U.S. Public Health Service AANHS, Office of Environmental Health 3350 Commercial Drive Anchorage, Alaska 99501	CUSTODIAL POINT CODE	ACCOUNTABLE AREA CODE	DATE
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------	--------------------------	------

BORROWER'S NAME AND ADDRESS (Institution, Organization or Individual) RCA Alaska Communications Inc. 949 E 36th Pouch 6607 Anchorage, Alaska 99502	LOAN PERIOD One <input checked="" type="checkbox"/> XXX MONTHS <input type="checkbox"/> ONE YEAR
----------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------

STOCK NUMBER	DESCRIPTION (prop. no., Mfg. Ser. no, Model no.)	UNIT	QUANTITY	VALUE	COND.
09270.3	Bucyrus Erie crane, Model 25B, S/N 123220	1	each	\$20,000	used

SIGNATURE OF CUSTODIAL OFFICER:	DATE:
SIGNATURE AND TITLE OF APPROVING PROGRAM OFFICIAL:	DATE:
SIGNATURE OF APPROVING OPERATING AGENCY HEAD:	DATE:

I hereby certify that the necessary records have been established and appropriate annotations have been made on the inventory records to maintain control of property by location.

John D. Sullivan, Acting A-6-5 4/14/78
Signature of Accountable Officer Date

The property is hereby loaned for official use for the period commencing 4-5-78 and ending 5-5-78, unless terminated at an earlier date. The borrower agrees to be responsible for any damage and/or repairs necessary as the result of usage, prior to return of property. All transportation costs incident to delivery or return of property will be the borrower's expense. Justification for loan must be attached to this record. The signature of the borrower indicates his acceptance of the property under the terms cited above and those contained in HEW MM §103-27.56.

Hayden Wilbeck, Jr., VACS Engr, RCA 4-4-78
Signature of Borrower Date

MEMORANDUM OF AGREEMENT
BETWEEN
THE INDIAN HEALTH SERVICE
AND
VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

MEMORANDUM OF AGREEMENT
BETWEEN
THE INDIAN HEALTH SERVICE
AND
VILLAGE OF ATKA, ALASKA

PROJECT NO. AN-77-160
PUBLIC LAW 86-121

THIS AGREEMENT between the United States government, acting through the Indian Health Service, part of the U. S. Public Health Service, hereinafter referred to as the IHS, under and pursuant to the provisions of Public Law 86-121 (OMB 13.229) and the Village of Atka, Alaska, hereinafter referred to as Community, acting under authority of the village council, provides that

WHEREAS, the Community is desirous of obtaining satisfactory water supply and adequate waste disposal facilities for the Native residents of Atka, and

WHEREAS, the Community, acting through the village council, by a project proposal dated October 6, 1976, requested assistance from the IHS, under Public Law 86-121 in developing sanitation facilities for the Natives of Atka, and

WHEREAS, the IHS is desirous of assisting in the installation of water supply and waste disposal facilities for Natives of Atka,

NOW, THEREFORE, in order to carry out the projects as set forth in the attached project summary entitled "Sanitation Facilities Construction, Village of Atka, Alaska", the parties hereto mutually agree:

COMMUNITY CONTRIBUTIONS AND OBLIGATIONS

1. That the Community will provide without cost to the IHS a liaison person to work with the project engineer and/or supervisor to coordinate the Community's participation under this agreement, including active promotion of attendance of Native members in the fulfillment of labor responsibilities assumed by the Community under this agreement.

2. That the Community, at the start of construction, will identify and appoint two reliable residents to serve as operator and assistant operator of the water supply and waste disposal systems. They should be employed as part of the work force during construction so they will know how the facilities are constructed. For the hours that they work on the project, they will be paid at the specified labor rate from project funds. Upon completion of the project, they will become employed by the Community as system operators. These individuals will be further trained to operate and maintain the facilities for the benefit of the Community.

3. That the City will contribute without charge to IHS, or its representatives, sand, gravel, and/or shot rock, in quality and amounts determined necessary by the project engineer, that may be available from Community sources. Sufficient gravel and rock will be provided for backfill, pipe bedding, and other such uses in constructing required facilities.

4. That the Community will provide, at no cost to the IHS, land necessary to:
 - a. Construct a new dam structure including intake and spillway;
 - b. Construct a 30,000 gallon wood stave storage tank;
 - c. Construct a water treatment building.

5. That the Community will provide, at no cost to IHS, any Community-owned construction equipment that is available at the time of construction. Requests to utilize this equipment shall be submitted by the project foreman at least three days prior to the day of anticipated use. Where possible, long range scheduling for use of the equipment should be accomplished by the project foreman. This should eliminate conflicts with other potential users of the above-mentioned equipment.

6. That the Community will hire the necessary labor force to:
 - a. Build a new dam structure, including intake and spillway;
 - b. Construct a 30,000 gallon wood stave storage tank;
 - c. Construct a water treatment building, including all appurtenances;
 - d. Install a water transmission line and distribution system;
 - e. Construct a gravity sewage collection system;
 - f. Install plumbing for 11 dwellings;
 - g. Construct two sewage outfall lines.

7. That the Community shall provide the administration to perform the necessary bookkeeping and payroll management for the Community labor force on this project. The Community will deposit all funds received for labor expenses on this project in a separate bank account labeled "Labor Account", insured by the Federal Deposit Insurance Corporation, and use these funds solely for the purpose of paying for labor or previously agreed on materials or equipment required to construct the sanitation facilities. The Community will obtain approval from the IHS prior to making any payments or purchases. The Community will maintain complete payroll

records, withhold Federal and State income taxes, transfer the withheld funds to the appropriate taxing agencies, issue paychecks every two weeks, and furnish copies of payrolls, time sheets, or receipts substantiating expenditures of funds to the project engineer at his request. Funds for Workmen's Compensation and Liability Insurance must be provided by the Community for project employees out of the Labor Account. The Community shall, if the village council so decides, make payroll deductions for Social Security benefits, and deposit them with the State. Funds not utilized for the above purposes will be returned to the IHS upon completion of the project. The Labor Account will be subject to audit by a certified auditing agency.

8. That the wage rate for employees of the Community labor force will be determined by the village council subject to the following provisions:
 - a. The IHS will contribute an amount equal to but not more than 75% of the prevailing Davis-Bacon hourly wage rate to the Labor Account.
 - b. From this account, the Community, as the employer, must pay for Workmen's Compensation and Liability Insurance, and may elect to pay unemployment compensation and/or the employer's Social Security contribution.
 - c. The amount remaining from the IHS contribution to be paid to the employee will be approximately 60% of the prevailing Davis-Bacon hourly wage rate. If the village council decides that the employees should be paid more than the 60% remaining from the IHS labor contribution, the Community must obtain the additional labor money from other than IHS sources. Any amounts paid by the Community will be considered a contribution to the project.
 - d. State and Federal income tax must be deducted from all employees'

wages according to published guidelines. If the village council decides to be a part of the Social Security program, FICA deductions must also be withheld from each employee's wages.

9. That the Community will provide without charge to IHS or its representatives adequate field office facilities for the project supervisor. These facilities shall include space (approximately 12' x 16' in area) in an existing Community building, which will be suitable for the safe storage of project materials. The facilities must also include an area (approximately 150' x 150') to protect the larger, more weather-resistant materials. The office and storage facilities must be available for the duration of the construction period.

10. That the Community will obtain and provide to the IHS all easements and/or rights-of-way on or over public or private land within the Community as in the judgment of the project engineer may be necessary to install and operate all facilities provided under this agreement, and waives all claims for compensation and damage for these easements and/or rights-of-way, except those which may be recognized under the Federal Tort Claims Act.

11. That the Community hereby grants permission for the IHS or its representatives to enter upon or across Community land for the purpose of carrying out the project outlined in the project summary and provided for in this agreement, and further agrees to waive all claims for damages that may arise because of such entry upon Community land, except those which may be recognized under the Federal Tort Claims Act.

12. That the Community agrees to accept the transfer of all off-premise water and waste facilities constructed and to operate, maintain and repair

them as the property of the Community.

13. That the Community will establish and collect from users service charges sufficient to keep community facilities in proper operating condition.

14. That the Community agrees to enact and enforce appropriate ordinances and regulation necessary to govern the use of the community water supply and waste disposal systems.

INDIAN HEALTH SERVICE CONTRIBUTION

1. That the IHS will provide, without charge to the Community, all materials, supplies, equipment, and technical supervision required for the installation and/or modification of adequate sanitation facilities as provided for in the attached project summary, and not otherwise provided for in this agreement.

2. That the IHS will contribute to the Community a cash sum equal to 75% of the cost of all labor, exclusive of project supervisors, required for construction of the proposed facilities, up to a total not to exceed \$200,000. The cost of labor upon which this contribution is based is outlined in Section 8 (Community Contribution) of this agreement. Such contributions will be paid to the Community in accordance with a schedule to be mutually agreed upon. The Community will deposit the contributed funds in a separate bank account from all other Community funds, and label it "Labor Account". Disbursements from this separate account shall be limited to payment of labor, Social Security, Workmen's Compensation and Liability Insurance, or for previously agreed upon equipment or materials required for the construction of the project. No equipment or supplies will be purchased without express approval for use of the funds by the IHS project engineer. Time records of

the employees shall be kept by the IHS project supervisor and submitted to the village council at two-week intervals. Copies of all time records, payroll records, and tax reports shall be submitted to the project engineer no later than 30 days after the end of each quarter year. The IHS reserves the right to have the Labor Account audited by a certified auditor at any time.

3. That the IHS will provide and compensate at no cost to the Community a qualified project supervisor to direct the work under this agreement. This supervisor shall work under the direction and be responsible to the project engineer.

4. That the IHS will provide without charge to the Community instructions on the proper utilization, maintenance, operation and protection of the facilities provided for herein, including an operations and maintenance manual.

5. That in consideration of the contributions made and the responsibilities undertaken by the Community, upon completion of the project, IHS will transfer to the Community, without cost, all off-premises facilities and appurtenances up to the lot line, including all rights-of-way materials, supplies and equipment provided for and incorporated in such facilities.

6. That the IHS will complete the design and construction of the water supply and waste disposal facilities provided for in the project summary as soon as it is practical within the limits of the schedule of the IHS project engineer.

IN WITNESS WHEREOF, the parties have subscribed their names.

FOR THE VILLAGE OF ATKA, ALASKA

1-11-78
Date

Ymiko Anigarriff
having been duly authorized by the Village Council to enter into this agreement on behalf of the Village of Atka as evidenced by the Resolution made by the Village Council of Atka, Alaska.

RECOMMENDED APPROVAL

9/27/77
Date

Henry F. Warden, III
Henry F. Warden, III, Chief
Area General Services Branch

FOR THE INDIAN HEALTH SERVICE

9-27-77
Date

G. H. Ivey
G. H. Ivey, Director
Alaska Area Native Health Service
Public Health Service, Department of
Health, Education, and Welfare

RESOLUTION

OF
Atka Village Council No 78-1.

WHEREAS, the Atka Village
Council, hereinafter called the Council, is the governing
body of Atka, Alaska, and

WHEREAS, said Council is desirous of aiding the Indian
Health Service, hereinafter called the Service, in providing
adequate sanitation facilities for the residents of Atka,
and

WHEREAS, said Council has a duly authorized President
to represent it in matters concerning Atka.

NOW THEREFORE, be it resolved that said Council hereby
authorizes the President to enter into agreements with the
Service on behalf of Atka concerning the provisions
and transfer of sanitation facilities for Atka, and

BE IT FURTHER RESOLVED that said Council will cooperate
with the provisions of any agreement entered into by the
Council's President and the Service, and they will
be duly carried out.

I, the undersigned, hereby certify that the Council is
composed of Seven members, of whom four constituting
a quorum were present at a meeting duly and regularly called,
noticed, convened, and held this 11th day of January, 1978;
and that the foregoing Resolution was duly adopted at such
meeting by the affirmative vote of (4) members, and that
said Resolution has not been rescinded or amended in any
way.

DATED this 11th day of January, 1978.

SIGNED: Conrad E. G. G. G.
Secretary

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

SOUTHCENTRAL REGIONAL OFFICE

Atka
JAY S. HAMMOND, GOVERNOR

338 DENALI STREET
MacKAY BUILDING, ROOM 1206
ANCHORAGE 99501

August 28, 1978

John R. DeLapp
Chief, Design Section
Alaska Area Native Health Service
Box 7-741
Anchorage, AK 99510

Subject: Sanitation Facilities Project AN-77-160

Dear Mr. DeLapp:

We have received and reviewed plans of the subject facilities project at Atka. Our comments follow.

WATER

Enclosed with this letter is a certificate approving construction of the proposed water treatment and distribution system. The "Approval to Operate" section of the certificate must be completed by a representative of this department prior to placing the system in operation. The results of raw water analyses for the inorganic and organic chemical, physical and bacteriological contaminants specified in 18 AAC 80.050 must be received by this office before we can issue the operation approval.

WASTEWATER

It is recognized that the proposed system is not in compliance with State regulations but it will serve the purpose of eliminating ground discharge of raw sewage. Consequently, the sewerage system is approved for the features with which this department is concerned. This letter constitutes the permit required under AS 46.03.720(a) for approval of sewage system. I would like to point out that the proposed discharge will require an NPDES permit from EPA. You should contact EPA's Alaska Operations Office for permit application forms.

If you have any questions regarding our review of this project, please feel free to contact me.

Sincerely,

James O. Starr

James O. Starr
Environmental Engineer

Enclosure

CONSTRUCTION AND OPERATION CERTIFICATE

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PUBLIC WATER SYSTEM

APPROVAL TO CONSTRUCT

Plans for the construction of Atka (Project No. AN-77-160)
_____ public water system located
in Atka, Alaska, submitted in accordance with 18 AAC 80.100
by John DeLapp/AMHS have been reviewed and are

approved.

conditionally approved (see attached conditions).

BY [Signature] Environmental Engineer 7-2-78
BY TITLE DATE

If construction has not started within two years of the approval date, this certificate is void and new plans and specifications must be submitted for review and approval before construction.

APPROVED CHANGE ORDERS

Change (contract order no. or descriptive reference)	Approved by	Date
_____	_____	_____
_____	_____	_____

The "APPROVAL TO OPERATE" section must be completed before any water is made available to the public.

APPROVAL TO OPERATE

The construction of the _____ public
water system was completed on _____ (date). The system is hereby
granted interim approval to operate for 90 days following the completion date.

BY _____ TITLE _____ DATE _____

As-built plans submitted during the interim approval period, or an inspection by the Department has confirmed the system was constructed according to the approved plans. The system is hereby granted approval to operate.

BY _____ TITLE _____ DATE _____

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

APPLICATION FOR WASTEWATER DISPOSAL PERMIT
OR
CERTIFICATION OF REASONABLE ASSURANCE

In accordance with Alaska Statutes, Title 46, "Water, Air, and Environmental Conservation", Chapter 03, Section 46.03.100, and rules and regulations promulgated thereunder, or in accordance with 33 U.S.C. 466 et. seq., sec. 401, we:

A. City of Atka
(name of applicant)

B. Atka, Alaska
(address of applicant)

herewith apply for a

C. Waste Discharge Permit (X) Certification of Reasonable Assurance ()
for the following proposed activity:

D. Dredging () Construction () Construction with Discharge ()
Discharge Only (X)

E. TYPE OF INDUSTRY: Treated domestic wastewater only

F. LOCATION OF WASTE DISCHARGING FACILITY: new HUD housing subdivision near
Atka PHONE: _____

G. LOCATION OF WASTE DISCHARGING POINT(S): submarine discharge 1,000 feet
offshore from the HUD subdivision.

H. WASTE DISCHARGE VOLUME: Domestic Wastewater ~~XXXXXXXXXXXXXXXXXXXX~~ COOLING WATER
Maximum (gallons/day): _____
Daily Average (gallons/day): 6,500 gpd

I. RAW WATER SUPPLY: Source: surface Volume 6,500 gpd gallons/day

J. NAME OF RECEIVING WATER (or sewerage system): Nazan Bay

K. CHARACTERISTICS OF WASTE FLOW: Describe in detail the chemical and physical properties of the effluent to be discharged to State waters (including but not limited to temperature, pH, dissolved oxygen, color, total dissolved solids, suspended solids, BODS, COD, oils, phenol, heavy metals, chlorinated hydrocarbons, and other biocides, acidity, alkalinity, etc.) Also include a description of sampling and analytic methods used to derive this information. Submit this information with your application as Exhibit 1.

L. RAW MATERIAL AND CHEMICALS USED IN PROCESSES:

Brand Name	Chemical, Scientific or Actual Name	Quantity Used per Day* Average	Maximum
------------	-------------------------------------	--------------------------------	---------

This application concerns treated effluent from the HUD subdivision community septic system. There will be no industrial users of this system. Only domestic wastewater will be treated.

M. PLANT OPERATION:

Average

Days per Year

Number of Employees per Shift
Day Swing Night

N. PRODUCTION:

Item

Quantity Produced per Day*
Average Maximum

O. SANITARY WASTES:

Treatment Primary treatment through community septic tank

Discharged to Nazan Bay

P. Explain any seasonal variation in waste discharge volumes, plant operations, raw materials, and chemicals used in processes, and/or production:

* Please specify units. For example: Tons per day, pounds per day, barrels per day, etc.

- Q. Give a detailed description of the sources of all industrial wastes within your industry. Describe in detail the treatment given to each of these wastes. Include in this description the disposal methods used for these wastes and also for any sludge collected by your waste treatment system. Include a schematic flow diagram showing the sources of all wastes and their flow pattern. Submit this information with your application as Exhibit 2.
- R. Briefly describe any additional treatment or changes in waste disposal methods you are planning or have under construction. Submit this information as Exhibit 3. Include all information for previous questions, where additional space is necessary as part of Exhibit 3. Also include any additional information or comments you feel are necessary to clarify this application with Exhibit 3.
- S. If the activity does not involve a discharge to waters of the State (such as construction of facilities in the waterway, dredging, land fill, etc.), completely describe the proposed activity including: maps showing the location of the facility or activity and the waterway involved; a description of the character of each structure; the quantity and type of dredge or fill material involved; the proposed method of instrumentation which will be used to measure the volume of any solids deposited and to determine its effect upon the waterway, rates and periods of deposition; duration of the activity. Submit this information with your application as Exhibit 4.

The information given on this application is complete and accurate to the best of my knowledge.

Gregory Golodoff
Signature

GREGORY GOLODOFF
Printed Name

PRESIDENT
Title

JULY 8, 1982
Date

Exhibit No. 1:

Waste discharge to consist of only primary treated domestic wastewater. The approximate make-up of the treated effluent will be as follows*:

BOD ₅	140 - 175 mg/l
TSS	45 - 65 mg/l
FC	1×10^3 - 1×10^6 MPN/100ml

* Characteristics of septic tank effluents as published in the article "On-site Wastewater Treatment on Problem Soils", by M.J. Hansel and R.E. Machmeier, WPCF Journal, Vol. 52, No. 3, March 1980.

Exhibit No. 2

Waste discharge to consist of only primary treated domestic wastewater.

APPLICATION FOR A DEPARTMENT OF THE ARMY PERMIT

For use of this form, see EP 1145-2-1

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of P. L. 92-500 and Section 103 of P. L. 92-532. These laws require permits authorizing structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided in ENG Form 4345 will be used in evaluating the application for a permit. Information in the application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and checklist) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. Application number (To be assigned by Corps)	2. Date <div style="text-align: center;">23 3 82 Day Mo. Yr.</div>	3. For Corps use only.
-------------------------------------------------	---------------------------------------------------------------------------------------	------------------------

4. Name and address of applicant. City of Atka Atka, Alaska Telephone no. during business hours A/C (907) <u>767-8001</u> A/C () _____	5. Name, address and title of authorized agent. Alaska Area Native Health Service Environmental Health Branch 701 C Street, Box 65 Anchorage, Alaska, 99513 Telephone no. during business hours A/C (907) <u>271-4700</u> A/C () _____
-------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

6. Describe in detail the proposed activity, its purpose and intended use (private, public, commercial or other) including description of the type of structures, if any to be erected on fills, or pile or float-supported platforms, the type, composition and quantity of materials to be discharged or dumped and means of conveyance, and the source of discharge or fill material. If additional space is needed, use Block 14.

This application is for the installation of a permanent six inch (6") weighted butt fused high density polyethylene outfall line from the community of Atka to Nazan Bay (see detailed drawings). The line is to lay on the bottom and extend 1,000 feet from shore. The outfall will discharge effluent from the community wastewater collection and treatment system serving a population of approximately 70 residents.

7. Names, addresses and telephone numbers of adjoining property owners, lessees, etc., whose property also adjoins the waterway.

Aleutian Pribilof Island Housing Authority
1689 C Street
Anchorage, Alaska 99501

(907) 276-2700

8. Location where proposed activity exists or will occur.

Address:

Beach front area
Street, road or other descriptive location

Atka
In or near city or town

County Alaska 99502
State Zip Code

Tax Assessors Description: (If known)

Map No.	Subdiv. No.	Lot No.
9	92S	175W
Sec.	Twp.	Rge.

9. Name of waterway at location of the activity.

Nazan Bay

10. Date activity is proposed to commence. August 1, 1982
Date activity is expected to be completed September 30, 1982 Actual outfall construction to take one (1) to two (2) days.

11. Is any portion of the activity for which authorization is sought now complete? YES NO
If answer is "Yes" give reasons in the remark section. Month and year the activity was completed _____ . Indicate the existing work on the drawings.

12. List all approvals or certifications required by other federal, interstate, state or local agencies for any structures, construction, discharges, deposits or other activities described in this application.

<u>Issuing Agency</u>	<u>Type Approval</u>	<u>Identification No.</u>	<u>Date of Application</u>	<u>Date of Approval</u>
-----------------------	----------------------	---------------------------	----------------------------	-------------------------

*See Section 14

13. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?

Yes No (If "Yes" explain in remarks)

14. Remarks or additional information.

A Project Summary has been submitted to the State Clearinghouse for environmental clearances.

Plans and specifications are to be submitted to the Alaska State Department of Environmental Conservation for review and approvals by May 1, 1982.

15. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.

R. W. McManis, P.E.
Signature of Applicant or Authorized Agent
USPHS, AANHS

The application must be signed by the applicant; however, it may be signed by a duly authorized agent (named in Item 5) if this form is accompanied by a statement by the applicant designating the agent and agreeing to furnish upon request, supplemental information in support of the application.

18 U. S. C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both. Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.

STATE OF ALASKA

JAY S. HAMMOND, Governor

OFFICE OF THE GOVERNOR
DIVISION OF POLICY DEVELOPMENT AND PLANNING

POUCH AD
JUNEAU, ALASKA 99811
PHONE: 465-3512

Certification of Consistency with the Alaska Coastal Management Program

Re: Department of the Army Permit
Application No. _____
Applicant: _____

Section 307(c)(3) of the Coastal Zone Management Act of 1972 as amended by 16 USC 1456(c)(3) requires the applicant for a Federal permit to conduct an activity affecting land or water uses in the Alaska coastal zone to provide certification that the activity will comply with the Alaska Coastal Management Program (ACMP).

The proposed activity described in your permit application is within the ACMP, and the following certification is required before your application can be processed to Public Notice. Upon receipt of the signed, dated certification, the Public Notice will be issued and will include the certification statement. The Public Notice will be forwarded to the State Clearinghouse, Division of Policy Development and Planning for its concurrence or objection. For additional information on the Alaska Coastal Zone Management Program, contact Office of Coastal Management, Division of Policy Development and Planning, Office of the Governor, Pouch AP, Juneau, Alaska 99811. Telephone (907) 465-3540.

CERTIFICATION STATEMENT

I certify that, to the best of my knowledge and belief, the proposed activity described in Department of the Army Application No. _____
_____ complies with the approved Alaska Coastal Management Program,
and will be conducted in a manner consistent with such programs.

City of Atka
Atka, Alaska

Signature of Applicant

Richard McManus, P.E.
Alaska Area Native Health Service

Date

Acting as an authorized agent for the
City of Atka

PURPOSE: SEWAGE TREATMENT SYSTEM
OUTFALL LINE

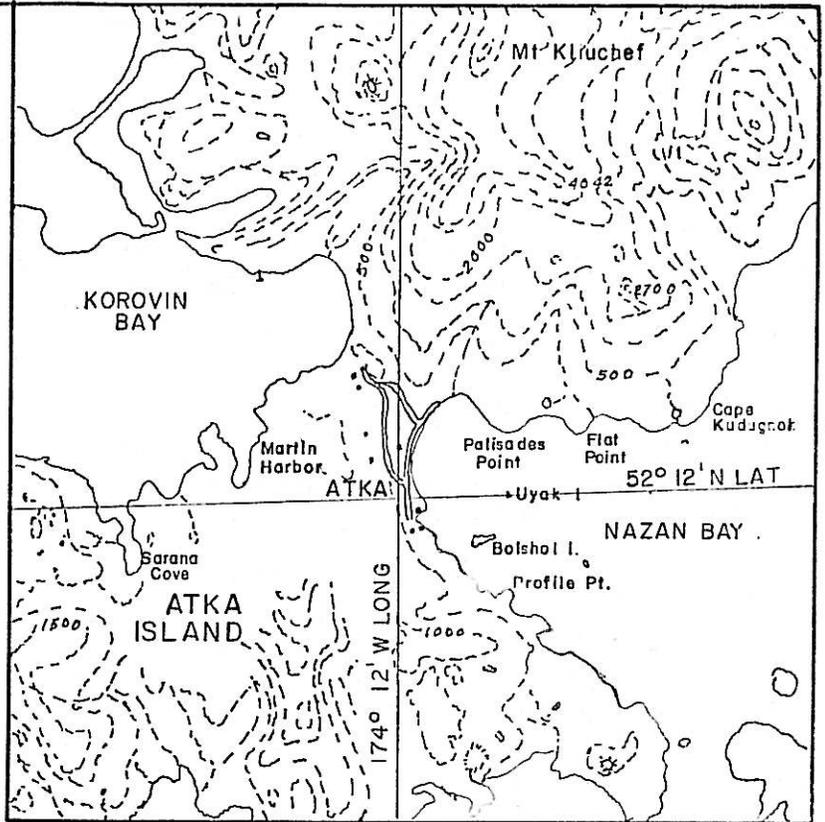
SCALE: 1:20,000

ADJACENT PROPERTY OWNERS:

- ① CITY OF ATKA
- ② ALEUTIAN PRIBILOF HOUSING
AUTHORITY

METHOD OF CONSTRUCTION:

LINE TO BE ASSEMBLED ON SHORE
FLOATED INTO POSITION AND SUNK.



VICINITY MAP

SCALE 1:250,000

ATKA
ISLAND

NAZAN BAY

NEW SUBDIVISION
LOCATION

VILLAGE
OF ATKA

6" WEIGHTED BUTT-FUSED, HIGH DENSITY PE PIPE
OUTFALL TO TERMINATE IN 30 FEET OF WATER
APPROXIMATELY 1,000 FEET OFFSHORE

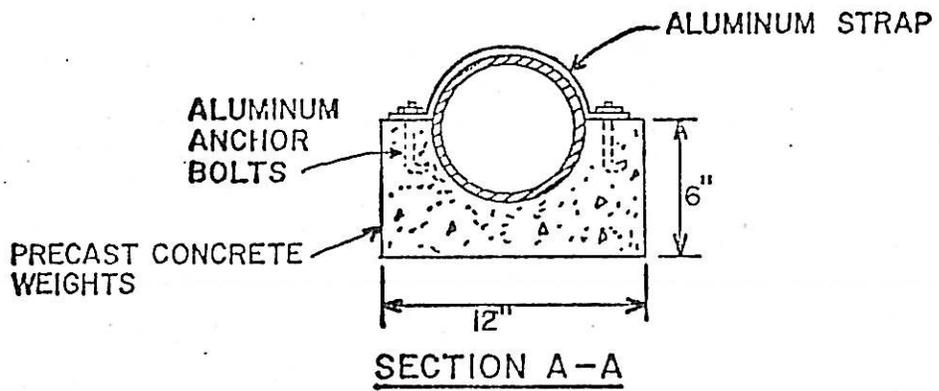
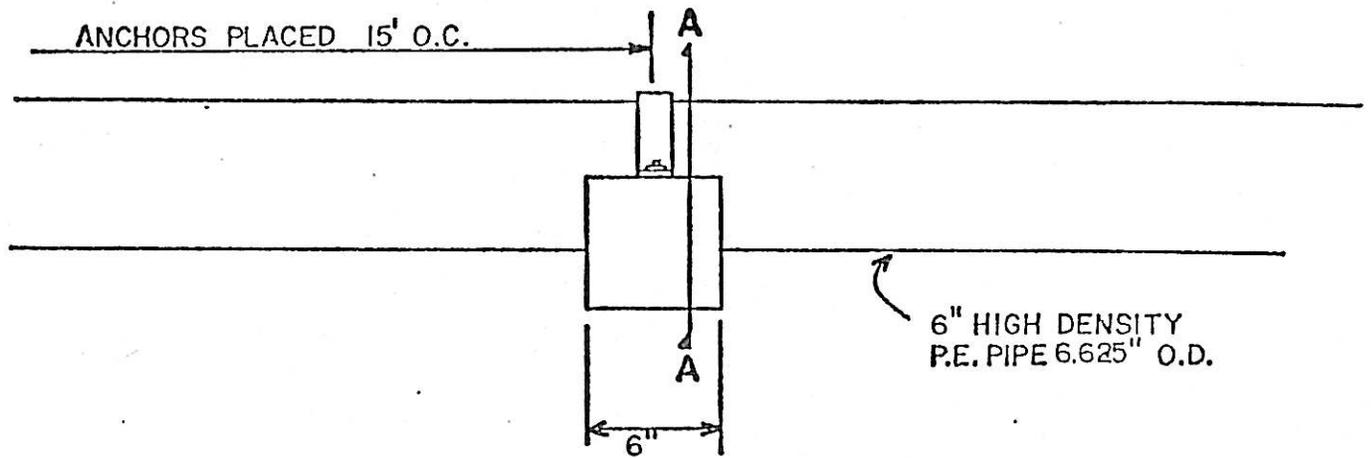
CONE I.

BOLSHOI
ISLAND

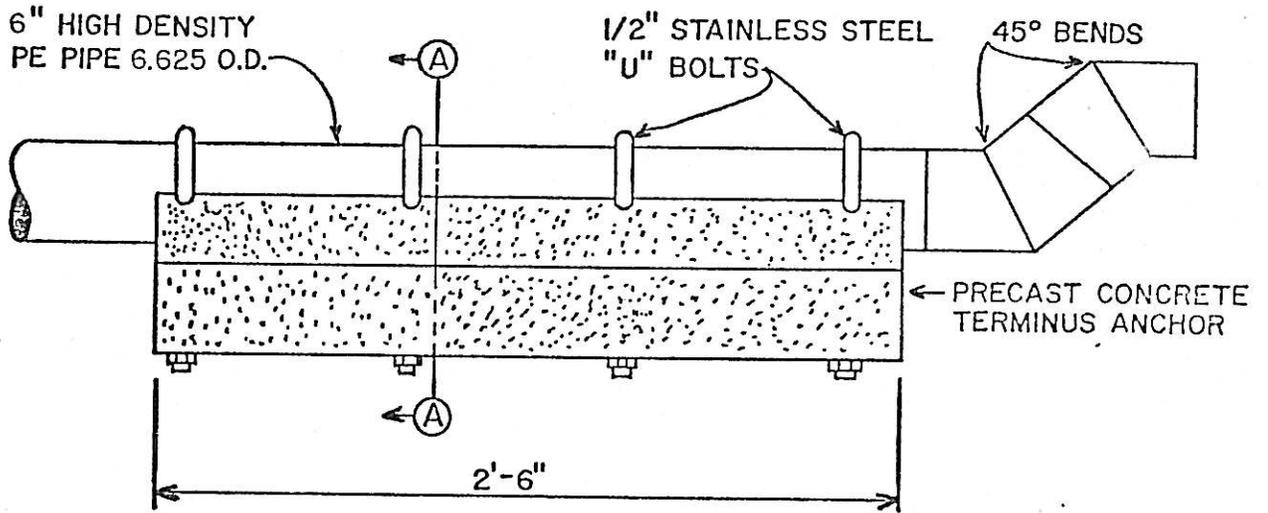
PROPOSED SEWAGE
TREATMENT SYSTEM
OUTFALL LINE IN
NAZAN BAY, ATKA
ALASKA
APPLICATION BY:
U.S.P.H.S. A.A.N.H.S.

OUTFALL WEIGHT DETAIL

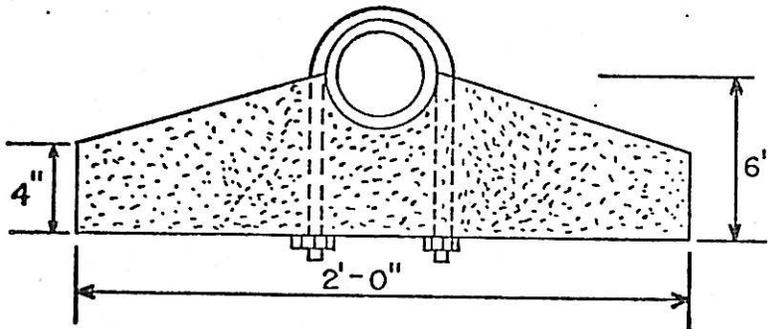
NTS



OUTFALL TERMINUS DETAIL
N.T.S.



OUTFALL TERMINUS
PROFILE VIEW
N.T.S.



SECTION A-A
N.T.S.

BAY PROFILE ALONG OUTFALL CENTERLINE

