

BEFORE THE INDIAN CLAIMS COMMISSION

ALEUT COMMUNITY OF ST. PAUL ISLAND,)	
)	
Plaintiff,)	
)	
v.)	Docket No. 352
)	
THE UNITED STATES OF AMERICA,)	
)	
Defendant.)	
)	
THE ALEUT TRIBE, by Iliodor Merculieff)	
as Representative of the said Tribe)	
and all members thereof, and THE)	
ALEUT COMMUNITY OF ST. PAUL ISLAND,)	
)	
Plaintiffs,)	
)	
v.)	Docket No. 369
)	
THE UNITED STATES OF AMERICA,)	
)	
Defendant.)	

Decided: June 9, 1978

FINDINGS OF FACT

PREFACE

Due to the length of the findings of fact made herein we have grouped the findings under the following broad categories: Procedural aspects-- finding of fact Nos. 1 through 4; Historical and Sociological data-- findings 5 through 46; Economic Analysis of First Lease Period--findings 47 through 81; Economic Analysis of Second Lease Period--findings 82 through 119; Economic Analysis of Government Administration Period-- findings 120 through 149; Value of Compensation, Goods, and Services

provided the Aleuts--findings 150 through 160; and, Standards of Compensation, Goods and Services that Should Have Been Provided--findings 161 through 222.

PROCEDURAL

1. Identity and Capacity of the Plaintiffs. The Aleut Community of St. Paul Island, plaintiff in Docket 352 (and 369), is a subdivision and community within the Aleut Tribe, with an organization recognized by the Secretary of the Interior as having authority to represent all of the Community's members. The Community is a band of American natives residing on St. Paul Island, one of the Pribilof Islands of Alaska. The claim in Docket 352 is asserted pursuant to the Act of August 13, 1946, 60 Stat. 1049, accrued prior to that date, and was timely filed before the Indian Claims Commission.

Plaintiff in Docket 369 is the Aleut Tribe, et al., as captioned above. The Aleut Community of St. George Island, as a constituent band of the Aleut Tribe, presents its claim in Docket 369. The Aleut Community of St. George is a band of American natives residing on St. George Island, one of the Pribilof Islands of Alaska, and has the authority to represent the tribal interests of all the Community's members. The claim in Docket 369 is asserted pursuant to the Act of August 13, 1946, 60 Stat. 1049, and accrued prior to that date. The claim was timely filed before the Indian Claims Commission.

2. Consolidation of Claims for Trial. On July 18, 1975, the Indian Claims Commission granted plaintiffs' motion to sever the claim of the

Aleut Community of St. George Island from Docket 369 and consolidate that claim for trial in Docket 352 (36 Ind. Cl. Comm. 235).

3. Plaintiffs' Claim. Plaintiffs contend that those members of the Aleut Tribe residing on the Islands of St. Paul and St. George in the years 1870-1946, inclusive, were unfairly and dishonorably deprived of the adequate compensation, housing, food, clothing, health facilities, educational system, water supply, sanitation facilities, and related services promised to them by the Act of July 1, 1870, 16 Stat. 180, and the Act of April 21, 1910, 36 Stat. 326. Plaintiffs rest their claims on section 2, clause 5 of the Indian Claims Commission Act, 60 Stat., at 1050.

4. Identity of Expert Witnesses. The trial in this case was held from May 24, 1976, through June 3, 1976. Several expert witnesses testified for the parties. Testifying for plaintiffs were economists Dr. Roger H. Willsie, Mr. Glenn B. Chadwick, and Dr. Herschel F. Jones, members of the firm CH2M Hill, who were responsible for the preparation of plaintiffs' exhibit 701. Also testifying for plaintiffs was Dr. William S. Laughlin, anthropologist at the University of Connecticut and an honorary Aleut. Dr. Laughlin submitted plaintiffs' exhibit L.^{1/}

^{1/} There are a number of articles in Pl. Ex. L. Among those relied upon are: "Secular Change and Isolate Divergence in the Aleutian Population System," "A New View of the History of the Aleutians," "Aleut Settlement Location and Distribution," "Eskimos & Aleuts: Their Origins and Evolution," and "Aleuts: Ecosystem, Holocene History, and Siberian Origin."

Testifying for defendant were Dr. Dorothy Jones, sociologist at the University of Alaska, who wrote defendant's exhibit J; Dr. George W. Rogers, economist at the University of Alaska, who wrote defendant's exhibit R; and Dr. Allan G. Gruchy, economist at the University of Maryland, who was responsible for the preparation of defendant's exhibit E-125.

HISTORICAL AND SOCIOLOGICAL

5. Origin and Migration of the Aleut People. Anthropologically, the Aleuts are of a stock similar to the Eskimo. General external features serve to link Aleuts and Eskimos. Aleut blood types are similar to those of Eskimos and are significantly different from those of other American Indian groups. The Aleut and Eskimo languages show similarities in certain aspects of basic structure and vocabulary, but are not mutually intelligible.

It is believed that the Aleuts originally migrated to Alaska from Siberia over the Bering Strait land bridge approximately 10,000 years ago. Following the Alaska coast south these people eventually came to the Aleutian Islands, an archipelago stretching over 1,100 miles from Port Moller on the Alaskan Peninsula in the east to Attu Island in the west. Migrations from the southern coast of Alaska to the Aleutians proceeded through at least two waves, the latter of which was continuing at the time of the Russian discovery of the islands in 1741.

6. Differences in Aleut Population. The Aleuts residing on the Aleutians at the time of the Russian discovery were not a homogeneous

population group. There were western Aleuts associated with an early migration, and the more recently arrived eastern Aleuts. The Russians, perhaps aware of the two differing groups, brought only eastern Aleuts to the Pribilof Islands.

7. Population, Environment, and Food Sources on the Aleutians. The pre-Russian Aleut population was approximately 16,000, a relatively dense population for approximately 70 treeless islands of volcanic origin with high, snow-covered mountains (some of which are still active volcanoes). Vegetation on the islands is limited to grasses, lichens, small bushes, and flowers, and there is no record of any substantial food crops being grown.

Prior to the Russian discovery the Aleutians were an area teeming with sea life. Sea mammals--hair and fur seals, sea lions, sea otters, whales--fish--salmon, halibut, cod, smelt--and sea-dependent invertebrates were abundant. Many birds also nested in the islands.

8. Cooperative Behavior of Aleut Communities. The pre-Russian Aleut villages exhibited cooperative behavior to a marked degree. Most important village functions such as the sea hunt and warfare were treated as group endeavors. Not only was the hunt for food a community enterprise, but whatever food was caught was shared by the community as a whole, even in times of famine.

9. Village Administration. Each Aleut village had one "headman" whose primary function was to lead the community in its cooperative efforts,

but his authority also extended to other areas of organization and to arbitration of disputes. The position of headman is not thought to have been hereditary, nor did it confer special rewards to the holder.

10. Aleut Habitation and Transportation. At the time of the Russian discovery Aleuts lived in small, partially subterranean sod and grass dwellings known as barabaras. These dwellings were heated by small, stone, oil-burning lamps and were well-suited to the cold, windy, wet, Aleutian climate. The Aleut vehicle for sea hunting was the baidarka (a type of kayak) which the Aleuts piloted with great skill. Aleuts were proficient in marine technology and navigation.

11. The Aleutian Ecosystem. The Aleuts had a sophisticated culture seemingly well-suited to the environment of the Aleutian Islands. The male population prior to Russian contact had a longer life expectancy than any subsequent Aleut population. The presence of Aleuts on the islands was responsible for keeping the numbers of various marine animal species relatively constant.

12. Discovery of the Aleutians. In 1741, Vitus Bering, sailing under the Russian flag, sighted the Aleutians. Russians and other traders followed Bering to the Aleutians and initiated a period of slaughter of marine animals -- at first primarily the sea otter -- and mistreatment of the Aleuts. Because the Aleuts were expert marine hunters the Russians often employed Aleuts in marine hunts. The Aleuts resisted Russian dominance for several decades but eventually were forced to accept Russian hegemony.

13. Discovery and Location of Pribilofs. In 1786, Gerasim Pribilof became the first European to sight what are now known as the Pribilof Islands. The two main islands, separated by 40 miles of sea, are St. Paul and St. George. The islands lie near 57° north latitude (approximately the same latitude as Moscow and Copenhagen, and far north of most major American and Canadian cities) and 170° west longitude (directly south of the easternmost tip of Siberia). The Pribilofs occupy a remote portion of the Bering Sea, lying 214 miles northwest of Unalaska Island in the Aleutians and 309 miles southwest of Cape Newenham on the Alaska mainland. St. Paul and St. George are approximately the same size: St. Paul has 35 square miles, and St. George has 27 square miles.

14. Topography and Flora on Pribilofs. Both islands are of volcanic origin, rocky with high sea cliffs, and with relatively high hill elevations. There are several very shallow lakes, very little soil cover, and other areas where sand dunes predominate. There is no record of any crop production on the Pribilofs, and grasses, herbs, mosses, flowers, lichens, and small bushes are the only types of vegetation.

15. Climatic Conditions. The climate in the Pribilofs is cold, cloudy, windy, and wet. Colder than the Aleutians to the south, the average daily high temperature is approximately 39°F. and the average low is approximately 32°F. Although the average yearly rainfall is not great, precipitation occurs 200 or more days a year. There are about 274 days of heavy cloud cover and the average wind speed is 18.4 mph.

16. Pre-Russian Pribilofs. The Pribilofs were known to the Aleuts prior to their discovery by Russia in 1786, but there were no inhabitants on the islands in 1786, nor was there any record of previous settlements.

17. Comparative Disadvantages of the Pribilof Climate. The Pribilofs constitute an inferior living environment for the Aleuts as compared with the Aleutian chain. The Pribilofs are colder and ice conditions are considerably more severe than in the chain. The Bering Sea freezes so extensively that foxes can sometimes travel on ice from the Alaskan mainland to the Pribilofs. This ice makes winter fishing difficult and reduces by a scouring effect the amount of kelp and seaweed on the shore.

18. Fresh Water on the Pribilofs. Each island has several small, shallow, fresh water lakes but no significant fresh water streams. The lakes are a considerable distance from the settlements, and this makes it difficult to obtain sufficient water for drinking and very difficult to obtain the necessary amounts of water for bathing. The lack of fresh running water decreases the absence of salmon and trout, two mainstays of the Aleut diet.

19. Pribilof Coastline. From an Aleut viewpoint an important deficiency of the Pribilofs is the lack of a complex coastline. The Pribilofs, as compared with the eastern Aleutians, have smooth coastlines. Thus, the islands lack the protected bays, protective reef systems, and good harbors that provide plentiful and varied food sources. The Pribilofs have such open, treacherous coastlines that landing periods for even an Aleut baidarka are sometimes limited to only several hours per day.

20. Food Sources and Driftwood on the Pribilofs. The Pribilofs are isolated, forcing Aleuts to hunt in a restricted habitat. Although the presence of fur seals (*Callorhinus ursinus*) provides the Aleuts with a food source, the fur seal has not traditionally been the Aleuts' sole or primary food source. Sea otter, sea lions, whales, and porpoises have always been used by the Aleuts for food. Aleuts prefer many other kinds of meat to fur-seal meat. The presence of fur-seals on the islands for 4 to 6 months each year makes it difficult for the Aleuts to use the coastline and to collect the invertebrates, such as sea urchins, which are traditionally a part of their diet. Very little driftwood, an essential material for Aleut boats and homes, is found on the Pribilofs.

21. Settlement of the Pribilofs. Shortly after 1786 various Russian traders brought Aleuts to the Pribilofs to kill and skin fur seals. Most of these Aleuts came from the Fox Islands but some probably also were transported from the Atka Island area. At one time there were several settlements on both St. George and St. Paul. It is probable that not all of these settlements were continuously inhabited, however, since sealing was suspended or greatly reduced, due to decreased seal herds, for significant periods in the first half of the nineteenth century. There are indications that the two main settlements, St. Paul on St. Paul Island and St. George on St. George Island, were continuously inhabited for many years prior to the sale of Alaska to the United States.

22. The First Charter of the Russian-American Co. In 1799 the Russian Government gave the Russian-American Company a monopoly in fur

sealing and other commercial activity in the Bering Sea. The first 20-year charter of the Russian-American Company stressed the importance of treating islanders (as Aleuts were called) amicably, but said little concerning the political status of Aleuts or concerning any Aleut obligation to work for the Russians. The Russian administrators, however, obligated the Aleuts to work for the Company.

23. The Second Charter. In the second charter, granted in 1821, Aleut men between 18 and 50 were obligated to serve the Russian-American Company for 3 years. The Company often pressed Aleuts into service for much longer than 3 years, however, giving them little more freedom than slaves. The third charter of the Russian-American Company in 1844 did not change the Aleuts' political status.

24. Russian Herd Conservation. In the nineteenth century the Russians recognized that herd conservation practices were necessary if the fur seal was to survive on the Pribilofs. In 1808 and subsequent years, the kill was limited to 40,000. In 1841 the kill on St. Paul was reduced to 8,000 per year. The Russians also instituted the practice of killing only 2 and 3 year-old male fur seals.

25. The Aleut Chief System and Russian Reliance on the Aleuts. The Russians augmented the traditional chief system of the Aleuts by requiring the chief to select one or two assistant chiefs. The chiefs were given higher pay and treated with courtesy by the Russians. The Company had to rely on Aleuts because of their unique hunting and processing skills

and because of the lack of Russians in Alaska, and especially in the Pribilofs. In their non-Company fishing and hunting activities the Aleuts' community distribution of goods persisted.

26. Remuneration to the Aleuts Under Russian Administration. The Russian-American Company kept account of amounts earned throughout the year and at year's end distributed the money to the community. Shares were determined by work classification. Work classification was determined by type of work done. Women apparently worked at and were compensated for seal hunting. Pribilof Aleuts probably earned more than other Aleuts, and Veniaminov, a Russian priest who spent over 10 years in Russian Alaska, considered the Pribilof Aleuts richer than other Aleuts. However, more so than other Aleuts, those on the Pribilofs were forced to trade with the Russians for the necessities of life. Prices at the Company store were high, with the average profit margin estimated as 35 percent.

27. Effect of Russian Administration on the Aleuts. The Russian administration left the Aleut population decimated while leaving the strong imprint of Russian culture. Warfare, forced labor, and disease, reduced the 1840 Aleut population to as little as one-tenth of their pre-contact numbers. Under the encouragement of the Russians the Aleuts adopted the Russian Orthodox religion. By the early nineteenth century many Aleuts were baptized and took Russian christian and family names. Russian Orthodox churches were built on St. Paul and on St. George.

28. Aleut Learning. Under the supervision of the renowned Veniaminov (later to become Metropolitan of Moscow) the Aleuts became literate in their own language. Veniaminov finished the first Aleut language text in 1828. The Aleuts were quick learners and by 1860 a sizeable number could read Aleut and speak both Aleut and Russian.

29. Aleut Mobility in the Russian Administration. In the latter portion of the Russian administration Aleuts had a good deal of job mobility and were trained in and held responsible positions. Aleuts were sent to school in Sitka (the Russian administrative center of Alaska in the Alaskan panhandle) and in Amchitka (Siberia). Aleuts became ship navigators and captains, bookkeepers and priests. Many ships of the Russian-American Company were built in Alaska with native labor. Many Creoles (half Russian, half Aleut) held positions of authority, up to and including Administrator General of the Russian-American Company.

30. Sealing in Final Years of Russian Administration. There are no accurate figures for fur seals killed in the last years of Russian sovereignty. It is probable, however, that the fur seal population, and the annual kill, were growing as a result of the restrictive killing measures instituted by the Russians in the 1830's. A large number of seals may have been killed in 1867 in anticipation of the change in sovereignty.

31. Treaty of Cession. Beset by financial problems and international considerations, Russia, in the Treaty of Cession, ratified May 30, 1867,

sold Alaska to the United States for \$7,200,000. Article 3 of the Treaty defines the status of inhabitants of the territory. All inhabitants, save the uncivilized (or savage) tribes, were to be accorded American citizenship. The general policy of the United States was to treat the Pribilof Aleuts as non-citizen aboriginals until the Act of June 2, 1924.

32. Free Trade Period. From 1868 through the first portion of 1870 was a free trade period, with various commercial companies paying the Aleuts 25-40 cents per seal skin. This sealing was carried out in contravention of section 6 of the Act of July 27, 1868 (15 Stat. 539), by which the Government prohibited the killing of fur seals. Estimates of the seals killed in 1868 exceed 200,000.

33. Pribilofs as a Special Reservation. On March 3, 1869, Congress declared the Pribilofs a special reservation (15 Stat. 348) thereby prohibiting the presence of private concerns on the islands. Revenue Marines were assigned to the islands to enforce the prohibition on killing seals. Over 85,000 seals were killed in 1869, however, as government officials on the islands allowed the Aleuts to sell sealskins to traders for necessities. In 1870 the seal kill was diminished markedly.

34. Primacy of the Pribilofs as Fur Seal Rookeries. Historically, the Pribilof Islands were but one of many islands used as rookeries by the fur seal. By 1870, however, depredations by man had greatly reduced the number of commercially profitable fur-sealing rookeries. In the 1870's the Pribilof fur seal catch constituted over two-thirds of those rookery-

killed seals sold on the London market. A relatively small percentage of fur seals sold at London were killed on the open sea in the North Pacific Ocean and the Bering Sea.

35. Retention of Aleut Tribal Organization, 1870-1946. The Pribilof Aleuts maintained some type of tribal organization during the entire 1870-1946 period. At the beginning of the first lease period the Aleuts had a well-organized system of government, under chiefs of their own selection. The focal point of tribal organization was the role of the chief. Even though the lessees and government agents interfered in Aleut government in progressively greater degrees as time went on (even appointing what the Government considered to be the "Chief"), the Aleut chief system continued in some form until about 1920. Thereafter, the "Foreman" and the President of the Community Council carried duties approximating that of the Chief. In 1946, for example, the President of the Community Council led a strike for higher wages.

36. Retention of Community Distribution of Income, 1870-1946. Throughout the 76-year period in question the Pribilof Aleuts carried on sealing as a group endeavor and income from sealing was distributed on a community basis. Income from the taking of foxes was also generally distributed on a community basis.^{2/} Portions of the communities' income were distributed

^{2/} On St. George, where most foxes were taken, there was a distribution of fox income. On St. Paul, where income from taking foxes was much smaller and thus less important, there frequently was no community distribution -- men simply received payment for the foxes they themselves caught.

to individual Aleuts in the form of shares. The largest shares went to men most skilled in sealing. Shares were also appropriated to support the priest (when not otherwise supported), to maintain the church, to help pay for certain community buildings, to assist widows and orphans (the lessees and the Government also supported widows and children at times), and to pay for other minor community needs.

37. Aleut Population of the Pribilofs, 1870-1946. The total Aleut population in the Pribilofs in 1870 was 372. Thereafter the population dipped, rose, and then began a significant decline that was to last for nearly 20 years. The reason for the overall decrease in population was the extremely high death rate in the Pribilofs. The crude death rate^{3/} on St. Paul was four times greater than that of Massachusetts (a state with reliable figures for the period). St. George's crude death rate was three times that of Massachusetts. The death rate was so high that even an above average birth rate and some migration to the islands^{4/} could not check the decline.

Aleut population decreased in the first 5 years of the second lease period (1890-95), then began a gradual increase. The increase in

^{3/} Crude death rate equals $\frac{\text{Deaths}}{\text{Population}} \times 1,000$.

^{4/} St. Paul had a net migration gain during the period and St. George had a net migration loss. St. Paul's migration gain was greater than St. George's migration loss. There was undoubtedly some migration from St. George to St. Paul but it is not known if this comprised the bulk of migration to St. Paul. Some migration was due to men bringing in wives from other areas.

population was due to an increased birth rate, migration, and a lowered crude death rate. The crude death rate, however, remained far higher than that of Massachusetts.

Aleut population slowly increased in the government period until finally, in 1930, it reached the 1870 population level. Crude death rates generally decreased, but in the 1940's these rates remained twice as high as those in the United States. An example of the extremely high death rate on the Pribilofs is that in 1887, 46 of the 68 St. Paul male workers alive in 1870 had died. Concern was expressed that the Pribilof Aleuts would not survive. In contrast, no white person died in the Pribilofs in the 1867-1887 period.

38. Life Expectancy in the Pribilofs, 1870-1946. The Pribilof Aleuts not only had a lower life expectancy under American rule than in the pre-contact and Russian periods, but also had a lower life expectancy than their Aleut contemporaries living on the Aleutian chain. For the period as a whole, infant mortality was a major problem and those who survived infancy did not live to old age. Even though the death rates were declining for some groups as the 76-year period ended, the life expectancy for those Pribilof Aleuts in the reproductive ages was not appreciably better than their counterparts in the 1870-1910 period.

39. Economic Rights of the Aleuts, 1870-1909. Pribilof Aleuts had to work and had to work solely for the operators of the sealskin trade. There is no record of any Aleut successfully refusing to labor, nor is

there any indication that any Aleut could or did maintain himself on the islands independent of the sealskin trade. The Pribilof communities existed only to harvest seals and Aleuts could not survive on the islands without outside assistance.

The Government denied the Aleuts on the islands the right to bargain over conditions of employment. Work stoppages were dealt with summarily. Aleuts were prohibited from trading with any person other than the sealskin operators. To ensure compliance, the islands were declared "special reservations," thus allowing only government-authorized personnel on the islands.

40. Restriction on Pribilof Aleuts' Freedom to Move - 1870-1909.

Aleuts were constrained in their freedom to move by the fact that the government agents' permission was required to leave or reenter the islands. Since the paramount concern of the Government was the retention of a productive sealing force on the islands, the agents wielded their enormous power to discourage Aleut emigration. The geographical isolation of the Pribilofs, their lack of communications with the rest of the world, and the lack of any commercial transportation to or from the islands added to Aleut difficulties in moving, and increased their dependence on the wishes of the Government.

41. Emergence of In-Kind Compensation for Aleuts - 1890-1909. In the second lease period Aleuts wages were dispensed almost exclusively in in-kind payments. Aleuts received credit at the Company store, where they

were severely restricted in the type and quantity of goods they could select. This procedure continued in the government period.

42. Economic Rights of the Aleuts, 1910-1946. The Aleuts' economic position remained virtually unchanged in the period of government control. Aleuts had to work for the Government, could not sell their labor on the open market, and had no bargaining rights. The Aleuts were able to open a canteen over which they exercised a measure of control.

While workers in the United States acquired job-related benefits, the Pribilof Aleuts acquired none. Because they were federal employees, Pribilof Aleuts were considered ineligible for minimum wage, hour, unemployment, retirement, and disability benefits gradually afforded workers during this period. However, the Aleuts were also excluded from benefits -- workmen's compensation, retirement and annual leave -- afforded federal employees.

In contrast to the increasing numbers of women entering the labor force in the United States at this time, there were virtually no job opportunities for women in the Pribilofs.

43. Restriction on Pribilof Aleuts' Freedom to Move, 1910-1946. Government agents continued to discourage Aleut emigration in this period. The Government's interest in keeping the Pribilof Aleuts intact as a labor force is shown during World War II. After Aleuts were evacuated from the Pribilofs in 1942, the Superintendent of the Bureau of Fisheries wrote to the United States Employment Service requesting the placement of working Aleuts in units as large as possible in isolated areas because

"[w]e [the Bureau] believe that we can keep better control over the Natives if we had 15 men at one location rather than 3 men at each of 5 locations." The Bureau of Fisheries apparently refused requests by some Aleuts at the evacuation center to leave to look for work elsewhere.

44. Government Agents' Authority on the Pribilofs, 1870-1946. The authority of government agents on the Pribilofs was virutally unlimited. Agents could summarily fine and incarcerate Aleuts. There was one instance in which an agent exiled a Pribilof Aleut from the islands. Agents interferred in the system of Aleut government and even decided the types and quantities of goods Aleuts could purchase. By the latter part of the government period, the government agent was the integral part of a system that controlled nearly every aspect of the Pribilof Aleuts' lives.

45. World War II Evacuation. In June 1942 the Aleuts of St. Paul and St. George were evacuated to Funter Bay in southeastern Alaska. No sealing was conducted in 1942, but in 1943 sealing gangs returned to the islands and a large number of seals were taken. In May 1944 the Pribilof Aleuts were brought back to the islands.

46. Conditions at Funter Bay. Living conditions in the Aleut evacuation center at Funter Bay were extremely unhealthy. An assistant supervisor of the Fish and Wildlife Service wrote on October 28, 1943, that unless conditions improved before the winter "it is more than a possibility that the death toll from tuberculosis, pneumonia, influenza, and other diseases will so decimate the ranks of the natives that few

will survive to return to the islands." The same supervisor reported the criticism of a physician that "the Aleuts were herded into quarters unfit for pigs, denied adequate medical attention; lack of healthful diet and even facilities to keep warm and are virtually prisoners of the Government though theoretically possessing the status of citizenship."

ECONOMIC ANALYSIS OF THE FIRST LEASE PERIOD, 1870-1889

47. The Act of July 1, 1870. On July 1, 1870, Congress passed an act (16 Stat. 180) allowing, inter alia, the leasing of the right to take fur seals on the Pribilofs. The act set minimum acceptable remuneration to the Government from such a lease at \$50,000 annual rental and \$2 per skin as revenue tax. The lease would be for 20 years and proceeds would go into the Treasury. The kill was restricted to 75,000 per year on St. Paul and 25,000 per year on St. George, except for those seals which the Pribilof Aleuts required for food, clothing and boat-building. In the making of the lease the Secretary of the Treasury was instructed to "have due regard to the preservation of the seal fur-trade of said islands, and the comfort, maintenance, and education of the natives thereof" (§4). In §6 the Secretary was authorized to "make all needful rules and regulations. . . for the comfort, maintenance, education and protection of the natives of said islands."

48. The Alaska Commercial Company's Lease. In 1870 the Alaska Commercial Company (hereinafter the ACC), successor to Hutchinson, Kohl, and Co., was granted the lease to take Pribilof fur-seals amid charges that the company engaged in bribery and other improper inducements.

49. Provisions of the ACC Lease. The lease signed by the ACC and the Secretary of the Treasury provided that the company was to pay an annual rental of \$55,000, a \$2 revenue tax on each fur-seal skin taken and shipped, an additional 62 1/2 cents for each fur-seal skin, and 55 cents per gallon of fur-seal oil obtained for sale.^{5/} All these monies were to be paid into the U. S. Treasury.

The lease also provided that the Pribilof Aleuts were to receive free of charge 25,000 dried salmon, 60 cords of firewood, sufficient quantities of salt, and a number of barrels to preserve meat. The ACC agreed to abide by all regulations for the comfort, maintenance, education, and protection of the natives.

50. Few Regulations Issued by the Secretary of Treasury. Prior to the awarding of the lease to ACC, the Secretary of the Treasury stated that the eventual lessee would be required to establish schools on St. Paul and St. George and would be required "to pay to the natives of the islands for the labor performed by them such compensation as may be necessary for their proper support, under regulations to be prescribed by the Secretary of the Treasury." Although few regulations were made by the Secretary of the Treasury, one was the requirement that the ACC use only Pribilof Aleuts in the seal killing and skinning operations.

^{5/} The lease does not specifically term the 62 1/2 cents per skin, or the 55 cents per gallon of seal oil, a "tax."

The ACC recognized Aleut native government, and the chiefs' right to choose working parties.

51. Seal Harvesting Restrictions and Procedure. The Act of July 1, 1870, and the lease with the ACC prohibited certain types of sealing. Female seals and all seals less than one year old could not be killed; the killing was to occur in June through October, exclusively; and seal killing in the waters adjacent to the islands was prohibited.

On the day of a seal kill the Aleut men would arise early and proceed to the targeted rookery. In a selected area of the rookery Aleuts would drive a group of seals away from the ocean. Then, allowing older seals and female seals to escape, the group was herded to the killing ground. There the seals were clubbed over the head and perhaps stabbed in the heart.

Skinning the seals proceeded immediately after killing. The whole killing and skinning operation was a group enterprise involving men with differing duties and levels of expertise. The extraordinary proficiency of the Aleuts in this task is evidenced by the fact that in 50 days, 71 men are reported to have killed and skinned 75,000 seals.

52. Curing and Transportation of Skins. After skinning, the skins were cured for up to three weeks and then bundled. When the company ship called at the islands the skins would be ferried out to the boat, since there were no docking facilities on either St. Paul or St. George. The skins were taken to San Francisco, thence to New York, and, prior to 1913, to auction in London.

53. Aleut Remuneration in the First Lease Period. Aleut and government revenue was primarily determined by the count of government agents either when the skins were loaded aboard the company ship at the Pribilofs or upon delivery to the government agent at San Francisco. Either pursuant to government regulation or on its own volition the ACC set Aleut remuneration at 40 cents per seal skin.

54. Government of Pribilofs. The Secretary of the Treasury administered the Pribilofs directly through the agents on St. Paul and St. George; there were no intermediate officials.

55. ACC Employees and Store. The ACC initially employed 11 non-natives on St. Paul -- an agent, three assistants, three carpenters, a school teacher, a physician, a cooper and a cook -- and four non-natives on St. George -- an agent, a physician, a teacher and cook. The ACC maintained a store on each island; prices were set at not more than 25 percent above San Francisco wholesale prices.

56. Number of Seals Killed. Although the Act of July 1, 1870, restricted the kill of seals to 100,000, and to the months of June, July, September and October, another provision in the act allowed Aleuts to kill at other times such seals as might be needed for food, clothing and boat manufacture (16 Stat. 180, §§1, 3). Since the number of seals taken for food on St. Paul alone exceeded 10,000 at times, it was common in the years 1871-1889 for more than 100,000 seals to be killed.

57. Selection of Sealskins to be Shipped. During the sealing season the Aleuts engaged in seal harvesting that was specifically intended to be applied toward the ACC's quota. A small percentage of the skins taken were rejected by the ACC as unfit. At other times in the year the Aleuts took seal pups and bachelor seals for food. Those sealskins from this kill suitable for sale were taken by the ACC and applied toward the seal quota.

58. Sale of Sealskins on the London Market. Most, if not all, of the sealskins harvested on the Pribilofs were shipped to London and sold there. The best estimate of the number of Pribilof Islands' sealskins sold on the London market during the first lease period, from 1870 to 1889, is 1,839,353.^{6/} Total receipts from fur sales at the London market were \$27,173,668.^{7/}

59. Foxskin Catch; Sale of Foxskins; Revenue Therefrom. The ACC also derived income from selling foxskins harvested on the Pribilofs. Although the 1870 lease did not mention any revenue-producing activity other than

^{6/} This figure may not reflect total ACC Pribilof sealskin sales because some ACC sealskins may have been sold after the termination of the lease in 1889, and because a small quantity of sealskins may not have reached London (see Pl. Ex. 25, at 110). For differing estimates see Pl. Ex. 33, at 386; Pl. Ex. 49, at 963.

^{7/} This is the figure in Def. Ex. G-1, Sch. 2-1. This compares with Henry Elliott's estimate of \$27,153,514 (Def. Ex. R, at 195) and plaintiffs' expert's estimate of \$29,473,060 (based on a chart in Pl. Ex. 78).. The estimate of \$27,836,668 in Def. Ex. R, at 26, is too high for several reasons: (1) Receipts of \$82,552 are too high for the sealskins taken under the lease in 1870 (see Def. Ex. GS-1, at 10; Pl. Ex. 701, at A-10); (2) There is a typographical error in the figure for 1875 -- it should read 1,271,009; and (3) The column of figures totalling gross revenue has been incorrectly added.

sealing, the ACC assumed the privilege of taking and selling foxskins. Information on the number of skins and revenues derived from foxing in the period 1870-1889 is incomplete. Both "blue" and "white" fox were trapped, but the blue fox was much more highly prized and constituted the overwhelming majority of foxes caught. St. George was the primary foxing area, and the catch there was several times as high as on St. Paul.

60. Estimate of Foxskin Catch and Revenue. The best estimate of the total fox catch over the 20-year period is 24,792, producing gross revenues of \$300,000.^{8/}

61. Seal Oil Production. The ACC produced at least 32,000 gallons of seal oil in the lease period, but there is no record of gross or net revenues accruing to the ACC from the production of seal oil. The lease with the Government called for a tax of 55 cents per gallon of seal oil produced for sale by the ACC. In 1874, however, the solicitor of the Treasury unilaterally waived this tax, and there is no record of any monies paid to the Government pursuant to the seal oil tax.

^{8/} This estimate is based on Def. Ex. G-6 (upon which defendant's experts rely in Def. Ex. G-1, at 10-11, and Def. Ex. R, at 35-36) which is a government document and the most complete record of foxing available. Plaintiffs' expert estimates the total fox harvest for 1870-1889 at 17,875 (Pl. Ex. 721) and gross revenues at \$158,193 (Pl. Ex. 701, at 6-5). See Def. Ex. E-49, at 965, fn. 2.

62. Payments to Pribilof Aleuts for Sealing. The ACC paid Aleuts a total of \$722,887 for killing and skinning seals.^{9/} \$596,056 was paid for sealing on St. Paul and \$126,831 for sealing on St. George.^{10/}

63. Payments to Pribilof Aleuts for Foxskins. Information on the amount paid the Aleuts for each fox pelt indicates that blue fox pelts brought either 50 cents per pelt or 40-60 cents per pelt and white fox skins brought much less. White foxskins appear to constitute an insignificant portion of the total catch and these skins may not even be included in catch data. Assuming an average price per skin of 50 cents and a total catch of 24,792 (see findings of fact No. 60), the ACC paid \$12,396 to the Aleuts for foxing. This represents an income of \$2,190 to the St. Paul Aleuts, and \$10,206 to St. George Aleuts.

64. Miscellaneous Pribilof Aleut Labor Expenditures. The ACC also paid the Pribilof Aleuts for labor unconnected with the taking of seals. This labor was usually compensated at the rate of 10 cents per hour. The company also paid the natives small amounts for sea lion skins and various other animal parts. St. Paul Aleuts earned \$7,006 for miscellaneous labor.^{11/} While St. George Aleuts may have earned money at miscellaneous

^{9/} Defendant's exhibit E-33 contains an erroneous total at page 262. The total should be \$126,830.80.

^{10/} Although \$596,056 was paid for sealing on St. Paul, records indicate that \$25,780 of this total was paid to St. George men who had assisted in the St. Paul sealing (Def. Ex. G-1, at 11; see Def. Ex. 45, at 35 for a slightly lower estimate of fox earnings on St. Paul).

^{11/} Defendant's exhibit R has an incorrect total at page 35 for miscellaneous labor on St. Paul in 1872. The figure should be \$221.97 not \$521.97.

work, no documentation is available to establish the existence of such payment or its amount.^{12/}

65. Donor Goods Provided by the ACC. The ACC was obligated under the lease to provide the Aleuts with dried salmon, 60 cords of wood, salt, and barrels to preserve meat. However, the ACC in 1871 substituted 60 tons of coal for the wood and in 1873 substituted salted salmon for dried salmon.

66. Value of Salmon Supplied. The best estimate of the dried salmon, salt salmon and codfish supplied by the ACC under the terms of the lease is \$8,000. The ACC provided 80 barrels of fish per year. The value for dried salmon per barrel from 1868 on, and the value for dry-salted salmon from 1900 on^{13/} are set forth in Pl. Ex. 701, Vol. II, at 102. The value of salmon during the first lease period was approximately \$8 to \$9 per barrel. The value of dry-salted salmon after 1900 was approximately \$4 to \$5. Since most of the salmon provided was dry-salted, an estimate of \$5 per barrel for fish supplied by the ACC is reasonable.^{14/} This indicates estimated expenditures of \$400 per year and \$8,000 for the lease period.

^{12/} Defendant's expert, in Def. Ex. R, at 36, estimates \$1,200 per year as miscellaneous labor payments to St. George Aleuts. However, as authority for this estimation, there is apparently only one reference to a small payment in 1872 (see Def. Ex. E-45).

^{13/} There are no figures in the exhibit for the period prior to 1900.

^{14/} Plaintiffs estimate the value of the fish supplied at \$8.55 per barrel and \$684.15 per year. Defendant's expert estimates that salt salmon cost the ACC \$3 per barrel (Def. Ex. R, at 40).

67. Value of Coal Provided. The cost to the ACC of the coal provided is conjectural but may be estimated at \$780 per year or \$15,600 (\$10,400 for St. Paul, \$5,200 for St. George) for the lease period. Both parties agree that the price per ton of coal at the St. Paul store in 1900 was \$15.50. Neither party sets forth any reason why coal prices should have been substantially higher or lower in the 1870-1889 period. Therefore, taking \$15.50, the store price in 1900, and deducting 25 per cent for allowed markup over San Francisco price, leaves an estimated cost per ton of approximately \$13.^{15/}

68. Value of Salt and Barrels Provided. Although records show that the ACC did provide salt and barrels to the Pribilof Aleuts, the quantity of these items supplied is unknown. The cost to the ACC was insignificant and no value has been estimated for these supplies.

69. Value of Medical Care to Pribilof Aleuts. Although not required to do so by the lease arrangement, the ACC stationed a doctor and a supply of free medicine on each island. Assuming that doctors' salaries in the

^{15/} Plaintiff maintains that the known cost of coal in the Pribilofs in 1888 was \$20 per ton (Pl. Ex. 701, Vol. I, at 3-13), and marshalls certain authority in the record that indicates that the retail price of coal was at various times in the \$20 range (Pl. Ex. 31, at 27; Pl. Ex. 123, at 32; Pl. Ex. 53, at 209). Plaintiffs' expert's worksheet (Pl. Ex. 719, at 2), however, estimates the price per ton at \$15 for the period 1880 to 1889. The same worksheet states that observed prices in 1891 were \$15 per ton. Defendant's expert speculates that the cost per ton of coal to the ACC was \$7.

first lease period were approximately the same as the \$1,200 per year per doctor paid in the second lease period (see finding of fact No. 97), and assuming that \$300 of medicine was dispensed per island per year, a total of \$3,000 per year was expended for health services. During the 20-year lease period this would mean an ACC expenditure of \$60,000.

70. Other Expenditures to the Pribilof Aleuts. Other expenditures to the Pribilof Aleuts are not estimated. Although the ACC did provide some school instruction, the expense to the company was probably minimal. There are no records of expenses for school supplies and the "teacher" may have been a regular employee of the ACC more concerned with the seal harvest than with teaching.

The ACC expended some funds in the first lease period for support of Pribilof widows and orphans, but the amount of money so spent was probably very low, and the ACC and the Government were often at odds over the ACC lack of support for this segment of the population. Often the Aleuts themselves had to support widows and orphans.

71. Non-Pribilof Aleut Labor. The ACC also hired outside labor to work on St. Paul. Unalaska Aleuts made up this work force which was primarily engaged in extra sealing-related labor during the sealing season. The first record of Unalaska workers on St. Paul is 1878. Additional records exist for 1879, 1881, and 1889. Any 20-year total for this labor must be an approximation. Data on the years 1878 and 1879 indicates monthly wages from \$30 to \$40 for Unalaska labor. Total wages

paid (for making seal oil) are listed at \$1,022.92 for 1878, and \$1,110.00 for 1879. Assuming an average of 20 Unalaskan workers from 1878-1889, pay of \$40 per month, and average employment of 6 weeks (a major portion of the killing season), yearly wages are \$1,116.00. Taking average wages for 10 years and adding them to the 2 years in which wages are known, gives total wages to non-Pribilof Aleuts as \$13,293.

The ACC may also have provided board to the Unalaskans while on St. Paul, but this amount must have been very small and is not estimated.

72. Salaries, Transportation, Offices. The ACC had to pay other costs which for the year 1872 Henry Elliott, a one-time government agent and author of reports on the Pribilof Islands seal trade, listed as follows:

Salaries of island agents & white assistants, etc.	\$ 24,000
Steamer (in commission 5 months)	25,000
Salaries of agents & office force, San Francisco	12,000
Salaries of Washington attorney & agent	6,000
Wharfage, packing, casks, San Francisco	2,000
Fast freight, San Francisco to New York, 8 cars	1,600
Insurance from islands to London	7,000
Steamer freight and transshipment New York to London, etc.	1,400
Brokerage, dock charge, London sales	<u>15,000</u>
Total	\$ 94,000

There is no verification for these figures and the figures, even if correct, reflect only one year's expenditures. The figures do provide, however, the best available approximation of ACC costs. Applying these costs over the 20-year period results in an expenditure of \$1,880,000.

73. Building Acquisition and Construction Expenditures. Records indicate the ACC paid \$28,051 to Hutchinson, Kohl and Co. for the various structures existing on the islands. In addition, the ACC spent approximately \$18,000 on Aleut housing. The total of these two expenditures is \$46,051.

74. Payment to the U. S. Government. The ACC paid the Government \$6,010,566 in the first lease period. For the year 1870 the ACC paid the Government a rental of \$5,480.75, a tax of \$1 for each sealskin remaining on the islands but taken prior to the effective date of the lease, and a tax of \$2.625 for each sealskin taken during the lease period. From 1871-1889 the ACC paid \$55,000 in rental and \$2.625 for each sealskin shipped from the Pribilofs.

75. Total Expenditure and Net Profit to the ACC. The ACC's expenditures during the first lease period are as follows:

(1) Pribilof Aleuts for sealing	\$ 722,887
(2) Pribilof Aleuts for foxing	12,396
(3) Pribilof Aleuts for misc. labor	7,006
(4) Cost of salmon provided	8,000
(5) Cost of coal provided	15,600
(6) Non-Pribilof Aleuts for labor	13,293
(7) Cost of ACC salaries, transportation, offices	1,880,000
(8) Cost of health services provided	60,000
(9) Cost of building acquisition from Hutchinson, Kohl & Co., cost of erecting houses	46,051
(10) Payments to U. S. Government	<u>6,010,566</u>
Total	\$8,775,799

Total expenditures are \$8,775,799, total receipts are \$27,473,668 (findings of fact Nos. 58 and 60), resulting in net profit to the ACC, from 1870-1889, of \$18,697,869.^{16/}

76. Revenues and Expenditures of the U. S. Government. The Government was paid \$6,010,566 by the ACC under the 1870 lease.^{17/} There is no record of the Government directly assisting in sealing operations in the Pribilofs. The Government did station agents on the islands, however, and the Government did make certain expenditures related to the fur-sealing industry.

^{16/} This estimate of net profit compares to Henry Elliott's estimate of \$18,753,911.20 (Def. Ex. E-49, at 964), defendant expert's estimate of \$18,102,140 (Def. Ex. R, at 30), and plaintiffs' expert's profit estimate of \$17.8 to \$20.4 million. Plaintiffs' estimate, however, is based on the assumption that the ACC made substantial profits only in its Pribilof operations (Pl. Ex. 701, at 6-6). This has not been shown. Rather, the record discloses that beginning in 1871 the ACC held a lease to kill fur seals on the Russian Komandorskiye (Commander) Islands (Pl. Ex. 25, at 92) (lying approximately 165° east longitude, 55° north latitude) and that under advantageous lease provisions, the ACC killed and sold 720,406 fur seals (Pl. Ex. 700, at 151) and 17,409 foxskins (Def. Ex. G-6, at 4) between 1872 and 1890. Although profit calculations are not possible, the volume of skins taken should have yielded a very substantial return to the ACC (Pl. Ex. 25, at 111). The ACC also had a substantial, and a probably profitable, presence elsewhere in Alaska.

^{17/} In addition to the Government revenue under the 1870 lease plaintiff's expert contends that an estimated additional \$2,844,857, collected as duties on sealskins, should be counted as profit to the Government (Pl. Ex. 701, Vol. I, at 6-12). These estimated duties were collected on sealskins that were imported into the United States after processing in London. Plaintiffs' expert's calculations are based solely on a chart submitted by a witness for the ACC at an 1889 Congressional hearing (Pl. Ex. 25, at 99). Plaintiffs' expert assumes an average price for imported skins of \$78.93 and a duty of 20 percent per skin. Plaintiffs also estimate as Government expenses 5 percent of the amount collected, or \$188,587, to give a net return from duties of \$2,656,270.

77. Government Agents' Salaries. The best estimate of agents' salaries and expenses in the first lease period is \$152,517.^{18/} Government agents appear to have been well-paid in the first lease period. Salaries of the chief agents often exceeded \$3,000 (including traveling expenses). It is not known if in addition to this salary agents received room and board.

78. Cost of Government Buildings. The cost of Government buildings on the Pribilofs was small. The best estimate of cost is \$5,940.^{19/}

79. Governmental Research on Fur Seals and Fur Trade. Def. Ex. E-42, at 42 lists \$784.51 spent in 1875 for "collecting information respecting fur trade." No other sums are listed for research on the Aleuts or fur seals.

80. Government Expenditures for General Patrol of Alaska. \$183,808.62 was expended by the Government for patrol and administration of Alaskan

^{18/} Def. Ex. E-42, at 42, and Def. Ex. G-1, at 9 have substantially the same figures per year, the difference in totals primarily due to the inclusion of salaries and expenses for fiscal 1890 in Def. Ex. G-1. Excluding fiscal 1890, and otherwise relying upon Def. Ex. E-42, results in agents' salaries and expenses of \$152,517. Other estimates are: \$152,482 (in Pl. Ex. 701, Vol. I, at 6-13), \$166,784 (in Def. Ex. G-1, at 9), and \$202,655 (in Def. Ex. R, at 28 and Def. Ex. E-75, at 1). See also Def. Ex. G-3, at 7.

^{19/} Defendant's expert cites an identical report (Def. Ex. G-42, at 42), but arrives at a higher figure (Def. Ex. R, at 28). Def. Ex. G-1, at 9, also has a higher total, one not consistent with Def. Ex. G-3, at 104, 108.

waters and marine areas in the first lease period.^{20/} A description of the use of the monies appropriated for the "protection of sea-otters and seals" in Alaska illustrates that a sizeable portion of the appropriation was intended for activities unrelated to the sealing operations. A typical description of an appropriation commits the monies "[t]o enable the Secretary of the Treasury to use revenue-steamers for the protection of the interests of the Government of the seal islands, the seal-otter hunting grounds, and the enforcement of the provisions of law in Alaska."^{21/}

Although the revenue cutters did, in part, help enforce sealing laws and regulations, other activities were numerous and much more time-consuming. A chronological list of the activities of the revenue cutter Corwin in 1884 shows the diverse responsibilities of the Revenue Cutter Service. In 1888 the Secretary of the Treasury was unable to approximate the amount expended by the revenue marine on the seal islands because the revenue cruisers

^{20/} A Congressional hearing in 1888 indicated that for the years 1877-1887 \$163,808.62 was the cost of revenue cutters and naval vessels in Alaska. A further appropriation of \$20,000 in 1888 brings the total for the lease period to \$183,808.62. The General Services Administration report includes both \$183,808.62 and \$600,000 as Government patrol expenses even though a witness for the GSA testified that the GSA did not know if one figure was inclusive of the other (Tr. IV, at 41). Both the GSA figure of \$606,846.66 and Def. Ex. R figure of \$600,000 are based, without further substantiation, upon Henry Elliott's estimate that \$30,000 per year was expended on the seal trade (see Def. Ex. E-49, at 964).

^{21/} United States Treasury Department, Division of Bookkeeping and Warrants, Digest of Appropriations for the Support of the Government of the United States for Service of the Fiscal Years Ending 1878 through 1887, at 41 (Def. Ex. G-31, at 41).

"were dispatched thither for various purposes, and sailed many thousand miles on business in no way connected with the protection of seal life."^{22/}

A later government document that sets forth receipts and expenditures of the fur seal fisheries does not include the \$183,808.62 in the main table, but instead footnotes the figure with the explanation that the money "had little or nothing to do with the seal islands."^{23/} The Commission finds that the amount expended by the Government to protect the Pribilof Island sealing operations was small and not subject to quantification.

81. Government Profit, First Lease Period. In the 1870-1889 period payment by the ACC to the Government was \$6,010,566 and expenditures totalled \$159,242. Profit was \$5,851,324.

ECONOMIC ANALYSIS OF THE SECOND LEASE PERIOD, 1890-1909

82. Awarding of the Second Lease. The North American Commercial Company (hereinafter the NACC) outbid the ACC and on March 12, 1890, was granted the lease to take fur seals on the Pribilofs for a 20-year period.

83. Provision in the Second Lease for Remuneration to the Government and for Free Goods to the Aleuts. The second lease increased the amount of rent and taxes the lessee was to pay the Government from the sealing operation. Annual rent was fixed at \$60,000, and the payment for each

^{22/} U. S. Congress, Fur-Seal Fisheries of Alaska. House Report No. 3883, 50th Cong., 2nd Sess., 1889, at 345 (Pl. Ex. 25, at 345).

^{23/} Sims, Edward W., Report on the Alaskan Fur-Seal Fisheries, House Report No. 251, 59th Cong., 2nd Sess., 1906, at 42 (Def. Ex. E-42, at 42).

shipped sealskin was increased to \$9.625. In addition the Government was to receive 50 cents for each gallon of seal oil sold by the lease.

The second lease, like the first, obligated the lessee to provide coal, salmon, salt, and barrels to the Aleuts. The second lease, increased, however, the amount of coal to be provided from 60 to 80 tons per year and left to the discretion of the Secretary of the Treasury the amounts of dried salmon, salt, and barrels to be provided.

84. Additional Obligations of the Lessee Under the Second Lease. The second lease provided that the NACC was to furnish to the Pribilof Aleuts

. . . a sufficient number of comfortable dwellings in which said native inhabitants may reside; and will keep said dwellings in proper repair; and will also provide and keep in repair such suitable schoolhouses as may be necessary, and will establish and maintain during eight months of each year proper schools for the education of the children on said islands, the same to be taught by competent teachers who shall be paid by the company a fair compensation, all to the satisfaction of the Secretary of the Treasury; and will also provide and maintain a suitable house for religious worship; and will also provide a competent physician or physicians, and necessary and proper medicines and medical supplies; and will also provide the necessaries of life for the widows and orphans and aged and infirm inhabitants of said islands who are unable to provide for themselves; all of which foregoing agreements will be done and performed by the said company free of all costs and charges to said native inhabitants of said islands or to the United States. . .

. . . .

The said company further agrees to employ the native inhabitants of said islands to perform such labor upon the islands as they are fitted to perform, and to pay therefor

a fair and just compensation, such as may be fixed by the Secretary of the Treasury; and also agrees to contribute, as far as in its power, all reasonable efforts to secure the comfort, health, education, and promote the morals and civilization of said native inhabitants.

85. Quota of Seals Allowed to be Taken. The lease placed a quota of 60,000 on the number of seals the NACC could kill in the year ending May 1, 1891. The lease established no limit on the seal kill thereafter, but the Secretary of the Treasury held the power to restrict the kill.

86. Decrease in the Seal Herd. By 1890, there was a dramatic decrease in the size of the Pribilof seal herd as compared with its number a decade earlier. This decrease was in part due to the prolific growth of pelagic sealing. From a modest beginning in the 1860's, pelagic sealing had increased substantially in the 1880's, and by the 1890's the number of seals taken at sea far outnumbered those taken on the Pribilofs.

87. Government Administration of the Pribilofs in the Second Lease Period. Until 1903 the Treasury Department continued to administer the Pribilofs. In 1903 the administration of the islands was transferred to the Department of Commerce and Labor. In both instances the chief agent on the islands reported directly to the Secretary. In 1909 the Bureau of Fisheries, within the Department of Commerce and Labor, was given responsibility for administering the Pribilofs.

88. Sale of Sealskins in London. In the second lease period, 1890-1909, 339,180 sealskins were shipped to London and sold at the fur market there. ^{24/} These skins were sold for \$9,489,728. ^{25/}

89. Foxskin Harvest and Sale. The record indicates that during the second lease period approximately 7,652 foxes were taken on St. George and 2,671 were taken on St. Paul. There is little information available to establish the price the NACC received on the sale of foxskins. ^{26/} It is

^{24/} There is some substantiation for a slightly higher number of skins sold during one of the years -- 1890 (Pl. Ex. 701, Vol. I, at A-4; Pl. Ex. 700, at 151).

^{25/} The parties are in substantial agreement on the gross revenues derived from the sale of sealskins (see Def. Ex. R, at 71; Def. Ex. G-1, at 14; Pl. Ex. 701, Vol. I, at A-14). The General Services Administration figures (Def. Ex. G-1) have been relied upon with two exceptions -- the totals for fiscal 1909 and 1910 have been recalculated using the product of the number of sealskins shipped times the average price per skin, as listed in separate columns of the GSA report. The products now listed for 1909 and 1910 by the GSA do not equal the product of sealskin times price per skin. Def. Ex. R, at 71, uses the same revenue figures as the GSA report (with the exception of one \$6 deviation) but arrives at a different total because the column of figures has been incorrectly added. Pl. Ex. 701, Vol. 1, is in near complete agreement with defendant's experts' estimate of the number of seals sold and the price per skin. Plaintiffs' expert arrives at a higher total revenue figure, however, by relying on other sources -- Pl. Ex. 78 and Pl. Ex. 88, at 107.

^{26/} Blue foxskins may have been selling from \$12-\$20 in the San Francisco market early in the second lease period (Def. Ex. G-14, at 4). There is no indication in the record, however, that the NACC sold foxskins in San Francisco. Defendant's expert, relying upon 1888-1891 ACC sales, calculates net revenues from each foxskin at \$22.53 (and a \$235,258 total over the lease period) (Def. Ex. R, at 74). Plaintiff's expert estimates \$20 as the market price for blue fox and \$12 as the market price for white fox. This leads to an estimate of \$204,488 for gross revenues.

apparent that foxskins were a valuable commodity at this time since several private interests attempted to breed foxes on Alaskan islands for commercial purposes.

A reasonable estimate of the price for foxskins is \$22 for blue foxskins and \$15 for white foxskins. Indications are that white foxskins made up a small percentage of those skins taken. Assuming all but 4 percent of the foxskins were blue fox results in estimated total revenue of \$230,400.

90. Seal Oil Production. There is no record of seal oil being produced by the NACC.

91. Payments to Pribilof Aleuts for Sealing. The best estimate for amounts paid to Aleuts for sealing during the second lease period, 1890 to 1909, is \$184,275.^{27/}

92. Payments to Pribilof Aleuts for Foxskins. Data on the amount paid the Aleuts for fox pelts indicates that compensation was initially in the \$1-\$2 range. Compensation was increased for the winter harvest of 1893-94 to \$5 for each first class blue fox, \$4 for second class blue fox and \$1 for white fox. By 1900 Aleuts were paid \$5 for all blue foxskins. Total revenue to the Aleuts from the NACC was approximately \$43,730. \$32,959 was paid to St. George Aleuts and \$10,761 to St. Paul Aleuts.

^{27/} Aleuts were paid 40 cents per seal skin in 1890. This was increased to 50 cents per skin in 1891 (Pl. Ex. 53, at 314) and 75 cents per skin in 1906.

93. Payments to Pribilof Aleuts for Miscellaneous Labor. While the NACC probably paid the Aleuts small amounts each year for miscellaneous labor, the only record of such payment is a \$2,000 expenditure to St. ^{28/}George Aleuts in 1895.

94. Value of Salmon Provided. The NACC was obligated to furnish as much dried salmon as deemed necessary by the Secretary of the Treasury. There is no record that the Secretary ever set any guidelines in regard to dried salmon. The amount of salt and dried salmon provided was probably much less than that furnished in the first lease period. The best estimate of the value of the fish provided is \$5,079. ^{29/}

95. Value of Coal Provided. There is little documentation of the cost of the coal provided by the NACC in the second lease period. It is known that the average wholesale price of eastern United States coal in the second lease period was only marginally higher than the price in the

^{28/} A 1910 report indicates that the NACC had on its payroll 4 Aleut janitors at a total annual salary of \$840 (Def. Ex. E-70, at 9). There is no record that these salaries were actually expended in the second lease period. In the first lease period the Aleuts received miscellaneous labor payments for some seal bundling and salting work. There are indications that when the price per sealskin was increased (see fn. 27, *supra*) the NACC considered this heretofore separately compensated labor to be included in the higher wage.

^{29/} There are few entries in the record setting forth the amount of fish provided. Indications are, however, that this donor good was provided throughout the second lease period. Quantities of salmon supplied and type of salmon supplied is speculative. If it is assumed, however, that 40 barrels of fish were provided each year -- half dried salmon, half salt salmon -- and if it is assumed that the price per barrel ranged from \$5 for salt salmon to \$7.65 for dried salmon (Pl. Ex. 701, Vol. II, at 102), then the total expenditure by the NACC is \$5,079. Defendant's expert estimates the value of the salmon at \$5,000 (Def. Ex. R, at 87); plaintiffs' expert estimates \$319 (Pl. Ex. 701, Vol. I, at 3-26).

first lease period. It is also known that at the end of the second lease period, when coal prices were relatively high, the Government paid the NACC \$17 for each ton of coal remaining on the islands. Assuming a small increase of \$1 per ton over the first lease period average of \$13 and a supply of 80 tons per year (see finding of fact No. 83) gives a total cost to the NACC of \$22,400.^{30/}

96. Value of Salt and Barrels Provided. The value of salt and barrels provided to the Aleuts was minimal and is not estimated.

97. Value of Health Services Provided. The NACC is reported to have spent \$2,400 on doctors' salaries in 1904 (there were two doctors -- one on each island -- and each received \$1,200). In addition, the NACC paid the room and board for these physicians, amounting to \$1,040. Expenses for medical supplies and coal for the dispensary in 1904 totalled \$701.44. Assuming these amounts were expended yearly over the entire second lease period, the value of doctors' services and medicine over the second lease period was \$82,829. The record also indicates that \$1,206 was spent on medical buildings in the lease period. Total expenditures for health services are \$84,035.

98. Value of Housing Provided. The second lease obliged the NACC to furnish the Pribilof Aleuts with "a sufficient number of comfortable

^{30/} Plaintiffs' expert estimates slightly over \$20 a ton for coal for a total cost of \$33,137 (Pl. Ex. 701, Vol. I, at 3-16). Defendant's expert estimates cost per ton to the NACC of \$10 (Def. Ex. R, at 87).

dwellings . . . [kept] in proper repair." The amount paid in 1890 by the NACC to the ACC for the native dwellings is not known. The inventory value of the native dwellings in 1910 was listed as \$23,916 (\$17,269 for St. Paul dwellings, \$6,647 for St. George dwellings), but in buying the NACC property the Government in 1910 paid only \$11,958 for native dwellings.

We consider it probable that the value of the dwellings for inventory purposes was higher than fair market value, while value for what was, in effect, forced sale to the Government was less than fair market value. Considering these factors we believe that a reasonable fair market value for the dwellings lies between these two extremes. We believe that the midpoint figure -- \$17,937 -- represents fair market value.

There is no record of any housing constructed by the NACC for the Aleuts. Repairs to the native dwellings by the NACC were minimal (several houses may have been abandoned in this period). The only available records show that repairs cost the NACC \$54.42 on the Pribilofs in 1904 and cost \$36.36 on St. George in 1905. If it is assumed that housing repairs cost, on the average, \$75 per year, the total expenditure by the NACC for housing was \$19,437.

99. Value of Providing and Maintaining a House of Worship. Although the second lease obligated the NACC to provide and maintain a church for the Aleuts, the NACC expended no monies for this purpose. The Aleuts had previously built churches on St. Paul and on St. George which were maintained by the Aleut population without any contribution from the NACC.

100. Value of Providing for Widows, Orphans, Aged and Infirm. There is little information concerning NACC expenditures to those Aleuts the second lease obligated it to support. There is a record of controversy between the Government and the NACC as to which Aleuts were entitled to NACC support. All that has been shown in the record is that the NACC maintained it spent \$1,943 for widows and orphans on St. Paul in 1904; \$947 on St. George in 1904; and \$1,709 on St. George in 1905. Contributions to Aleuts must have varied greatly as the composition of the population changed and as the NACC altered its policies as to whom to support, when to support these people, and in what manner to support them. It is clear that the level of support provided by the NACC to widows and orphans did not equal the income of other Pribilof Aleuts. Defendant's expert states that the widows and orphans must have experienced severe economic deprivation. A contribution of \$2,000 per year would have provided a per capita income of \$50 to 40 widows and orphans. This figure is a reasonable estimate of support given Aleut per capita income. Applying \$2,000 per year over the lease period gives total expenditures of \$40,000 over the lease period.

101. Value of Educational Services. The best estimate of expenditures for education in the second lease period is \$75,721.^{31/} Over 90 percent of this expense was for payment of teachers' salaries.

^{31/} This is the estimate of plaintiffs' expert (Pl. Ex. 701, Vol. I, at 3-46). The estimate includes the cost of teachers' salaries, school supplies and school buildings. Defendant's expert did not estimate expenditures for education.

102. Salaries, Transportation, Offices. The NACC had other costs which for the year 1902 Henry Elliott listed as follows:

Salaries and subsistence of foremen and white assistants on islands	\$ 12,000
Charter of small tramp steamer, three months	15,000
Insurance from islands to London	7,000
Salt & bundling on islands	250
Salaries of secretary and clerk, office rent, etc., San Francisco	6,000
Wharfage, packing, casks, etc., San Francisco	2,000
Railroad freight, San Francisco to New York	1,000
Steamer freight, New York to London	500
Brokerage, dock charges, and agents' London sales	<u>15,000</u>
Total	\$ 68,000

These figures, although unverified, provide the best available approximation of NACC costs. Applying these costs over the 20-year lease period results in an expenditure of \$1,360,000.

103. Expenditures by the NACC for Miscellaneous Buildings. The NACC inventory in 1910 included a number of watchhouses, warehouses, salthouses, a library, and other miscellaneous structures. There is no basis to determine those structures for which the NACC made expenditures. The inventory value of "Company buldings" was \$37,287 in 1910 for which the Government paid \$18,674. In 1890 the NACC paid the ACC \$55,000 for "buildings, improvements, and telephone" on the Pribilofs. Given these circumstances it would be speculative to estimate expenditures by the NACC for miscellaneous structures on the Pribilofs.

104. Payment to the U. S. Government. The NACC paid the Government ^{32/} \$3,460,675 during the second lease period.

105. Total Expenditures and Revenues to the NACC. NACC revenues during the second lease period are as follows:

(1) Sale of Sealskins	\$ 9,489,728
(2) Sale of Foxskins	<u>230,400</u>
Total Revenue	\$ 9,720,128

NACC expenditures during the second lease period are as follows:

(1) Pribilof Aleuts for sealing	\$ 184,275
(2) Pribilof Aleuts for foxes taken	43,730
(3) Pribilof Aleuts for miscellaneous labor	2,000
(4) Cost of salmon provided	5,079
(5) Cost of coal provided	22,400
(6) Cost of health care provided	84,035
(7) Cost of housing provided	19,437
(8) Cost of support for widows, etc.	40,000
(9) Cost of education provided	75,721
(10) Cost of salaries, transportation, offices	1,360,000
(11) Payment to U. S. Government	<u>3,460,675</u>
Total	\$5,297,352

32/ Def. Ex. G-1 includes in the Government's lease income certain income from "rent of islands of Alaska for propagating foxes" (Def. Ex. G-8). There is no evidence that this income was derived from the Pribilof Islands and on the contrary could, in all probability, be traced to fox raising ventures on other islands.

Def. Ex. R fails to arrive at this figure. In Pl. Ex. 701, Vol. I, at 6-11, plaintiff's expert makes an unsupported assertion that revenues from the second lease were \$3,752,415.

In 1898 the Supreme Court ruled that the NACC was entitled to a reduction in the \$60,000 annual rental price due to restrictions the Government placed on the number of seals allowed to be killed (North American Commercial Co. v. United States, 171 U. S. 110 (1897)). Consequently, yearly rental payments to the Government were only a fraction of \$60,000.

106. Net Profit to the NACC From Commercial Operations Under the Second Lease. Total revenues minus total expenditures leave net profit to the NACC of \$4,422,776.^{33/}

107. Revenue to the U. S. Government. The Government was paid \$3,460,675 by the NACC from 1890 to 1909. As in the first lease, the only sources of revenue to the Government were the annual rental payment and the tax per sealskin. No revenue was realized as a result of the fox killing operation.^{34/}

108. Government Expenditures in the Second Lease Period. The Government stationed agents on the Pribilofs, appropriated monies for Pribilof Aleut welfare, and constructed and maintained structures on the islands. Other governmental actions involving the Pribilof Islands area included the naval patrol of the Bering Sea and the arrangement of a modus vivendi with Great Britain concerning pelagic sealing.

109. Government Compensation to Aleuts for Labor. Although government agents in the 1889-1909 period required the Pribilof Aleuts to work for the

^{33/} Defendant's expert has estimated net profits of the NACC as \$4,390,917 (Def. Ex. R, at 77). Plaintiffs' expert estimates profits as \$4,707,400 -- the midpoint of a possible profit range of \$4,315,100 to \$5,099,700 (Pl. Ex. 701, Vol. I, at 6-18). Henry Elliott estimates that profits to the NACC were \$4,976,574 (Def. Ex. E-49, at 964).

^{34/} In addition to the revenue collected from the NACC, plaintiff's expert contends that an estimated additional \$926,884 collected as duties on sealskins should be counted as profit to the Government (Pl. Ex. 701, Vol. I, at 6-13). Plaintiffs also estimate as government expenses 5 percent of the amount collected, or \$46,344, to give a net return from duties of \$880,540.

Government in various projects and at various chores, the Government did not compensate the Aleuts for this work.

110. Government Agents' Salaries. The salaries and expenses of government agents in the 1890-1909 period totaled \$235,085.^{35/} The salaries and expenses of the four agents on the islands averaged \$11,754.

111. Supplies for Pribilof Aleut Welfare. The Government appropriated and spent \$335,302 for Pribilof Aleut welfare during the second lease period (Pl. Ex. G-1, Sch. 3-2).

112. Expenditures for Building Construction and Repair. The Government spent \$3,790 for buildings in the second lease period.^{36/}

113. Miscellaneous Government Expenses. Defendant's exhibit G-27 lists several other government expenses in the second lease period (these are totaled in Def. Ex. G-1, at 15).^{37/} These are:

(1) Proposals for lease of fur seal islands in Alaska	\$ 641.04
(2) Statistics relating to fur industries and natives of Alaska	^{38/} 15,164.34
(3) Protecting seal and salmon fisheries of Alaska	31,510.97
(4) Reimbursement to NACC for supplies ^{39/}	7,465.33

^{35/} Def. Ex. R estimates agents' salaries and expenses as \$232,803.

^{36/} Def. Ex. G-1 omits a \$3,000 expense for repairs to public buildings included in Def. Ex. G-27 for the fiscal year 1910.

^{37/} See also Def. Ex. E-42, at 42. The GSA report uses three columns to report these expenses: "Ordinary expenses," "Miscellaneous expenses," and "Reimbursement to NACC." The GSA report does not explain how an ordinary expense differs from a miscellaneous expense -- and in fact is inconsistent in differentiating between the two.

^{38/} The GSA report does not indicate why this expense should be included here rather than in its category titled "Bering Sea Patrol."

^{39/} See Tr. VI, at 41, for correction of Def. Ex. G-1, at 15.

(5) Expenses and repairs to U.S.S. Albatross in Alaskan waters ^{40/}	\$ 36,171.06
(6) Expenses of inspectors of pelagic sealskins	2,200.00
(7) Scientific investigation of the fur-seal fisheries	17,792.40
(8) Commission on damages for seizure of vessels in Bering Sea	75,000.00
(9) Payment of Bering Sea awards	473,151.26

114. Pelagic Sealing in the Bering Sea. Pelagic sealing grew

dramatically in the latter portion of the first lease period and increased still further in the second lease period.^{41/} The United States viewed pelagic sealing as a threat to the continued existence of the fur seal herd and attempted to restrict pelagic sealing. The Government chose to view the Bering Sea as United States territorial water and seized a number of British flag vessels engaged in sealing in violation of United States law. Following a protest by Great Britain, the International Tribunal of Arbitration met and found the Bering Sea to be an international waterway. The United States eventually paid Great Britain \$473,151.26 for the vessel seizures.

115. International Agreements Prove Ineffective to Halt Pelagic Sealing. In the early 1890's the United States and Great Britain agreed upon a modus vivendi to limit seal killing. Later the International Tribunal of Arbitration placed some restrictions on pelagic sealing.

^{40/} See footnote 38, supra.

^{41/} A Congressional committee found that a major figure in the NACC had himself engaged in illegal pelagic sealing.

None of the restrictions proved effective and pelagic sealing continued to flourish throughout the second lease period.

116. Protection of Seal Herd. With the increase in pelagic sealing, the United States increased its naval presence in the Bering Sea. From 1891 through 1894 U. S. Navy ships patrolled the Bering Sea. The Bering Sea Patrol of the Revenue Cutter Service also patrolled the Bering Sea during the second lease period.

117. Amount Spent by Revenue Cutter Service on Fur Seal Patrol. The Acting Secretary of the Treasury in a report concerning the duties of the Revenue Cutter Service from 1890 to 1909, stated that it was "hardly practicable" to separate the work these cutters performed on fur seal patrol from their other duties in Alaskan waters. The Acting Commissioner of the Bureau of Fisheries of the Department of Labor and Commerce stated in 1910 that if the cutters assigned to the Bering Sea Patrol were not so engaged, they would be employed elsewhere, and therefore "no additional cost of maintenance is involved."

118. Defendant's Experts Estimate Approximately \$5,000,000 Spent on Fur Seal Protection. Defendant's experts have estimated that the actual expense of the Government's fur seal protection during the second lease period was \$5,000,000. The Acting Secretary of the Treasury stated that on the average 2.75 vessels were on patrol in Alaskan waters during the 1890-1909 period and the annual cost of maintaining a cutter was \$42,000 per year. The fur seal patrol season lasted only 5 months, however,

so that the cost of maintaining each vessel during the patrol season was less than \$20,000. Assuming, arguendo, that all the expenses of the patrol were for fur seal protection, the Revenue Cutter Service expended approximately \$50,000 per year (see also Pl. proposed finding of fact No. 449), and \$1 million over the lease period, for fur seal protection.^{42/}

119. Government Profit, Second Lease Period (Excluding Patrol Costs). In the 1890-1909 period payments by the NACC to the Government totalled \$3,460,675, and expenditures were \$594,169.^{43/} Profit was \$2,866,506.

TERMINATION OF THE LEASING SYSTEM:
THE UNITED STATES AS SOLE ADMINISTRATOR

120. The Act of April 21, 1910 (36 Stat. 326). On April 21, 1910, Congress ended the system of leasing the Pribilof Islands to private parties and granted to the Department of Commerce and Labor full authority not only to regulate the seal harvest and protect the herd, but also to harvest the seals and market the furs, as well as to provide for the employment,

^{42/} Def. Ex. R includes in its \$5,000,000 estimate \$703,048 for expenses of the U. S. Navy in patrolling the North Pacific and Bering Sea from 1892 to 1894.

^{43/} See findings of fact Nos. 107 through 113. In finding No. 113, items 6 and 7 were included as expenses. Other items in No. 113 were either included in other figures or are deemed to have too tenuous a connection with the sealskin monopoly.

education, protection, and comfort of Pribilof Aleuts. The primary motivation for the Government's termination of the system of private lessees was the dwindling population of the Pribilof seal herds.

121. Provisions of the Act Providing for Compensation, Comfort, Maintenance, Education and Protection. The Act of April 21, 1910, Section 3, provided that:

whenever seals are killed and sealskins taken on any of the Pribilof Islands the native inhabitants of said islands shall be employed in such killing and in curing the skins taken, and shall receive for their labor fair compensation, to be fixed from time to time by the Secretary of Commerce and Labor, who shall have the authority to prescribe by regulation the manner in which such compensation shall be paid to the said natives or expended or otherwise used in their behalf and for their benefit.

Section 9 of the act provided, in part, that the Secretary of Labor and Commerce "shall likewise have authority to furnish food, shelter, fuel, clothing, and other necessities of life to the native inhabitants of the Pribilof Islands and to provide for their comfort, maintenance, education, and protection."

122. Government Administrative Organization. The Bureau of Fisheries of the Department of Commerce and Labor administered the Pribilofs until 1939. After that date the Fish and Wildlife Service of the Department of the Interior was responsible for the islands' administration.

123. Proceeds of Pribilof Island Revenues Went Both for Expenses and Into the Treasury. Unlike the earlier periods when government revenues

from Pribilof Islands operations went solely into the Treasury, part of the revenues in the government period were used to defray operational expenses. The Government appropriated additional funds for certain other expenses.

124. Number of Seals Killed on Pribilof Islands, 1910-1946.

Approximately 1,367,939 seals were killed on the Pribilofs in the government operations period.^{44/}

125. Gross Revenue to Government from Sale of Sealskins. The

Government realized \$42,745,710 from the sale of Pribilof Islands sealskins harvested in the years 1910-1946, inclusive.^{45/}

^{44/} This is the figure used in Def. Ex. R, at 117. Plaintiffs expert's figure is nearly identical (see Pl. Ex. 701, Vol. I, at A-4).

^{45/} Pl. Ex. 701, Vol. I, and Def. Ex. R calculate identical sales revenues for 21 of the 37 years in question. For many other years in question the amounts arrived at by the two experts are nearly identical. When Def. Ex. R, at 123, 126-129, and Pl. Ex. 701, Vol. I, at A-12, were in agreement concerning a yearly revenue figure, that figure was used. Where there was disagreement, Def. Ex. G-15 and E-54 were used to determine the sales figure. Def. Ex. E-54 was considered the most complete source. Def. Ex. G-1 calculates fur seal revenues on a fiscal year basis and arrives at a figure substantially different from the other experts' figures. \$46,147 was deducted from the total figure to take into account the sale of Japanese sealskins (Def. Ex. G-1, at 21).

Def. Ex. R includes in gross revenues sales of fur seals harvested through 1946, but sold in 1947 through 1950. Revenues collected from these sealskins sold after the end of the 1910-1946 period were \$7,525,156 (defendant's expert report does not describe how this figure was reached, but a review of the annual reports of seals killed and sold indicated that this figure is correct (see Pl. Ex. 91 (1947, 1948, 1949, 1950))). These revenues are included in the \$42,745,710 figure. No other expert has considered post-1946 sales of pre-1947 sealskins (see Pl. proposed finding of fact 362). Defendant's expert's figure for gross revenues and the figure arrived at above would be more nearly the same but for an error of \$100,000 in defendant's estimate of 1933 sales.

126. Location and Type of Sealskins Sold. From the beginning of the government operations period through January 1913, sealskins were shipped to London for sale. Beginning in December 1913 the seal harvest was shipped to St. Louis, Missouri, where the firm of Funsten Bros. and Co. (later the Fouke Fur Co.) auctioned the sealskins. Prior to 1916 the sealskins were sold in an unprepared state, but after 1916 the sealskins were generally dressed and dyed prior to auction (Def. Ex. 54 (1916, at 6)). The Government was the beneficiary of all sums realized from the sale of sealskins. The Government entered into various contracts with Funsten or Fouke to compensate these companies for their role in the preparation and sale of the skins.^{46/}

127. Number of Foxes Killed and Gross Revenues Realized. Approximately 37,512 foxes were taken on the Pribilofs in the 1910-1946 period.^{47/} Fox pelts were sold at auction by Funsten Bros. and Co. (later Fouke Fur Co.), usually twice yearly and usually in St. Louis. The best estimate of revenue derived from the sale of fox pelts is \$1,240,538.^{48/}

^{46/} There is insufficient evidence in the record to calculate profit to Funsten Bros. or Fouke Fur Co. from the sealskin and foxskin trade.

^{47/} Plaintiffs' and defendant's experts agree on 28 of the 37 yearly fox harvest totals. Only plaintiffs' expert listed fox harvests for the seasons of 1910-11 and 1911-12. Only defendant's expert listed harvests for the seasons of 1912-13 and 1913-14 (see Def. Ex. 54, at 11). Totals for the remaining 5 years were estimated as the average of plaintiffs' and defendant's figures. Plaintiffs' list 1,426 foxes killed during 1931-32; the correct number is 11,426.

^{48/} This is the average of plaintiffs' and defendant's experts' estimates. Def. Ex. G-1, at 21, estimates \$1,243,709 for gross sales; Pl. Ex. 701 at A-22, estimates \$1,237,366. There were probably revenues from fox pelts harvested during or prior to 1946 and sold after 1946 but no expert attempts to calculate that figure.

128. Revenue from Pribilof Islands Seal Byproducts Plant. Revenue from the production of seal meal at the Pribilof Islands byproducts plant totalled \$132,353^{49/} in the government operations period, 1910-1946. The value of seal oil sold was \$197,103. The value of seal blubber sold was \$8,816.^{50/}

129. Miscellaneous Revenue to the United States. Def. Ex. G-1, at 21, lists revenues for a series of minor items. These are:

(1) Sale of Foxes (live)	\$ 11,305
(2) Sale of Sea Otter Skins	7,317
(3) Sales of Barrels, Drums, etc.	4,933
(4) Recovery of Prior Years Cash	
Discounts Allowed	1,606
(5) Refunds of Expenses	1,044
(6) Miscellaneous Income	<u>1,418</u>
Total	\$ 27,623

130. Gross Revenue to the U. S. Government, 1910-1946. Revenue to the Government from sources listed above is:

Gross Revenues from Sealskins	\$ 42,745,710
" " " Fox Pelts	1,240,538
" " " Seal Meal	132,353
" " " Seal Oil	197,103
" " " Seal Blubber	8,816
" " " Misc. Sources	<u>27,623</u>
Total	\$ 44,352,143

^{49/} Revenue for 1921 should be \$139.13 rather than \$136.13 (Pl. Ex. 90 (1921)).

^{50/} Revenue from 1940 should be \$126.57, not \$88.29 (Def. Ex. 54 (1940)). Sales of blubber for 1945 in the amount of \$1,277 should be added to plaintiffs' expert's figure (Def. Ex. G-17 (1946)).

131. The Fur Seal Convention of 1911. In 1911 the United States, Great Britain (representing the interests of the Dominion of Canada), Japan, and Russia entered into an agreement to preserve and protect fur seals (37 Stat. 1542). Each signatory country agreed to prohibit its subjects and vessels from engaging in pelagic sealing in the North Pacific Ocean. The United States agreed, inter alia, to pay to both Great Britain and Japan \$200,000 upon ratification of the treaty, \$10,000 for each year seal killing was prohibited on the Pribilofs, and to deliver to each 15 percent of the yearly harvest of sealskins from the islands. (The United States was allowed to reimburse itself for the initial payments by retaining sealskins from the shares of Canada and Japan in later years (37 Stat. 1542, at Art. XI).) The Commission also gave the United States the right to take 10 percent of the Japanese fur seal catch on Robben Island (37 Stat. 1542, at Art. XIII).

132. Allocation of Furs and Monies Under the Fur Seal Convention. Japan and Great Britain (later the Dominion of Canada) initially chose to take their 15 percent share of the Pribilof seal catch in money rather than skins. In 1933 the Dominion of Canada altered its policy and began taking its percentage in skins. In 1941 Canada took part skins, part cash. By 1942 Japan had withdrawn from the treaty and the United States and Canada provisionally agreed upon a 80 percent-20 percent division of Pribilof Island sealskins. In 1943 Canada took its share partially in skins and partially in cash. In 1944 the Fur Seal Act was enacted giving

Canada a 20 percent share in the Pribilof sealskins. In 1944 and thereafter it appears that Canada took skins exclusively.^{51/}

133. Payments by and to the United States Under Fur Seal Agreements, 1910-1946. The best estimate of amounts paid by the United States as obligations under the Fur Seal Convention of 1911, and the later agreement with Canada, is \$3,471,527.^{52/}

Under Art. XIII of the Convention the United States was to receive 10 percent of those Japanese sealskins taken on Robben Island. Gross revenue from the sale of these sealskins was \$46,147. The expenses in regard to the Japanese sealskins were as follows:

(1) Dressing, Dyeing and Machining	\$ 22,500
(2) Transportation Costs	1,927
(3) Cash Discounts	443
(4) Sales Commission	<u>1,483</u>
Total	\$ 26,353

134. Decline of Pelagic Sealing Under the Fur Seal Convention. After 1911 illegal pelagic sealing declined drastically.^{53/} Officials reported

^{51/} The value of the sealskins given to Canada has not been estimated.

^{52/} Payments for fiscal 1912 through fiscal 1921 are taken from Def. Ex. E-75, at 22. Payments from fiscal 1922 through fiscal 1944 are taken from Def. Ex. G-17 (Def. Ex. G-1, at 31-36) from the line entitled "Treaty Obligations." There is considerable doubt, however, whether Def. Ex. G-17 is an accurate account of payments to Canada and Japan, especially after 1932.

^{53/} The only sanctioned pelagic sealing that continued was that conducted by Indians, primarily in southeastern Alaska.

in 1912 that there was no indication that pelagic sealing was attempted. Later reports substantiate the almost complete elimination of pelagic sealing.

135. Expenses Paid From Proceeds of Sale, Fiscal Years 1911-1946.

Expenses paid from the proceeds of sealskin and foxskin sales in fiscal years 1911-1946 totaled \$17,494,045. The components of this total are as follows:

(1) Dressing, Dyeing, Machining Sealskins	\$ 11,961,981
(2) Compensation, Wages and Travel	1,717,392
(3) Incentive Bonus-50% Net Guarantee	1,269,139
(4) Sales Commission	1,172,563
(5) Cash Discounts	356,971
(6) Supplies	344,995
(7) Transportation and Freight	222,659
(8) Liquidation Settlement-Funsten Bros. & Co.	200,000
(9) Travel Expenses-Fouke Fur Co. Employees	130,264
(10) Additional Payments to Natives	16,815
(11) Additional Expense Account-New York	10,167
(12) Other Expenses	72,942
(13) Insurance	18,157

136. Expenses Paid From Proceeds of Sales After Fiscal 1946 For 1943-1946 Harvest. Expenses paid from proceeds of sales after fiscal 1946 for fur seals harvested during fiscal 1943-1946 can be estimated at \$2,189,752.^{54/}

^{54/} Def. Ex. R lists payments of \$503,065 for fiscal year 1947 (seals sold from the harvests of 1944, 1945, and 1946) and payments of \$1,686,687 for fiscal years 1948, 1949, and 1950 (a portion of the seals sold in these years were taken in 1945 and 1946). Pl. proposed finding of fact No. 363 omits expenses for fiscal 1947.

137. Summary of Expenses Paid From Proceeds of Sales From 1910-1946, Including the Processing of 1943-1946 Sealskins Disposed of at a Later Date. Expenses paid from sales for seals harvested during the government period, 1910-1946, are as follows:

1910-1946	\$ 17,494,045
Post-1946	<u>2,189,752</u>
Total	\$ 19,683,797

138. Payments to Aleuts for Sealing. Payments to Pribilof Aleuts for sealing in the 1910-1946 period were \$973,800. Payment to St. Paul Aleuts was \$766,660 and to St. George Aleuts \$207,140.^{55/}

139. Payments to Pribilof Aleuts for Foxskins. Payments to Pribilof Aleuts for taking foxes in the 1910-1946 period was \$141,715.^{56/} St. Paul Aleuts were paid \$31,916 and St. George Aleuts \$109,799.

140. Store Issue and Fuel Supplied to Pribilof Aleuts. Early in the government period, 1910-1946, the United States began dispensing to the

^{55/} In 1910 \$498 of the St. Paul Aleuts' sealing income was paid by the NACC. No record of sealing payments can be found for the calendar years 1912-1917 (Def. Ex. G-1, at 37). Payments for 1925-1927 have been computed as stated in the annual reports (Def. Ex. E-101 to E-103). Payments for 1944-1946 have been computed with the amounts actually paid to civilian Aleuts for sealing. (Several Aleuts were members of the United States Army and were detailed to work in the sealing operation. These men received compensation from the Army.)

^{56/} Information on fox harvest income on St. Paul from 1910 to 1917 is not complete (see Def. Ex. G-21) but can be estimated from annual harvests. The 1910 payment may have been made by the NACC. Fox harvest income on St. George is not complete from 1914 to 1917. Estimates from Def. Ex. G-1, at 38 have been used. Earnings for 1911 are figured at \$1,196 (Def. Ex. 54 (1911, at 93)). Payment for the 1910 harvest on St. George was made by the NACC.

Aleuts food, clothing, and fuel purchased with appropriated monies. The food and clothing, called "Store Issue" was limited to articles of necessity. The fuel issue was always coal.

141. Expenses of Store Issue Supplied to St. Paul and St. George Aleuts, Fiscal Years 1911-1923. There is little data in the record indicating the amounts of store issue and fuel issued to the St. Paul Aleuts from fiscal 1911 to 1923. A reasonable estimate of store issue and fuel is \$385,645.^{57/} Subtracting 8.5 percent from this expenditure as coal issue^{58/} results in net expenditure on store issue of \$352,865.

There is almost no data in the record indicating the amount of food, supplies and fuel issued to the St. George Aleuts from fiscal 1911 to 1923. A reasonable estimate of store issue is \$216,925.^{59/} Subtracting 8.5 percent from this expenditure as coal issue^{60/} leaves expenditures on food and clothing of \$198,486.

^{57/} The value of store issue and fuel are known for 5 years of the period -- fiscal 1913, 1914, 1920, 1921, 1923 (Def. Ex. E-54 (1913); Def. Ex. G-68). (For two of these years, 1913 and 1914, the amount expended on St. Paul has to be calculated from the amount expended on the islands as a whole. This is calculated by taking the figure for both islands and multiplying by 64 percent -- the approximate percentage of the islands' population residing on St. Paul (Pl. Ex. 701, Vol. I, at 3-14).) Assuming 1913 and 1914 are representative of the expenditures in the first portion of the period and 1920, 1921, and 1923 are representative of the second portion, an average expenditure of \$29,665 was computed for fiscal years 1911 to 1923.

^{58/} In fiscal years 1920 and 1921 this is the percentage of the expenditure on coal. See also fiscal 1924 and 1925 (Def. Ex. G-29, at 1-2).

^{59/} This figure was arrived at by solving the equation $\frac{X}{385645} = \frac{36}{64}$.
See footnote 57, supra.

^{60/} See footnote 58, supra.

142. Summary of Expenses for Store Issue and Fuel Supplied on St. Paul and St. George, Fiscal Years 1911-1923. The expenses of store issue supplied to the Aleuts for fiscal 1911 to 1923 was \$551,351. The expense of fuel supplied to the Aleuts from fiscal 1911 to 1923 was \$51,219.

143. Expenses of Fuel Supplied to Aleuts, Fiscal Years 1924-1946. The value of coal supplied to the Pribilof Aleuts, 1924-1946 (excluding fiscal 1943 and 1944) is estimated at \$122,226 -- \$73,770 on St. Paul and \$48,456 on St. George.^{61/}

144. Expenses for Store Issue, St. Paul and St. George, Fiscal Years 1924-1946. Expenses for store issue on St. Paul and St. George from fiscal 1923 through 1946 (excluding 1943 and 1944)^{62/} are adequately documented. Total expenditures to St. Paul Aleuts were approximately \$425,442,^{63/} and to St. George Aleuts approximately \$287,208,^{64/} for a total of \$712,650.

^{61/} Data for coal issue to the Aleuts after fiscal 1923 is generally available in the record (Def. Ex. G-29, 30). However, data for fiscal 1926, 1927, 1943, 1944, 1945, and 1946 is missing (Def. Ex. G-1, at 37, 38). The total value of coal was arrived at by averaging coal costs for years in which costs were known and applying those averages to fiscal years in which cost data was missing. No estimate or average cost was computed for fiscal years 1943 and 1944 since during those years the islands were in part or in whole evacuated. No data is available for fuel costs for Aleuts while residing at evacuation centers. The figure for one year, 1940, listed as not available in Def. Ex. G-1, at 38, is set forth in another of defendant's exhibits, Def. Ex. G-23, at 32.

^{62/} See footnote 61, *supra*.

^{63/} Store issue figures for 20 of the 21 years were known. The total is calculated by using an average figure for the year not known.

^{64/} Store issue figures for 17 of the 21 years were known. The total is calculated using an average figure for the years not known.

145. Summary of Value of Store Issue and Fuel Provided the Pribilof Aleuts by the Government, 1910-1946 (Excluding Fiscal Years 1943 and 1944).

The value of store issue provided is:

Fiscal 1911-1923	\$ 551,351
Fiscal 1924-1946	<u>712,650</u>
Total	\$ 1,264,001 ^{65/}

The value of fuel provided is:

Fiscal 1911-1923	\$ 51,219
Fiscal 1924-1946	<u>122,226</u>
Total	\$ 173,445 ^{66/}

146. Government Expenditures on Aleut Housing. The record is incomplete as to the amount expended by the Government for Aleut housing in the 1910-1946 period. A reasonable estimate of government expenditure is \$79,655 -- \$51,827 on St. Paul and \$27,828 on St. George. The parties

^{65/} Def. Ex. G-1, at 37-38, estimates a greater expenditure. Included in this estimate, however, are figures for fiscal years 1911-1920 that are taken from Def. Ex. G-16. It is almost certain that the figures quoted from this exhibit include more than expenditures for native stores and fuel. Pl. Ex. 701, Vol. I, at 3-25, estimates total value for the government period as \$833,013. It appears that plaintiffs' estimate is based on far less evidence than that employed in reaching the instant estimate (see Pl. Ex. 701, Vol. II, at 104-130). Def. Ex. R combines store issue and coal issue for the 1919-1945 period and apparently estimates many of the years' expenditures in arriving at a higher expenditure figure.

^{66/} Plaintiff would add a \$8 per ton transportation cost for coal supplied (Pl. Ex. 701, Vol. I, at 3-15). Cost of coal in this calculation includes no sum for transportation other than that already possibly included in the Government's records.

are in apparent agreement over the improvement value of the native structures build on St. Paul and St. George.^{67/} In dispute is whether the Pribilof Aleuts were actually paid for their labor on the structures or whether the Government considered their remuneration to be the Store and Fuel Issue previously taken into consideration (finding of fact No. 145). The record indicates that Pribilof Aleuts were not paid for labor in building their houses.

Although the amount of investment value traceable to unpaid Pribilof Aleut labor is unknown, 40 percent of total investment value is a reasonable estimate.^{68/}

147. Amounts Expended for Fur Seal Service From Appropriations.

\$6,636,689 was expended by the Fur Seal Service from 1910 through 1946. This cost includes the value of goods and services previously considered (see findings of fact Nos. 138-146), and also includes the cost of items not heretofore valued (e.g., buildings, salaries of white government employees, "travel and subsistence," "freight and express," "purchase of Steamer Roosevelt," "salaries on Steamer Roosevelt."

^{67/} The inventory value of the St. Paul dwellings was \$86,378 (not \$86,348 as given at Tr. III, at 136), and the inventory value of the St. George dwellings was \$27,828 (Pl. Ex. 701, Vol. I, at 3-10, 3-11).

^{68/} See generally Pl. Ex. 515, 516, 537, 538. These exhibits list improvement and construction value for many years of the period. Pribilof Aleut labor was frequently listed as at least 40 percent of the construction and improvement value.

148. Value of Coast Guard Seal Patrol Not Subject to Quantification.

The value of naval patrol relating to seal protection by the Coast Guard (formerly the Revenue Cutter Service) for the years 1910-1946 cannot be quantified.^{69/} Government vessels did continue to patrol the Bering Sea even after illegal pelagic sealing had come to a virtual halt (Pl. proposed findings of fact Nos. 437-446). But these vessels had many duties and objectives unconnected with sealing -- including the servicing of an expanding population -- and it would be wholly speculative to attempt to estimate the costs attributable to seal patrol.

149. Summary of Receipts and Expenditures During the 1910-1946 Period (Excluding Coast Guard Costs).

Receipts from Pribilof Operations	\$ 44,352,143
Expenditures from Pribilof Operations	
Expenses from Sales	19,683,797
<u>Expenses from Appropriations</u>	<u>6,636,689</u>

Net Pribilof Operations + \$ 18,031,657

Treaty Receipts Under Fur Seal Agreements	
(Sale price of Japanese Sealskins)	\$ 46,147
Treaty Expenditures Under Fur Seal Agreements	
Expenses of Processing & Selling Japanese Sealskins	26,353
<u>Cash Payments to Japan & Canada</u>	<u>3,471,527</u>

Net Treaty Operations - \$ 3,451,733

Net profit to the Government in the 1910-1946 period is \$18,031,657 minus \$3,451,733, or \$14,579,924.

^{69/} Def. Ex. G-1 and Pl. Ex. 701, Vol. I, do not include patrol costs in a calculation of defendant's expenses. Def. Ex. R speculates that patrol costs were \$9,500,000 over the period, or \$250,000 per year.

VALUE OF COMPENSATION, GOODS, AND SERVICES
PROVIDED TO THE ALEUTS, 1870-1946

150. Compensation Provided for Sealing, 1870-1946. Compensation paid the Pribilof Aleuts for sealing during the 76-year period totalled \$1,880,962. \$722,887 was paid by the ACC during the first lease period (finding of fact No. 58), \$184,275 was paid by the NACC during the second lease period (finding of fact No. 91), and \$973,800 was paid by the Government during the government period (finding of fact No. 138).

151. Compensation for Taking Foxskins, 1870-1946. Compensation paid the Pribilof Aleuts for taking foxskins during the 76-year period was \$197,841. \$12,396 was paid by the ACC during the first lease period (finding of fact No. 63), \$43,730 was paid by the NACC during the second lease period (finding of fact No. 92), and \$141,715 was paid by the Government during the government period (finding of fact No. 139).

152. Compensation Provided for Miscellaneous Labor, 1870-1946. Compensation paid the Pribilof Aleuts for miscellaneous labor during the 76-year period was \$22,006. \$7,006 was paid during the first lease period (finding of fact No. 64), \$2,000 was paid during the second

lease period (finding of fact No. 93), and \$13,000 was paid during the government period.^{70/}

153. Value of Housing Provided, 1870-1946. The value of housing provided the Aleuts during the 76-year period was \$117,102. Housing provided in the first lease period was valued at \$18,000 (finding of fact No. 73). Housing provided in the second lease period was valued at \$19,437 (finding of fact No. 98). Housing provided in the Government period was valued at \$79,665 (finding of fact No. 146).

154. Value of Food and Clothing Provided, 1870-1946. The value of food and clothing provided to the Aleuts during the 76-year period was \$1,584,622. The value of food provided in the first lease period was \$8,000 (finding of fact No. 66). In the second lease period the value of food and clothing the Government contributed was \$267,542 (finding of fact Nos. 111, 155); and the NACC contributed \$45,079 (finding of fact Nos. 94, 100). In the government period food and clothing valued at \$1,264,001 was provided (finding of fact Nos. 140-145).

^{70/} This is an estimation. Information on miscellaneous income is fragmentary for the 1910-1946 period. The Government's reports mention the payment of extra income to the Pribilof Aleuts for several years in the years 1910-1921. In the years that specific payments are listed, the sums involved ranged from \$1,120 in 1918, to \$364 in 1921. After 1921 no reports were located that listed payment of extra income. It is probable that the Government terminated its policy of paying Aleuts for "extra" work at approximately this time (see Def. Ex. R, at 142-43). Therefore, payments for the 1910-1946 period are estimated at \$1,000 each year from 1910-1922, and no payments thereafter.

155. Value of Fuel Provided, 1870-1946. The value of fuel provided to the Aleuts during the 76-year period was \$279,205. The value of fuel provided in the first lease period was \$15,600 (finding of fact No. 67). In the second lease period the value of fuel the Government contributed was \$67,760 (see finding of fact Nos. 111, 95; Pl. Ex. 701, Vol. I, at 3-16); and the NACC contributed \$22,400 (finding of fact No. 95). The Government supplied \$173,445 worth of fuel in the 1910-1946 period (finding of fact No. 145).

156. Value of Medical Care Provided, 1870-1946. The value of medical care provided to the Aleuts during the 76-year period was \$459,866. The value of medical care provided in the first lease period was \$60,000 (finding of fact No. 69). In the second lease period medical care provided was valued at \$84,035 (finding of fact No. 97). In the 1910-^{71/}1946 period the Government provided \$315,831 worth of health services.

^{71/} This is the estimate of Pl. Ex. 701, Vol. I, at 3-34. This estimate is reasonable in view of the limited information available for health care costs (see Def. Ex. R, at 149). Def. Ex. R estimated the health care provided at a figure approximately \$1,000 a year higher than plaintiffs' estimate (see Def. Ex. R, at 153). Defendant's estimate also excludes the cost of medical building construction included in plaintiff's estimate. The parties are in virtual agreement concerning doctors' salaries, the bulk of medical expenditures, but defendant estimates higher costs for dentist and nurse salaries (indicating a higher estimate of time spent on the islands by dentists and nurses). In view of the fragmentary information concerning salaries paid to dentists and nurses while employed on the Pribilofs, plaintiffs' estimate is more reasonable. Another factor to be considered is the amount of health care rendered to white employees and temporary non-Pribilof Aleut workmen. Although neither party allocates a portion of medical care provided to these groups, it is likely that health care was provided, and therefore the value of the health care provided to the Pribilof Aleuts is less than estimated. In plaintiffs' calculation 30 percent of the cost of medical buildings is deducted as the portion of the inventory value attributable to uncompensated native labor. This is a reasonable assumption.

157. Value of Educational Services Provided, 1870-1946. The amount ^{72/} expended on educational services during the 76-year period was \$323,543. The value of educational services provided in the first lease period was minimal and is not estimated (see finding of fact No. 70). In the second lease period the value of educational services provided was \$75,721 (finding of fact No. 101). The Government expended \$247,822 for educational services in the 1910-1946 period. ^{73/} Of the monies expended, an estimated \$19,523 was spent on school building construction (\$2,750 in the lease periods and \$16,773 in the government period.) ^{74/}

^{72/} This figure is the sum of the expenditures listed in Pl. Ex. 701, Vol. I, at 3-46. Plaintiffs' expert has erroneously totaled the sum of these expenditures as \$256,958.

^{73/} This is plaintiff's expert's estimate which appears reasonable given the fragmentary information available for educational services. Defendant makes no estimate of the value of educational services provided. Several Pribilof Aleut children were sent to the Chemawa Indian School in Salem, Oregon (Def. Ex. J, at 148) in the first portion of the Government period. No estimate has been made of the value of this educational service. Overall, the quality of education provided the Pribilof Aleuts was extremely low. Government agents were dubious about the value of providing education to the Aleuts (Pl. Ex. 288) and the goal of the educational system was to produce "good sealers" (Pl. Ex. 661, 1/12/44). Until after World War II St. Paul only offered six grades and St. George five. The practice of sending Aleuts to the Chemawa School was discontinued in 1921, in part because the Aleuts sent there saw the ample means and environment of the American mainland and were dissatisfied upon returning to the Pribilofs (Def. Ex. J, at 148-151).

^{74/} Pl. Ex. 701, Vol. I, at 3-42, 3-43, has estimated approximately 40 percent of the cost of educational buildings as the portion of inventory value attributable to uncompensated native labor. Permanent improvement records from the islands indicated this is a reasonable approximation (see Pl. Ex. 516, 515).

158. Value of the Water System Provided, 1870-1946. A reasonable estimate of the value of the water system provided for the Aleuts during the government period is \$12,450.^{75/} Expenditure from 1870 to 1909 is minimal and is not estimated.

159. Value of Sanitation Facilities Provided, 1870-1946. The value of sanitation facilities provided during the lease periods was minimal and is not estimated.^{76/} The value of sanitation facilities provided during the government period was also small; a reasonable estimate of this cost is \$3,011.^{77/}

160. Cost of Electric Power Facilities Provided, 1870-1946. Small electric power plants existed on both St. Paul and St. George by the 1920's. Little of the electricity produced was made available to the Aleuts. Due

^{75/} This is the estimate of Pl. Ex. 701, Vol. I, at 3-52, 3-54. This figure was arrived at by finding inventory value of the St. Paul and St. George water systems, deducting a percentage for inventory value attributable to unpaid Aleut labor, and halving the resultant figure to account for non-Aleut use. This figure should be considered as only an approximation based on reasonable assumptions.

^{76/} Neither plaintiffs nor defendant estimate sanitation costs in the lease periods.

^{77/} This is the total of the cost of sanitation facilities provided on St. Paul (\$1,986) and the inventory value of sanitation facilities on St. George (\$1,025), as given by plaintiff's expert (Pl. Ex. 701, Vol. I, at 3-55, 3-60). Included in the figure for St. George is \$375 for a sewer system for the island school, presumably for native use. Plaintiffs' experts total sanitation facilities provided at \$2,790. It is not clear how this figure was reached. Plaintiffs' expert makes no deduction for Aleut labor on sanitation facilities not paid in cash.

to insufficient information to allocate costs, no estimate of the cost of providing electricity to the Aleuts will be made.^{78/}

STANDARDS OF FAIR COMPENSATION, ADEQUATE GOODS AND SERVICES

161. Aleuts' Work Characterized. Members of the work forces in the two Aleut communities performed tasks in the seal and fox harvesting operations which varied in complexity and amount of expertise required depending upon the specific task in the overall process assigned to a particular member of the work force. In the aggregate and for purposes of establishing a standard of fair compensation, it is reasonable to posit a work force of Aleut males, one-half of whom were skilled laborers and one-half of whom were unskilled.^{79/} This work force operated in a climate which imposed extreme physical hardship and in a geographical area of remoteness from the amenities of civilization. This characterization of the Aleut work force is valid throughout the entire period, 1870 to 1946.

^{78/} Plaintiffs do not claim damages for insufficient electric power provided (Pl. Ex. 701, Vol. I, at 8-3).

^{79/} Equation of the sealing trade to other types of employment is difficult. Reports indicate that the Aleuts were extraordinarily proficient in the skills involved in sealing (see finding of fact No. 51). It should be noted, however, that the Aleuts were not engaged in harvesting seals (or fox) 12 months a year. Information is incomplete as to the average weekly hours spent in company or government employ. There are indications that the Government expected the Pribilof Aleuts to work full-time the entire year for their compensation. The type of work performed, aside from sealing, is not chronicled with any particularity. However, it is known that some of this work, such as carpentry or boat building, was skilled labor (see Pl. Ex. 38, at 26).

162. Reasonable Standard of Fair Compensation. In order to arrive at a reasonable standard of fair compensation with which the actual compensation paid to the Aleuts can be compared, it is necessary to utilize available statistics which show average wages contemporaneously paid to a work force performing tasks comparable in complexity to those performed by the Aleuts, in conditions resembling as closely as possible those conditions in which the Aleuts labored. The record in this case does not include sufficient information to directly determine the wages of a skilled, or unskilled worker in Alaska. In order to determine the wages of an Alaskan worker, the wages of a hypothetical, partly skilled, partly unskilled, eastern worker must first be found. (There is much more information available for such an eastern worker than there is for an Alaskan worker.) Then, by comparing eastern wage rates with the limited information available for western United States and Alaskan wage rates, fair wages for an Alaskan worker of appropriate skills can be estimated.

163. Eastern United States Wage Rates, 1870-1889. Wage rates for eastern United States skilled workers varied during the period from 22.6 to 29.0 cents per hour. Wage rates for unskilled workers fluctuated from 13.5 to 15.9 cents per hour.^{80/} For each year 1870-1889, an average wage (consisting of one-half the skilled wage plus one-half the unskilled wage)^{81/} has been calculated.

^{80/} Pl. Ex. 701, Vol. II, at 452.

^{81/} See finding of fact No. 175.

164. Aleut Work Force, 1870-1889. The Aleut work force between 1870 and 1889 fluctuated between 100 and 78 and has been calculated for each year in this period.^{82/}

165. Aleut Work Force Earning Eastern United States Wage Rates, 1870-1889. Had the Pribilof Aleut work force worked in the eastern United States at one-half skilled, one-half unskilled labor from 1870-1889, these Aleuts would have earned \$1,194,869.16.^{83/}

^{82/} See finding of fact No. 175. The work force for each year in the 76-year period was calculated by first surveying annual reports. All those Aleuts engaged in sealing operations were deemed to be in the work force. Complete work force figures are known for 44 of the years and partial figures are known for several other years. The percentage of the population engaged in sealing was calculated for the 44 years in which work force was known and the average was applied to calculate work force in years figures were not available. Total population figures were taken from Def. Ex. R, at 34, 80, 136.

Two laundresses in 1918 and four to six "mess attendants" in the years 1930-1943 were not included in the work force. Payment to "cooks" is recorded in some years but these cooks were not Pribilof Aleuts. At times shares in the sealing division went to those not engaged in sealing. These people -- widows and priests, for example -- were eliminated from work force statistics when possible.

Pl. Ex. 726 estimates a vastly different figure for the Pribilof work force. This figure is derived from general employment averages in the United States. The Commission feels that such an estimation is an inferior method of calculation when Pribilof work force figures are so readily available for many years of the period.

^{83/} See finding of fact No. 175.

166. Eastern United States Wage Rates, 1890-1909. Wage rates for eastern United States skilled and semi-skilled workers varied during the 1890-1909 period from 21.1 to 28.2 cents per hour.^{84/} Wage rates for unskilled workers fluctuated from 14.8 to 18.7 cents per hour.^{85/} For each year 1890-1909 an average wage (consisting of one-half the skilled wage plus one-half the unskilled wage) has been calculated.^{86/}

167. Aleut Work Force, 1890-1909. The Aleut work force between 1889 and 1909 fluctuated between 66 and 83 and has been calculated for each year in this period.^{87/}

168. Aleut Work Force Earning Eastern United States Wage Rates, 1890-1909. Had the Pribilof Aleut work force worked in the eastern United States at one-half skilled, one-half unskilled labor from 1890-1909, these Aleuts would have earned \$817,343.75.^{88/}

169. Eastern United States Wage Rates, 1910-1946. Wage rates for eastern United States skilled workers varied during the period 1910-1946 from 28.2 cents to 1.32 dollars per hour.^{89/} Wage rates for unskilled

^{84/} Pl. Ex. 701, Vol. I, at 7-6; Pl. Ex. 701, Vol. II. at 457.

^{85/} Pl. Ex. 701, Vol. I, at 7-6; Pl. Ex. 701, Vol. II. at 454.

^{86/} See finding of fact No. 175.

^{87/} Id.

^{88/} Id.

^{89/} Pl. Ex. 701, Vol. II, at 457, 458; Pl. Ex. 701, Vol. I, at 7-7.

workers fluctuated from 18.8 cents to 1.015 dollars per hour.^{90/} For each year 1910-1946 an average wage (consisting of one-half the skilled and semi-skilled wage, and one-half the unskilled wage) has been calculated.^{91/}

170. Aleut Work Force, 1910-1946. The Aleut work force between 1910 and 1946 fluctuated between 77 and 136 and has been calculated for each year in the period.^{92/}

171. Aleut Work Force Earning Eastern United States Wage Rates, 1910-1946. Had the Pribilof Aleut work force worked in the eastern United States at one-half skilled and semi-skilled, and one-half unskilled labor from 1910-1946, these Aleuts would have earned \$4,818,418.50.^{93/}

172. Higher Wages Paid in Western United States as Compared With Eastern United States Due to Frontier Factor. Due to labor shortages, hardships, and remoteness, workers in the western United States were paid more for comparable labor than their counterparts in the eastern United States. This premium paid to western workers because of prevailing conditions has been termed the "frontier factor."

^{90/} Pl. Ex. 701, Vol. II, at 454, 458, Pl. Ex. 701, Vol. I, at 7-7.

^{91/} See finding of fact No. 175.

^{92/} Id.

^{93/} Id.

173. Premium Paid to Western United States Workers, 1870-1946.

Premiums paid to western United States workers have been calculated from data available for the years 1869, 1890, 1919, 1929, and 1940. Wage rates for the United States as a whole were compared with wage rates for the states of Washington, Oregon and California (although wage rates for the United States as a whole were used as a base, these rates are very similar to wage rates prevailing in the eastern United States at the time).^{94/} The premium ranges from 48 percent in 1869 to 9 percent in 1929.

174. The Pribilof Aleuts Should Receive a Premium Above Eastern Wages Rates for Their Labor. The Pribilof Aleuts toiled in conditions far more difficult and remote than workers in the western United States. In 1869, a year in which the isolation and other conditions in the West and in Alaska might have been roughly comparable, wages were 48 percent higher in the western United States than in the eastern United States. A comparison of the weekly earnings of production workers in Alaska with those in the United States as a whole shows that for the years 1962-1976 (the only years for which figures are available) wages in Alaska averaged 46.1 percent higher.^{95/} The best estimate for the period 1870-1946 is that

^{94/} Wages were 48 percent higher in 1869, 34 percent higher in 1890, 20 percent higher in 1919, 9 percent higher in 1929, and 18 percent higher in 1940. The declining wage differential reflects the industrial and social development of the West. There was no comparable development in Alaska, and the isolation and other conditions that typified the West in 1869 existed in Alaska throughout the period in question.

^{95/} U. S. Department of Commerce, Statistical Abstract of the United States. See table "Production Workers, Manufacturing Industries--Hours and Gross Earnings, By States," 1962 thru 1977 editions.

for comparable labor Alaskan workers received 45 percent more in wages than their eastern United States counterparts. Therefore, a fair level of compensation to the Aleuts is considered to be eastern wages plus 45 percent.

175. Wages Earned by Hypothetical Workmen, Partially Skilled, Partially Unskilled; Pribilof Aleut Work Force; Alaskan Premium to Work Force; Total Standard of Compensation. The following chart lists, for 76 years, the wage rates to eastern workmen, the Pribilof Aleut work force, wages earned at eastern wage rates, the wage premium for working in Alaska, and the total standard of compensation.^{96/}

^{96/} No wages have been calculated for 1942. In that year the Pribilofs were evacuated, no sealing was conducted, and the Pribilof Aleuts resided in southeastern Alaska (see finding of fact Nos. 43, 45, 46). Some Aleuts apparently found work on the Alaskan mainland during the evacuation period.

Eastern United States
Wages for Hypothetical
Workman, 1/2 skilled,
1/2 unskilled

<u>Year</u>	<u>Hourly(\$)</u>	<u>Weekly(\$)</u> ^{97/}	<u>Wages Yearly(\$)</u> <u>(50 week year)</u> ^{98/}	<u>Prib. Aleut</u> <u>Work Force</u> ^{99/}	<u>Total Eastern</u> <u>Wages(\$)</u> ^{100/}	<u>Alaskan</u> <u>Premium%</u> ^{101/}	<u>Total</u> <u>Comp.</u> ^{102/}
1870	.2147	13.5261	676.31	99	66,954.69		
1871	.2167	13.6521	682.61	99	67,578.39		
1872	.2205	13.8915	694.58	100	69,458		
1873	.2235	14.0805	704.03	85	59,842.55		
1874	.2220	13.9860	699.30	94	65,734.20		
1875	.2150	13.5450	677.25	95	64,338.75		
1876	.2057	12.9591	647.96	95	61,556.20		
1877	.1945	12.2598	612.99	96	58,847.04		
1878	.1880	11.8440	592.20	105	62,181		
1879	.1820	11.4660	573.30	101	57,903.30		
1880	.1845	11.6235	581.18	100	58,118		
1881	.1915	12.0645	603.23	93	56,100.39		
1882	.1960	12.3480	617.40	93	57,418.20		
1883	.1995	12.5685	628.43	91	57,187.13		
1884	.2005	12.6315	631.58	93	58,736.94		
1885	.1960	12.3480	617.40	93	57,418.20		
1886	.1962	12.3606	618.03	93	54,476.79		

Eastern United States
Wages for Hypothetical
Workman, 1/2 skilled,
1/2 unskilled

<u>Year</u>	<u>Hourly(\$)</u>	<u>Weekly(\$)</u>	<u>Wages Yearly(\$)</u> <u>(50 week year)</u>	<u>Prib. Aleut</u> <u>Work Force</u>	<u>Total Eastern</u> <u>Wages(\$)</u>	<u>Alaskan</u> <u>Premium %</u>	<u>Total</u> <u>Comp.</u>
1887	.2015	12.6945	634.73	90	57,125.70		
1888	.2022	12.7386	636.93	85	54,139.05		
1889	.2025	12.756	637.88	78	<u>49,754.64</u>		
TOTAL					\$1,194,869.16	45%	\$1,732,560.
1890	<u>103/</u>	10.57	528.50	71	37,523.50		
1891		10.67	533.50	70	37,345		
1892		10.695	534.75	69	36,897		
1893		10.725	536.25	74	39,682.50		
1894		10.48	524.00	73	38,252		
1895		10.45	522.50	70	36,575		
1896		10.545	527.25	79	41,652.75		
1897		10.495	524.75	73	38,306.75		
1898		10.60	530.00	83	43,990		
1899		10.765	538.25	83	44,674		
1900		11.00	550.00	79	43,450		
1901		11.295	564.75	66	37,273		

Eastern United States
Wages for Hypothetical
Workman, 1/2 skilled,
1/2 unskilled

<u>Year</u>	<u>Hourly(\$)</u>	<u>Weekly(\$)</u>	<u>Wages Yearly(\$)</u> <u>(50 week year)</u>	<u>Prib. Aleut</u> <u>Work Force</u>	<u>Total Eastern</u> <u>Wages(\$)</u>	<u>Alaskan</u> <u>Premium %</u>	<u>Total</u> <u>Comp.</u>
1902		11.55	577.50	66	38,115		
1903		11.925	596.25	67	39,348.75		
1904		11.985	599.25	68	40,749		
1905		12.16	608.00	68	41,344		
1906		12.56	628.00	69	43,332		
1907		12.99	649.50	68	44,166		
1908		12.85	642.50	71	45,617.50		
1909		13.08	654.00	75	<u>49,050</u>		
TOTAL					\$817,343.75	45%	\$1,185,148.75
1910		13.23	661.50	77	50,935.50		
1911		13.34	667.00	77	51,359		
1912		13.675	683.75	81	55,383.75		
1913		14.15	707.50	81	57,307.50		
1914		14.215	710.75	83	58,992.50		
1915		14.505	725.25	84	60,921		
1916		15.815	790.75	83	65,632		
1917		18.30	915.00	84	76,860		

Eastern United States
Wages for Hypothetical
Workman, 1/2 skilled,
1/2 unskilled

<u>Year</u>	<u>Hourly (\$)</u>	<u>Weekly(\$)</u>	<u>Wages Yearly (\$)</u> <u>(50 week year)</u>	<u>Prib. Aleut</u> <u>Work Force</u>	<u>Total Eastern</u> <u>Wages (\$)</u>	<u>Alaskan</u> <u>Premium</u>
1918		23.35	1,167.50	84	98,070	
1919		26.195	1,309.75	86	112,638.50	
1920		30.08	1,504.00	78	117,312	
1921		23.82	1,191.00	78	92,892	
1922		24.205	1,210.25	79	95,609.75	
1923		26.545	1,327.25	82	108,834.50	
1924		26.48	1,324.00	87	115,188	
1925		27.11	1,355.50	89	120,639.50	
1926		27.41	1,370.50	91	124,715.50	
1927		27.525	1,376.25	92	126,615	
1928		27.915	1,395.75	94	131,200	
1929		28.50	1,425.00	100	142,500	
1930		25.535	1,276.75	107	136,612.25	
1931		22.115	1,105.75	102	112,786.50	
1932		16.98	849.00	103	87,447	
1933		17.59	879.50	103	87,498.50	
1934		19.46	973.00	110	107,030	

Eastern United States
Wages for Hypothetical
Workman, 1/2 skilled,
1/2 unskilled

<u>Year</u>	<u>Hourly (\$)</u>	<u>Weekly (\$)</u>	<u>Wages Yearly (\$)</u> <u>(50 week year)</u>	<u>Prib. Aleut</u> <u>Work Force</u>	<u>Total Eastern</u> <u>Wages (\$)</u>	<u>Alaskan</u> <u>Premium %</u>	<u>Total</u> <u>Comp.</u>
1935		21.65	1,082.50	116	125,570		
1936		23.79	1,189.50	120	142,740		
1937		26.40	1,320.00	127	167,640		
1938		24.08	1,204.00	128	154,112		
1939		26.675	1,333.75	133	177,388.75		
1940		28.16	1,408.00	134	188,672		
1941		33.255	1,662.75	136	226,134		
1942		39.90	1,995.00	-	-		
1943		46.48	2,324.00	116	269,584		
1944		49.46	2,473.00	132	326,436		
1945		48.71	2,435.50	139	338,534.50		
1946		46.98	2,349.00	136	<u>319,464</u>		
TOTAL					4,818,418.50	45%	\$6,986,706.50

97/ Hours per week varied from 63 in 1870 to approximately 40 in 1946 (Pl. Ex. 701, Vol. II, pp. 452-458).

98/ A 50 week work year is assumed.

99/ See finding of fact Nos. 164, 167, 170.

100/ Yearly wages times Aleut work force. The islands were evacuated and no seals were harvested in 1942.

101/ See finding of fact Nos. 172, 173, 174.

102/ Total eastern wages times frontier factor.

103/ Different data sources were used in compiling figures for 1870-1889 and 1890-1919. Thus, the decline in weekly wages between 1889 and 1890 may be partially attributable to the more detailed data available for the latter period. See Pl. Ex. 701, Vol. II, pp. 452, 454, 457.

176. Total Standard of Compensation to the Aleuts, 1870-1946. The total standard of fair compensation to the Pribilof Aleuts for the 76 years, 1870-1946, is \$9,904,416.^{104/} The value of fair compensation is \$1,732,560.28 in the first lease period, \$1,185,148.44 in the second lease period, and \$6,986,706.83 in the government period.

177. Housing Insufficient. Aleuts were provided insufficient housing during the entire 76-year period in question. The first housing construction began in the 1870's when the ACC built frame cottages to replace the barabaras in which the Aleuts traditionally lived. These frame dwellings were not as well suited to the harsh climate of the Pribilofs as were the barabaras (see finding of fact No. 10). For most of the years 1870-1946 there were not as many cottages as Aleut families. The cottages built were very small; the most reliable estimates put the size of the structures at approximately 20 feet by 10 feet.

Government employees often decried the number, size, and condition of cottages provided. The cottages generally contained two rooms, one of which served as a bedroom. As many as six people were forced to sleep on the floor of a 10 foot by 12 foot bedroom. Few furnishings for the cottages were provided. At one point a St. Paul population of 196 had only 40 beds.

Although the Government built approximately 70 houses in the 1920's and 1930's, housing conditions remained inadequate. Government agents and

^{104/} See finding of fact No. 175.

other commentators continued to condemn the housing provided the Aleuts. Native housing remained over-crowded and inadequate to the end of the 76-year period.

178. Standard for Aleut Housing, 1870-1909. The Commission finds that the minimum adequate standard for an Aleut residence in the 1870-1909 period is a single family dwelling of wood construction containing four rooms and 500 square feet. The standard dwelling has four small rooms (approximately 10 feet by 10 feet) and a small storage area. This provides a typical four-person Aleut family with one room for each person and two sleeping areas for four people.

The size of the standard house has been selected for health and privacy considerations. The wood construction has been selected for its insulation value in a cold and wet climate.

179. Standard for Aleut Housing 1910-1946. The Commission finds that the minimum adequate standard for an Aleut residence in the 1910-1946 period is a single family dwelling of wood construction containing five rooms and 700 square feet. The standard dwelling has five small rooms, a bathroom, and a small storage area. The increase in size over the four room dwellings of the lease periods provides more space for the relatively larger Aleut family. A bath is included as standard for this period. Wood construction is considered standard. Health, privacy, and weather considerations suggested this model.

180. Life and Maintenance of Standard Housing, 1870-1946. A useful life of 40 years is reasonable for dwellings erected on the Pribilof Islands. Maintenance, however, would be higher than for the average United States house because of the severe weather conditions existing on the islands. Two percent of the cost of construction is a reasonable annual maintenance cost.

181. Number of Aleut Families, 1870-1909. Information concerning the number of families on the Pribilofs is not complete. A reasonable estimate of the number of Aleut families on the Pribilofs in the first few years of the first lease is 100. Later on in the 1870's the number of families rose to 110 before entering a period of decline that was to last until the end of the lease periods. ^{105/}

182. Cost of Construction of Standard Housing, 1870-1909. The housing standard assumes each family has a separate dwelling. One hundred houses built in the first few years of the 1870's would have given each family a house. A few years later, ten more houses would be needed to house the increased population.

The cost of 100 standard houses in the 1870-1873 period would be \$1,250 each. In 1874-1878 the estimated cost of ten houses is \$1,000 each. Total cost of housing in this period is \$135,000.

^{105/} Although the number of Aleut families probably exceeded 110 at times, these were isolated population peaks that existed for only short periods.

183. Cost of Construction of Standard Housing, 1910-1946. Assuming Pribilof housing lasts 40 years, the Government should have replaced 71 of the original 110 dwellings by 1920 (there were only 71 families on the islands at that time). As the number of families increased on the Pribilofs, 32 more dwellings should have been built through 1946. The value of the first 54 houses built would have been \$2,442 each, the next 17 would have been worth \$3,081 each, and the remaining 32 would have varied in value from \$3,181 to \$4,409.^{106/} Total cost for housing in this period is \$310,223.

184. Maintenance Expenses in the Lease Periods. Annual maintenance costs are 2 percent of the cost of each dwelling. One hundred ten dwellings would have been necessary for adequate housing in the 1870's. As the population and the number of families declined, however, not all of the dwellings built need have been kept in repair. From 1870 through 1889 all^{107/} of the houses built should have been kept in repair. From 1890 through 1899, 82 houses should have been kept in repair. In 1900-1909, 71 houses should have been kept in repair. Of the first 100 houses built, all should have been kept in repair for 20 years, 72 should have been kept in repair

^{106/} Seven houses in 1926-1930 would have cost \$4,409 each; seven houses in 1931-1935 would have cost \$3,181 each; ten houses in 1936-1940 would have cost \$3,852 each; and eight houses in 1941-1946 would have each cost \$4,291. The Commission adopts plaintiffs' expert's estimates in calculating housing costs. See Pl. Ex. 701, Vol. II, at 336-7, 341-2; Pl. Ex. 701, Vol. I, at 5-8 to 5-11.

^{107/} See Pl. Ex. 701, Vol. I, at A-28. Number of houses to be kept in repair is an estimate. The number of families fluctuated each year. The number of houses to be maintained is assumed to equal the highest number of families in any year of a 10-year period.

for 30 years and 61 should have been kept in repair until replaced in 1910-1913.^{108/} The cost of maintaining these houses would have been \$83,250 at 2 percent of cost per year. Of the ten houses built in 1874-1879, all should have been kept in repair until replaced. The value of this maintenance would have been \$8,000. Total maintenance costs are \$91,250 for the lease periods.

185. Maintenance Expenses in the Government Period. All the houses built in the government period should have been maintained up to 1946. Fifty-four houses should have been maintained an average of 35 years, 17 houses maintained 29 years, 7 houses maintained 18 years, 7 houses maintained 13 years, 10 houses maintained 8 years, and 8 houses maintained 3 years. Maintenance costs are 2 percent each year or \$147,799.

186. Total Maintenance Expenses. The total expense for maintenance of standard housing would be \$239,049 (\$91,250 in the lease periods, \$147,799 in the government period).

187. Total Expenses for Housing Standard. The total expense for housing construction and maintenance is \$684,272 (\$445,223 for construction and \$239,029 for maintenance). The following chart lists housing construction and maintenance costs.

^{108/} The basic assumption made here is that older houses will all be replaced before newer ones.

STANDARD EXPENDITURE FOR HOUSING CONSTRUCTION

<u>Period</u>	<u>Ave. House Size</u>	<u>Cost Per House (\$)</u>	<u>Number of Houses</u>	<u>Total Expenditure (\$)</u>
1870-1873	500 sq. ft. (4 rooms)	1,250	100	125,000
1874-1879		1,000	10	<u>10,000</u>
Subtotal (Lease Periods)				135,000
1910-1913	700 sq. ft. (5 rooms)	2,442	54	131,868
1914-1920		3,081	17	52,377
1926-1930		4,409	7	30,863
1931-1935		3,181	7	22,267
1936-1940		3,852	10	38,520
1941-1946		4,291	8	<u>34,328</u>
Subtotal (Gov't Period)				<u>310,223</u>
Total				445,223

STANDARD EXPENDITURE FOR HOUSING MAINTENANCE

<u>Year of Construction</u>	<u>Number of Houses to be Maintained</u>	<u>Cost</u>	<u>2% of Cost</u>	<u>Years of Maintenance</u>	<u>Main. Expense</u>
1870-1873	100	125,000	2,500	20	50,000
1870-1873	72	90,000	1,800	10	18,000
1870-1873	61	76,250	1,525	10	15,250
1874-1879	10	10,000	200	40	<u>8,000</u>
Subtotal (Lease Periods)					91,250
1910-1913	54	131,868	2,637	35	92,295
1914-1920	17	52,377	1,048	29	30,392
1926-1930	7	30,863	617	18	11,106
1931-1935	7	22,267	445	13	5,785
1936-1940	10	38,250	770	8	6,160
1941-1946	8	34,328	687	3	<u>2,061</u>
Subtotal (Gov't Period)					<u>147,799</u>
Total					239,049

188. Value of Aleut Labor on Housing. Although the standard developed mandates an expenditure of \$684,272 on housing, a portion of this expenditure would have been paid to Aleuts for working on housing construction and maintenance. This sum has previously been credited to the Aleuts and against the Government, so it must be deducted in order to avoid a double recovery to plaintiffs.^{109/} It is reasonable to assume that payments to the Aleuts would have constituted 25 percent of the standard housing expenditures.^{110/} Therefore, 25 percent of \$684,272 (total construction and maintenance expenses) will be deducted from the cost of providing housing.

The cost of providing standard housing (\$684,272) minus the value of Aleut labor on housing (25 percent of \$684,272) leaves \$513,204 as the standard for housing.

189. Fuel Provided to Pribilof Aleuts Insufficient. The amount of fuel supplied to the Pribilof Aleuts during the 1870-1946 period was vastly insufficient to provide an adequate degree of comfort.

^{109/} A similar procedure was employed in finding of fact No. 146 to guard against a double counting of government expenditures. There 40 percent of the inventory value of housing was deducted.

^{110/} This is an estimate. It is difficult to attempt to predict the value of Aleut labor on the projected standard housing construction and maintenance. In finding of fact No. 146 Aleut labor was deemed to represent 40 percent of the value of the housing actually provided. In a much more aggressive housing program, however, it is reasonable to assume that the value of Pribilof Aleut labor to the whole would fall (in part because the Aleuts were a small labor force and more outside workers would have to be employed) and 25 percent appears a likely estimate.

The climate of the Pribilofs makes it imperative that inhabitants have a proper supply of fuel (see finding of fact No. 15). The average daily year-around high temperature is 39°F. The average daily high temperature during the summer is approximately 49°F. It is necessary to have heat every day of the year.

190. Insufficiency of Fuel Provided in Lease Period. When the Aleuts were moved from their barabaras to the ACC-built frame cottages, fuel needs went up enormously. The 40 tons of coal allotted to the St. Paul Aleuts under the lease of 1870 barely served to meet their cooking needs. Often Aleuts were forced to walk miles to collect driftwood for fuel in the middle of winter. During many years the Aleuts had to purchase additional coal at high prices from the ACC.

The coal supply to the Aleuts was increased to 160 tons in 1891 and to 350 tons in 1896 but even with this increased supply, the amount of coal provided was far from adequate. In 1896, for example, Aleut families were forced to double up in dwellings to save coal. With their own funds the Aleuts purchased as much additional coal from the NACC as was available.

191. Insufficiency of Fuel Provided in Government Period. Complaints concerning the insufficiency of fuel provided continued into the government period. In 1919 a Pribilof Islands doctor recommended that 75 lbs. of coal each day be allotted to each Aleut family, but only 40-50 lbs. per day was available. In 1919 the Aleuts petitioned the Commissioner of Fisheries for more coal. This request was summarily rejected.

As larger Aleut houses were constructed in the 1920's and 1930's, the amount of coal needed for heat was greatly increased.

192. Unavailability of Other Fuels. The Pribilof Aleuts had no alternative to the use of imported coal as fuel. No trees grow on the Pribilofs. Little driftwood reaches the islands. Seal blubber had been used by Aleuts to heat their barabaras, but blubber was sorely insufficient to heat the Aleuts' frame dwellings. Blubber also is an extremely acrid-smelling fuel and if stored for long periods often turns rancid.

193. Dearth of Information Concerning Fuel Necessary to Heat Pribilof Dwellings. The Commission notes an absence of data which would aid in establishing the quantity of fuel needed to adequately heat the Pribilof Aleuts' homes.^{111/} Neither of the parties estimates a standard fuel expenditure for the then-existing housing.^{112/}

^{111/} Little information has been provided or found describing the particulars of Aleut housing construction. Factors such as the thickness of the walls, type of insulation (if any), and amount of air space would be significant factors in developing a standard. The Commission has no information concerning the heating capacity of the Aleuts' stoves. It is possible that these stoves were so inadequate as to make the proper heating of the Aleut dwellings impossible given even an unlimited quantity of coal. In addition, the Commission has little information concerning the quality of coal provided the Aleuts; the quality of coal as much as the quantity may have been responsible for the insufficient heating levels attained.

^{112/} Plaintiffs estimate the cost of fuel the Aleuts should have received for the houses the Aleuts should have received. The Commission feels this procedure is improper, and feels that each area of insufficiency should be examined independently. To do otherwise would be to lessen the relevance of these calculations to the situation that actually prevailed on the islands.

194. Standard Fuel Consumption for Pribilof Aleut Dwelling,

1870-1946. One reasonable contemporary estimate of the quantity of coal needed to adequately heat a Pribilof Aleut's dwelling in the 1870-1920 period during the coldest month of the year is 75 pounds of coal each ^{113/} day.

A reasonable estimate of the quantity of coal needed to adequately heat Pribilof Aleut dwellings in the years 1921-1946 during the coldest month of the year is 112.4 pounds of coal per day. ^{114/}

^{113/} The record shows that the 60 tons initially provided the Aleuts under the Government's lease with the ACC were but a fraction of actual need. Even when the amount of coal provided was increased to 350 tons in 1896 -- and the number of families had decreased from the 1870's -- the Aleuts still suffered hardship (Pl. Ex. 229, at 6, 7, 8). The 350 tons provided were equivalent to approximately 60 pounds of coal per day in December, January, February, and March and 17 pounds per day during the remainder of the year.

During the winter of 1919, 40 to 50 pounds of coal were distributed to each family each day. An island doctor recommended that 75 pounds per day be provided, and the Government agent agreed more coal was necessary (Pl. Ex. 307).

^{114/} This is an estimate. The record shows that beginning in the 1910's the Government began erecting larger houses to replace the cottages built by the ACC. While we know these houses were significantly larger and contained more rooms than the ACC dwellings, we do not know how much coal was adequate to heat these homes. The record does indicate that the larger houses required greatly increased amounts of heat (Pl. Ex. 359, at 5). Given this situation it is reasonable to estimate that fuel need averaged 50 percent higher than in the 1870-1920 period.

The Commission's calculations as to the quantity of fuel necessary for an adequate degree of comfort assumes that the quality of coal that should have been provided is identical to that actually provided.

195. Fuel Needs for Each Month of the Year, 1870-1946. By analyzing climatological data, fuel need for each month of the year was calculated. In the years 1870-1920, 75 pounds of fuel per day per family were assumed to be needed in March, the coldest month, to heat a dwelling to a constant 65° F. Fuel needs were then calculated for the other months assuming that fuel needs exhibited a one-to-one correspondence with degree heating days. Fuel needs per day per family are calculated as follows: January - 70.5 lbs.; February - 69 lbs.; March - 75 lbs.; April - 64.5 lbs.; May - 57.75 lbs.; June - 42.75 lbs.; July - 35.25 lbs.; August - 32.25 lbs.; September - 36 lbs.; October - 49.5 lbs.; November - 56.25 lbs.; and December - 67.5 lbs.

In the years 1921-1946, 112.5 pounds of fuel per day per family were assumed to be needed in March, the coldest month, to heat dwellings to a constant 65°F. Fuel need per day per family, using the same method of calculation as for the years 1870-1920, is as follows: January - 105.75 lbs.; February - 113.50 lbs.; March - 112.5 lbs.; April - 96.75 lbs.; May - 82.13 lbs.; June - 64.13 lbs.; July - 52.88 lbs.; August - 48.38 lbs.; September - 54 lbs.; October - 74.25 lbs.; November - 84.38 lbs.; and December - 101.25 lbs.

196. Fuel Need Per Month Per Aleut Dwelling, 1870-1946. Coal need each month for each Aleut family in the years 1870-1920 was as follows: January - 2,185.5 lbs.; February - 1,949.25 lbs.; March - 2,325 lbs.;

April - 1,935 lbs.; May - 1,790.25 lbs.; June - 1,282.5 lbs.; July - 1,092.75 lbs.; August - 999.75 lbs.; September - 1,080 lbs.; October - 1,534.5 lbs.; November - 1,685.5 lbs.; and December - 2,092.5 lbs.

Coal need each month for each Aleut family in the years 1921-1946 was as follows: January - 3,278.25 lbs.; February - 3,206.38 lbs.; March - 3,487.5 lbs.; April - 2,902 lbs.; May - 2,546.03 lbs.; June - 1,923.90 lbs.; July - 1,639.28 lbs.; August - 1,499.78 lbs.; September - 1,620 lbs.; October - 2,301.75 lbs.; November - 2,531.40 lbs.; December - 3,138.75 lbs.

197. Number of Aleut Dwellings on the Pribilofs, 1870-1946.

Information is incomplete on the number of occupied Aleut dwellings during the period. A reasonable estimate of occupied Aleut dwellings is 82.5 for the years 1870-1890, 70 for the years 1891-1910, 66 for the years 1911-1920, and 75 for the years 1921-1946. ^{115/}

198. Cost of Coal Per Ton, 1910-1946. A reasonable estimate of the cost of coal in the government period, excluding transportation costs, is \$9.76 per ton. ^{116/} Given the lack of information in the record, the cost of transportation is estimated at \$8 per ton. Total cost per ton is \$17.76.

^{115/} Data is taken from Pl. Ex. 701, Vol. I, at 3-8, A-28. The average number of occupied houses for 1870-1890 is taken from 1878 and 1890 figures. The number of occupied houses during 1891-1920 is assumed to be the number of families since there were more (or the same number of) dwellings than families. The average number of occupied houses in the years 1921-1941 was estimated by averaging the number of St. Paul and St. George dwellings in 1933, 1940, and 1946, and the total dwellings on St. Paul in 1918 and St. George in 1922.

^{116/} The value and amount of coal delivered to St. Paul is listed for 13 years of the period (Pl. Ex. 719). Quantities delivered are known for several other years. Applying the figures available over the 37-year period and dividing cost by tonnage gives an estimation of \$9.76 per ton.

199. Amount and Value of Coal Needed, 1870-1946. The amount of coal provided in the 1870-1890 period should have been 823.12 tons per year. In 1891-1910, 698.39 tons should have been delivered each year, in 1911-1920, 658.45 tons should have been delivered, and in 1921-1946, 1,127 tons should have been provided annually.

The value of coal that should have been provided in the 76-year period is \$1,061,204.

The coal needed in the 1870-1890 period is valued at \$225,534.88 (see finding of fact Nos. 67, 95).^{117/} In the 1891-1910 years the total value of coal is \$198,168.22 (see finding of fact Nos. 95, 198).^{118/} In the years 1911-1920, \$116,940.72 should have been spent on coal (see finding of fact No. 198).^{119/} Finally, fuel costs in 1921-1946 should have totaled \$520,560.56 (see finding of fact No. 198).^{120/}

200. Food, Clothing, and Household Furnishing Provided to the Pribilof Aleuts Insufficient. The amounts of food, clothing, and household furnishings supplied to the Pribilof Aleuts from 1870 to 1946 were far below the level required for an adequate degree of comfort.

^{117/} This is the total of an outlay of \$10,700.56 (823.12 tons x \$13/ton) for 20 years plus 1 year of an \$11,523.68 outlay (823.12 tons x \$14/ton).

^{118/} This is the total of an outlay of \$9,777.46 (698.39 tons x \$14/ton) for 19 years plus an outlay of \$12,396.48 (698.39 tons x \$17.76/ton) for 1 year.

^{119/} This is the total of an outlay of \$11,694.07 (658.45 tons x \$17.76/ton) for 10 years.

^{120/} This is the total of an outlay of \$20,021.56 (1,127 tons x \$17.76/ton) for 26 years.

201. Food Deficient in Quantity and Quality. The quantity and quality of the food made available to the Pribilof Aleuts was very low. Agents and other government employees often commented that the food issue was inadequate. Despite knowledge of the inadequate supply of food the Government had not remedied the situation by the end of the period in question.

In the latter part of the government period children under 2 years of age were issued only milk. There were no provisions for issue of fruit juice, cereal, or vegetables. From 2 to 4 years of age, children were issued only milk and cereal.

In 1915 Aleut children on St. Paul congregated around the white mess kitchen after every meal to pick out edible food from the refuse. Twenty-five years later other Aleut children were still begging for food at the mess hall.

The growth of the Aleut children was stunted by insufficient nourishment. A visiting medical commission in 1944 found nearly all the Aleut children were subject to some ailment. Aleut children's teeth were found to be so poor that 75 percent were expected to have no teeth at age 20. The cause of these health problems was laid to the Aleuts' insufficient diet and lack of vitamins.

202. Adult Aleuts Malnourished. The government food schedule in 1941 for Aleuts lacked essential food items. Moreover, the existence

of the schedule was no assurance that the Aleuts received even these items. In 1914 and 1915 when the Navy maintained a mess hall on St. Paul the entire population of the village congregated around the Navy mess hall to beg for food.

Information indicates that a day's food for an Aleut might consist of bread and coffee for breakfast, bread and tea for lunch, and potatoes and rice for dinner.

203. White Employees Given Best Food. Throughout the government period white government employees were given much better food than the Aleuts. There was a small dairy herd on the islands, but the milk produced was primarily distributed to the white employees even though Aleuts made up most of the population and had young children very much in need of fresh milk. In the 1930's and 1940's some vegetables were grown in a greenhouse on St. Paul, but these went primarily to the whites and not to the Aleuts who were in greater need of these foods. A number of reindeer, sheep, and cattle were slaughtered on the islands for meat. Once again this was predominantly for the benefit of the white employees. In general the whites enjoyed a food supply far superior to that of the Aleuts.

204. Seal Meat Insufficient to Feed Aleuts. The Government relied on seal meat as a food supply for the Aleuts. The Aleuts, however, would

consume only limited quantities of seal meat (see finding of fact No. 20). At times, Aleuts went hungry rather than eat seal meat. Inability to digest seal meat was a common ill.

At one time an employee of the Fish and Wildlife Service considered the possibility of marketing seal meat but concluded its market would be limited since it might only be sold to the poorest of the laboring classes in foreign countries.

205. Clothing Issue to Aleuts Insufficient. Many officials described the Pribilof Aleuts as being insufficiently clothed. The Aleuts suffered as a result of this lack of clothing. An agent reported in 1915 that only one suit of the cheapest clothes was provided for each man each year and that children after the age of three or four had only the scantiest garments. Items of particular need were footwear and heavy outer coats.

206. Issue of Essential Household Furnishings Deficient. The Government failed to provide an adequate number of essential household furnishings, such as beds and stoves. The Government provided only cooking stoves to the Aleuts. These stoves were of only limited use in heating the Aleuts' dwellings. The cooking stoves the Aleuts were given were often in disrepair. A government memo in 1916 instructed that when an Aleut family needed a new stove, a white employee should get the new stove and the Aleut family should get the employee's used stove.

Beds and bedding were not supplied in sufficient quantities on the Pribilofs (see finding of fact No. 177). Often three children were forced to sleep together in one small bed. Much of the inside house decorations and furniture were paid for by the Aleuts.

207. Standard For Food, Clothing, and Household Furnishings. Upon a review of the information in the record concerning foods, clothing, and household furnishings, the Commission finds that the Aleuts should have received the same level of food, clothing and household furnishings as was enjoyed by a wage-earning family in the lower 48 states.

208. Expenditures on Food, Clothing, and Household Furnishings by American Wage-Earning Families. Expenditures for food, clothing and household furnishings by American laboring families for 26 years during the period in question are as follows: ^{121/}

^{121/} The following sources were used in the calculation of these yearly figures: Pl. Ex. 706, 707, 708, 709, 715, 716, 701, Vol. II, at 503-558. The categories in these charts indicating expenditures for food and clothing were always used in the calculations. If a separate figure was reported for expenditures for household furnishings this also was included. Figures labeled "sundry" or "miscellaneous" were not included. If a list of food and clothing items was provided all those items were included.

Certain reports in the government period included figures for both 4 and 5 member families. In this case a figure was calculated for a 4.5 member family, since Pribilof families averaged between 4 and 5 members in the government period. Most other sources consulted were based on the 4 or 5 member family. When there was more than one source for a year, an average expenditure was calculated for that year.

<u>Year</u>	<u>Expenditure</u>
1874	\$ 408
1888	282
1901	314
1903	355
1906	452
1913	567
1914	502
1915	488
1917	637
1918	947
1919	683
1920	1,011
1921	946
1922	785
1926	783
1927	979
1928	1,023
1929	1,018
1931	869
1935	675
1936	888
1939	911
1940	921
1941	886
1942	1,122
1944	1,217

209. Average Expenditures for Food, Clothing, Household Furnishings.

The 26 years for which statistics are available measure expenditure levels of various types and sizes of families in diverse sections of the United States (see finding of fact No. 208). We have used these figures to calculate a standard for each of the 76 years. In order to arrive at a reasonable expenditure estimate for these 26 years as well as for the other 50, the following procedure was used: (1) Taking a known expenditure figure for a particular year, this figure was converted to an expenditure value in the 75 other years by virtue of a cost of living index. (The

cost of living index in the year for which an expenditure value was known was divided into the cost of living index for that year for which an expenditure figure was sought. This quotient was multiplied by the known expenditure to get the expenditure value. For instance, in 1888 there was a known expenditure of \$282 and a cost of living index of 88 (Pl. Ex. 701, Vol. I, at A-31). In order to calculate the expenditure value in 1871--when the cost of living index was 100--100 was divided by 88 and this quotient multiplied by \$282.) (2) The process of finding an expenditure figure for each of the 76 years was repeated 26 times--for each raw expenditure figure available. Thus, the initial result of these calculations were 26 columns of figures, each containing 76 entries. (3) Each of the 76 rows were then averaged--26 entries per row--in order to find the final yearly expenditure figure. It is this figure that appears in chart 209-A, column 2, below. (4) Yearly expenditures were then multiplied by the number of Pribilof Aleut families (column 3) to find yearly community expenditure (column 4).

Chart 209-A

Col. 1	Col. 2	Col. 3	Col. 4
<u>Year</u>	<u>Average Expenditure</u>	<u># Families</u>	<u>Yearly Community Expenditure</u>
1870	473	102	48,246
1871	473	104	49,192
1872	478	88	42,064
1873	468	90	42,120
1874	468	112	52,416
1875	459	100	45,900
1876	431	100	43,100
1877	426	107	45,582
1878	426	107	45,582
1879	421	111	46,731
1880	426	111	47,286
1881	440	114	50,160
1882	459	105	48,195
1883	431	97	41,807
1884	412	98	40,376
1885	397	100	39,700
1886	400	94	37,600
1887	400	92	36,800
1888	416	95	39,520
1889	416	89	37,024
1890	416	82	34,112
1891	400	81	32,400
1892	412	76	31,312
1893	397	76	30,172
1894	388	78	30,264
1895	388	79	30,652
1896	393	77	30,261
1897	397	77	30,569
1898	397	75	29,775
1899	412	75	30,900
1900	426	71	30,246
1901	435	68	29,580
1902	445	68	30,260
1903	468	65	30,420
1904	464	62	28,768
1905	464	60	27,840
1906	478	62	29,636
1907	506	61	30,866
1908	482	61	29,402
1909	482	60	28,920
1910	511	62	31,682
1911	511	62	31,682

Col. 1	Col. 2	Col. 3	Col. 4
<u>Year</u>	<u>Average Expenditure</u>	<u># Families</u>	<u>Yearly Community Expenditure</u>
1912	544	65	35,360
1913	530	65	34,450
1914	535	66	35,310
1915	544	66	35,904
1916	581	66	38,346
1917	686	66	45,276
1918	804	70	56,280
1919	927	69	63,963
1920	1,069	71	75,899
1921	952	67	63,784
1922	895	71	63,545
1923	913	71	64,823
1924	913	70	63,910
1925	937	67	62,779
1926	944	72	67,968
1927	927	75	69,525
1928	918	76	69,768
1929	918	76	69,768
1930	895	78	69,810
1931	814	79	64,306
1932	729	80	58,320
1933	691	83	57,353
1934	714	83	59,262
1935	733	85	62,305
1936	743	85	63,155
1937	767	88	67,496
1938	752	90	67,680
1939	743	94	69,842
1940	747	95	70,965
1941	785	97	76,145
1942	871	99	86,229
1943	923	98	90,454
1944	937	97	90,889
1945	960	99	95,040
1946	1,041	103	107,223
		Total	3,822,252

210. Government Expenditure Necessary to Provide Adequate Level of Food, Clothing, and Essential Household Furnishings. The government expenditure necessary to provide the Pribilof Aleuts with adequate levels of food, clothing, and household furnishings from 1870-1946 is \$3,822,252. In the 1870-1889 period \$1,298,270 should have been spent. In the second lease period \$606,355 would have constituted an adequate expenditure. In the government period \$1,917,627 should have been spent.^{122/}

211. Pribilof Water Supply Insufficient, 1870-1946. Throughout the 76-year period, the water supply to the Pribilof Aleuts was insufficient. The Pribilof Aleuts' sources of water were located at considerable distances from the villages and were at times contaminated. In the winter difficulty in reaching the sources of water often forced the Aleuts to melt snow for drinking water. The water supply was completely inadequate to maintain proper levels of personal or household cleanliness.

During the government period water became available from central locations in the villages. These systems were not completed until well

^{122/} The Commission assumes that the cost of buying and transporting food, clothing, and household furnishings to the Pribilofs equals the price paid for these items by consumers in the lower 48 states. Plaintiffs have asserted that goods on the Pribilofs were valued at wholesale price plus 25 percent (Pl. Ex. 701, Vol. I, at 5-19) but have failed to adequately support this position. Defendant has not reached the question of the relationship between consumer expenditures and the cost of providing goods on the Pribilofs.

into this period. Few or no Aleut homes were provided with inside plumbing by 1946. Running water and inside plumbing existed on the Pribilofs in the government period, but these comforts were reserved for non-Aleut government employees.

212. Standard for Water Supply Construction. The expense of constructing an adequate water distribution system in the lease periods would have been \$3,937.^{123/} This is what it would have cost to pipe water to central village locations both on St. Paul and St. George.

An adequate water system would have cost \$16,200 in the government period.^{124/} This is the estimated cost of running water lines to each Aleut dwelling. The total expenditure for an adequate Pribilof water system is \$20,137.

213. Sanitation System Insufficient. The system of sanitation on the Pribilofs, 1870-1946, failed to meet minimum recognized levels. The number of outhouses provided was insufficient throughout the 76-year period. Moreover, these structures were often in an unsanitary and dilapidated condition. In the government period some privies were built but the numbers were not adequate for the population. Few or no indoor

^{123/} This is the expense of building waterworks on each island minus the 25 percent of the cost that it is estimated would have been supplied by Aleut labor previously compensated (see finding of fact Nos. 188, 214, 218).

^{124/} This figure includes a reduction of 25 percent from the projected cost for Aleut labor previously compensated. This figure does not include the cost of inside plumbing in Aleut houses; expenditures for inside plumbing are included in the estimates of housing standards.

toilets existed in the Aleut residences during the government period. In 1947 a doctor reported that the sewage system that had been constructed to connect the non-Aleut government buildings was in disrepair and constituted a health hazard.

214. Standard for Sanitation. An adequate sanitation system in the lease periods would have required one outhouse for each family. The ^{125/} life of these privies is estimated at 20 years and their cost at \$20. During the government period a sewage line should have been installed for each Aleut house in both villages. The approximate cost of materials and laying the line would be \$9,600. Total cost for adequate sanitation facilities would have been \$10,140. ^{126/}

215. Education of Aleuts Insufficient. The educational program furnished the Aleuts was often criticized, and government officials admitted its shortcomings. Although a few Aleuts were sent to the Chemewa Indian School in Salem, Oregon, for high school education, most children had their education terminated at age 16. Only five or six grades were offered.

^{125/} 196 outhouses for a total cost of \$3,920 would have been needed.

^{126/} This figure includes a reduction of 25 percent for the value of outhouse and sewage construction that is attributable to the value of Aleut labor (see finding of fact Nos. 188, 211, 218). The standard for sanitation does not include the cost of indoor plumbing. That cost is included in the projected expenditure for housing.

216. No Standards Established for Educational Instruction or Provision of School Supplies. No standards have been established and plaintiffs do not claim damages for inadequate educational instruction or inadequate provision of school supplies.

217. Construction and Maintenance of Educational Facilities Inadequate, 1870-1909. The record indicates that the structures built or otherwise provided for the education of Pribilof Aleut children in the lease periods were not adequate educational facilities.

218. Standard for School Building Construction and Maintenance, 1870-1909. Six thousand seventy-four dollars should have been spent to erect proper school houses on the Pribilofs in the 1870's. This sum would have been sufficient to build and maintain schools on both St. Paul and St. George with adequate room for pupils and teachers. Four thousand eight hundred sixty dollars should have been spent on school maintenance. Twenty-five percent of the cost of construction and maintenance is deducted as that amount of cost attributable to Aleut labor previously compensated. ^{127/} The total cost of school building construction and maintenance in the 1870-1909 period should have been \$8,200.

^{127/} The standard for Aleut compensation has been considered in finding of fact Nos. 161-176. It is estimated, based on the available work force and the amount of construction on the islands that the Aleuts' labor could account for 25 percent of the cost of construction and maintenance (see finding of fact Nos. 188, 211, 214).

219. No Standards Established for Medical Care or Electric Power Supply. No standards have been established and plaintiffs do not claim damages for inadequate provision of medical care or inadequate provision of electric power.

220. Actual Expenditures vs. Standard Expenditure by Lease Periods.

	<u>Actual Expenditures (\$)</u>						
	<u>Compensation</u>	<u>Housing</u>	<u>Food Clothing, etc.</u>	<u>Fuel</u>	<u>Water</u>	<u>Sanitation</u>	<u>Ed. (Bldg. construction)</u>
1870-1889	742,289	18,000	8,000	15,600	0	0	()
1890-1909	230,005	19,437	312,621	90,160	0	0	(2,750)
1910-1946	1,128,515	79,665	1,264,001	173,445	12,450	3,011	--
	<u>Standard Expenditure (\$)</u>						
1870-1889	1,732,560.28	(169,687.50)	1,298,270	225,534.88	(3,937)	(2,940)	(8,200)
1890-1909	1,185,148.44	(169,687.50)	606,355	198,168.22	(3,937)	(2,940)	(8,200)
1910-1946	6,986,706.83	343,516.50	1,917,627	637,501.28	16,200	7,200	--
	<u>Standard Expenditure Minus Actual Expenditure (\$)</u>						
	<u>Actual Exp.</u>		<u>Standard Exp.</u>		<u>Difference</u>		
1870-1889	785,264		3,348,747	<u>128/</u>	2,563,483		
1890-1909	653,598		2,082,054	<u>128/</u>	1,428,456		
1910-1946	<u>2,661,087</u>		<u>9,908,752</u>		<u>7,247,665</u>		
Total	4,099,949		15,339,553		11,239,604		

128/ The standard expenditure for housing, water and sanitation systems, and educational building construction in the period 1870-1909 has been calculated only for the 40-year period and not for each lease period. For convenience, one-half of the expenditure will be assumed to due in the first lease period and one-half due in the second lease period.

221. Profits: Sealskin Monopoly.

1870-1889	\$ 24,549,193
1890-1909	7,289,282
1910-1946	<u>14,579,924</u>
Total	\$ 46,418,399

222. Actual Expenditures vs. Standard Expenditures by Category. The

sums expended on the Aleuts compared with the sums that should have been expended are as follows:

Compensation	
Standard Expenditure	\$ 9,904,416
Actual Expenditure	<u>2,100,809</u>
Deficit	\$ 7,803,607
Housing	
Standard Expenditure	\$ 513,204
Actual Expenditure	<u>117,102</u>
Deficit	\$ 396,102
Fuel	
Standard Expenditure	\$ 1,061,204
Actual Expenditure	<u>279,205</u>
Deficit	\$ 781,999
Food, Clothing	
Standard Expenditure	\$ 3,822,252
Actual Expenditure	<u>1,584,622</u>
Deficit	\$ 2,237,630
Water Supply	
Standard Expenditure	\$ 20,137
Actual Expenditure	<u>12,450</u>
Deficit	\$ 7,687
Sanitation System	
Standard Expenditure	\$ 10,140
Actual Expenditure	<u>3,011</u>
Deficit	\$ 7,129

Educational Buildings	
Standard Expenditure	\$ 8,200
Actual Expenditure	<u>2,750</u>
Deficit	\$ 5,450
<u>Total</u>	
Sum of Standard Expenditures	\$15,339,553
Sum of Actual Expenditures	<u>4,099,949</u>
Difference	\$11,239,604

CONCLUSIONS OF LAW

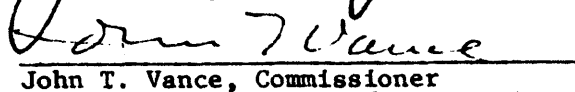
Based upon the foregoing findings of fact and all the evidence of record, the Commission concludes as a matter of law that:

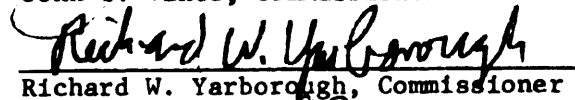
1. Plaintiffs, members of the Aleut Tribe of Indians residing at St. Paul and St. George, Alaska, had a "special relationship" with the Government by virtue of the Act of July 1, 1870 (16 Stat. 180) and the Act of April 21, 1910 (36 Stat. 326).
2. As a result of this special relationship the Government was obligated to provide a fair compensation and sufficient goods and services to the Pribilof Aleuts during the entire 76-year period in question.
3. The Aleuts carried on most major endeavors as a community. The obligation owed by the Government was owed to the Aleuts as a tribe and not to individual tribal members.
4. The sealskin monopolists, the Government and its private lessees, reaped profits of approximately \$46,418,399 during the 1870-1946 period.
5. The value of compensation, goods and services provided the Aleuts during the 76-year period was \$4,099,949. The value of fair compensation,

goods and services the Government was obligated to provide to the Aleuts was \$15,339,553.

6. Since the United States and its lessees provided the money equivalent of \$4,099,949 to the Aleuts when the obligation was to provide \$15,339,553, the plaintiffs are entitled to a judgment against the defendant in the amount of \$11,239,604, less allowable gratuitous offsets, if any.


Jerome K. Kuykendall, Chairman


John T. Vance, Commissioner


Richard W. Yarborough, Commissioner


Margaret H. Pierce, Commissioner


Brantley Blue, Commissioner