

## VIII. UNITED STATES LEPROSY INVESTIGATION STATION

### A. Establishment of Federal Leprosarium

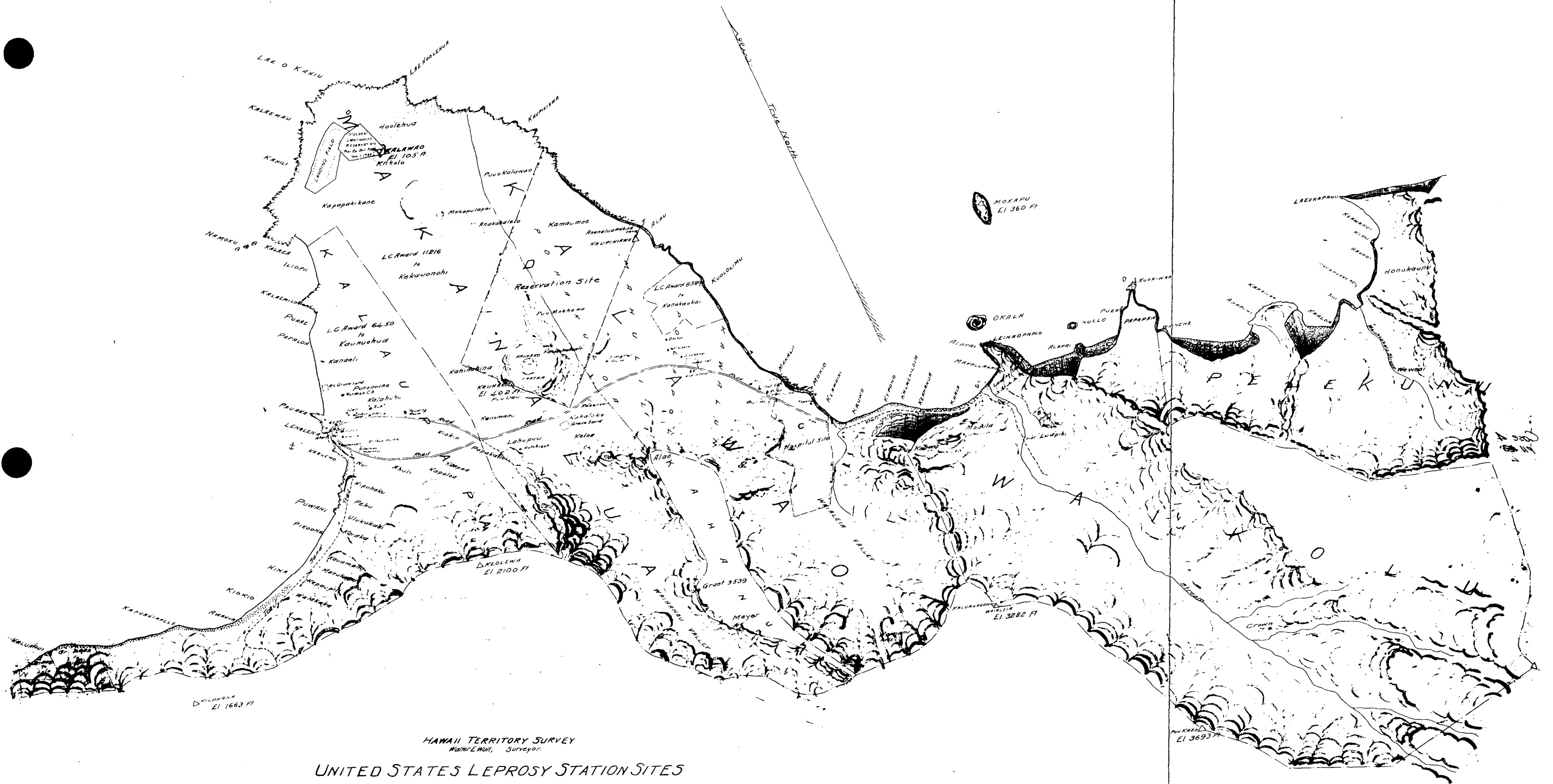
#### 1. Motivation

The vagaries of the political and social trends in Honolulu through the years had little effect upon the pace of life at the leprosy settlement on Moloka'i. Indeed, its residents were often unaware of how rapidly changes were being made. After King Kalākaua's death in 1891, his sister, Princess Liliuokalani, ascended the throne. Honolulu's businessmen, impatient with the old ways and anxious for annexation by the United States, deposed her in 1893 and ended the monarchy. A short succession of trial regimes followed: the Provisional Government of 1893 to 1894, the Republic of Hawai'i from 1894 to 1898, annexation by the United States in 1898, and finally, creation of the Territory of Hawai'i in 1900. Throughout these unsettling times, the everyday administration of the leprosy settlement was largely unaffected. The first decade of the twentieth century would begin to see some startling physical changes on the peninsula, however, and none would be as spectacular as Uncle Sam's first visible effort to attack the problem of leprosy in Hawai'i.

On March 3, 1905, the 58th U.S. Congress passed the "Act to Provide for the Investigation of Leprosy," with special reference to the care and treatment of leprosy victims in Hawai'i. By this act, the U.S. Public Health and Marine-Hospital Service was given the responsibility of building and administering a federal leprosarium. Credit for instigating this action by Congress was given to Dr. Charles B. Cooper, president of the Hawai'i Territorial Board of Health, who put out a ten-page pamphlet in 1904 entitled Leprosy in the Hawaiian Islands--Its Humanitarian and Financial Burden--An Unparalleled Instance of Public Philanthropy. In that document Cooper outlined the financial burden that leprosy had imposed on the Board of Health and developed a proposal for the federal government to aid in the scientific study and treatment of the disease.

In a letter to the secretary of the treasury commenting on the bill and recommending its passage, Surgeon-General Walter Wyman stated that because the medical profession was practically as impotent in

Map No. 2. Hawaii Territory Survey, Walter E. Wall, Surveyor. United States Leprosy Station Sites in Waikolu, Kalawao and Makanalua, Molokai, H.T. As selected by U.S. Surgeon-General Walter Wyman, P.H.&M.H.S. Survey and plan compiled by Geo. F. Wright, June 1905. Traced from Gov't Survey Reg. Map No. 1728. H.E. Newton, May 1906.



HAWAII TERRITORY SURVEY  
Walter E. Wall, Surveyor.

UNITED STATES LEPROSY STATION SITES  
IN WAIKOLU, KALAWAO AND MAKANALUA, MOLOKAI, H. T.

As Selected by  
U. S. Surgeon-General Walter Wyman, P.H. & M.H.S.

Scale 1 inch to 1000 feet.

Survey and plan compiled by Geo. F. Wright  
June --- 1905

Traced from Gov't Survey Reg. Map No. 1728.  
H. E. Newton May, 1906.

treating the disease as it had been hundreds of years ago, the time was ripe for a concerted scientific effort to study the causes of the disease and the methods of transmission and treatment and hopefully to find a cure. An experimental station in Hawaii seemed a likely place to conduct such research; at Moloka'i the remoteness and isolation were perfect, there were a large number of patients readily available, and every type of the disease appeared at the settlement so that clinical features could be studied to advantage. The Territorial Government felt it needed help now because incidences of the disease were not decreasing and because maintenance of the settlement without prospect of a cure was seriously taxing the resources of the territory.<sup>1</sup>

President Theodore Roosevelt, with the support of Surgeon-General Wyman, Governor George R. Carter of Hawai'i, and the Hawai'ian Board of Health, recommended in his annual message to Congress on December 6, 1904, that the Marine-Hospital Service be empowered to establish a hospital and laboratory in the islands to study leprosy. The sum of \$150,000 was appropriated for construction of facilities and the first year's maintenance.

---

1. Letter from the Surgeon-General to the Secretary of the Treasury, January 10, 1905, in Annual Report of the Surgeon-General of the Public Health & Marine-Hospital Service of the United States for the Fiscal Year 1905 (Washington: Government Printing Office, 1906), pp. 200-201. The Public Health Service was originally called the Marine Hospital Service and had its origin in a 1798 act that authorized hospitals for the care of sick and disabled American merchant seamen. Subsequent legislation broadened the scope of its activities. In 1902 the name was changed to Public Health and Marine-Hospital Service and in 1912 to Public Health Service. It was under the jurisdiction of the Treasury Department from 1798 to July 1, 1939. The Public Health Service was under the direction of a Surgeon-General and, among other things, was responsible for research in the cause, prevention, and control of disease. Walter Wyman served as Surgeon General of the Public Health and Marine-Hospital Service from 1891 to 1911.

## 2. Land

In exchange for the federal government's financial and scientific assistance in the project, the Territory of Hawai'i agreed to cede title to one square mile of land on Moloka'i to the federal government for construction of the buildings. On the morning of June 10, 1905, the Kalaupapa leprosy settlement brass band greeted a VIP group of federal and territorial officials who had come to select an appropriate location for the station. Wyman picked the site at Kalawao as being most suitable, and on June 28, 1905, the Governor of Hawai'i ceded the one-mile-square plot of land to the federal government in perpetuity. The station would be situated amid one of the largest aggregations of leprosy sufferers in the world, and in addition the site was thought to have a cool, healthy location, beautiful surroundings, an ample water supply, and a convenient landing place. The Kalawao plat was described thusly:

### The Kalawao plat proper

North Boundary, the ocean.

East Boundary, a line running from the sea in a south-easterly direction along the foot of the plateau at the mouth of Waialea Valley to a point which shall be decided by the surveyor as one ensuring the retaining of enough land by the Territory to preserve its taro, grazing and firewood interests.

West Boundary, a line running in a southwesterly direction from the ocean along the East side of the Baldwin Home and Roman Church to a point in Waialeia Valley to correspond to the terminus of the East boundary.

North Boundary, the line connecting the termini of the East and West boundaries.<sup>2</sup>

A resolution of the question of ownership of the land was attempted by the U.S. District Attorney, who wrote that at the time of

---

2. Leland Cofer, Passed Asst. Surgeon, Chief Quarantine Officer, Territory of Hawai'i, to Surgeon-General, U.S. Public Health and Marine-Hospital Service, June 15, 1905, General Files, 1897-1923, RG 90, NA, p. 10.

the proclamation the land set apart belonged to the Territory of Hawai'i, the title resting on undisturbed possession for about thirty years rather than on a record title. The land set apart was all within the three ahupua'as of Waikolu, Kalawao, and Makanalua. The district attorney's conclusion, after examining the records, was that all of the land, originally covered by patents, had been reconveyed to the Kingdom of Hawai'i:

If all of these conveyances were correct, made by the proper parties, and agree in survey, etc., the record title would necessarily be clear; but when a comparison is commenced, one gets into endless confusion. In many instances the surveys will not agree; in others, there is no description at all, sufficient to identify the land conveyed, save by reference to Patent number; again, the records will show a given person as the patentee, while the deed transferring the land covered by that patent, will be from an entirely different person or persons, with nothing of record to trace the connection between the patentee and the grantor in the deed. This arose from the loose methods of transacting business and keeping records in the Kingdom of Hawaii.

It is nevertheless clear, from an examination of the records, that an attempt was made by the Kingdom of Hawaii, to purchase for health purposes, all of the lands covered by the Patents and Land Commission Awards. . . . It is further very clear that, for almost thirty years, the Government of Hawaii has been in undisturbed possession of the land.<sup>3</sup>

There existed thirty old frame houses on the proposed reservation, many of which were occupied by patients, either owned by individuals or by the territory. Ten of them were located along the road immediately east of the Baldwin Home. It was debated whether people should live there during construction, and finally it was thought best to have the reservation vacated and all personal property removed. The Board of Health was notified and the matter of claims for damages was put before the territorial authorities. F.W. Pease, Inspector of Repairs of the Marine-Hospital Service, wrote:

---

3. Robt. W. Breckons, U.S. District Attorney, to the Attorney General, August 4, 1905, File 1500, General Files, 1897-1923, Record Group 90 (Records of the Public Health Service), National Archives, Washington, D.C., p. 3.

The question was asked me if the United States Government would pay for the houses etc., on the reservation, belonging to private parties, the appraisement of the value being upwards of \$4,000.00, I replied that the appropriation for the construction of the station would not permit of such an expense, whereupon a new appraisement was made by the President of the Board of Health the Superintendent and assistant Superintendent of the Leper Settlement, the amount of which was \$2,270.<sup>4</sup>

The territorial legislature later appropriated money to pay all claims. After much delay, the occupants were moved to Kalaupapa, the buildings were demolished, and after everything of value had been removed, the rubbish and debris were burned.

After thorough inspection of the area, it had been determined that the purpose of the 1905 act could best be fulfilled by selecting various areas of land in different localities for separate purposes. First 114 acres were selected on the grassy slope above Kalawao bay for the site of the hospital; the next choice was 8.9 acres out on the coast for a landing site; then 4.5 acres around a spring in Waikolu Valley were reserved as a possible future water source. The spring, right of way thereto, and an area surrounding the spring were included. A large tract in Makenalua (502.6 acres) was also reserved as pasture land for station livestock.

### 3. Construction

The supervisory architect of the Treasury Department informed the Surgeon-General that the proposed federal buildings were to be very simple in style. They would rest on wooden posts and have shingled roofs; the exterior walls would be wood studs covered with sheathing and finished with either clapboards or shingles. Interior partitions would be studs covered with tongue and groove sheathing or

---

4. F.W. Pease, Inspector of Repairs, Public Health & Marine-Hospital Service, to Surgeon-General, December 26, 1907, in ibid., p. 5.

plastered.<sup>5</sup> The station was to be divided into three compounds: Residence, Hospital, and Administration (Executive). The director of the new station, Dr. Walter B. Brinckerhoff, appointed on March 2, 1906, recommended that the three compounds be enclosed by a picket fence four feet high with vertical pickets four inches wide set at four-inch intervals.<sup>6</sup> A supplementary recommendation a week later was that a verandah eight feet wide be put along the southwest side (side away from the sea) of the hospital buildings, on the east and west wards, opposite the single rooms and opposite the four-bed wards. Windows opening on the verandah would go to the floor. A verandah on both sides of the wards was necessary because the patients were sensitive to the cold, and it would add to their comfort to be able to sit on either side of the building according to the wind direction.<sup>7</sup>

---

5. Supervising Architect, Treasury Department, to the Surgeon-General, Public Health and Marine Hospital Service, March 13, 1906, in ibid.

6. Walter R. Brinckerhoff, Director, Leprosy Investigation Station, Molokai, T.H., to the Surgeon General, U.S. Public Health and Marine-Hospital Service, May 5, 1906 in ibid. Brinckerhoff had been instructor of pathology at Harvard University Medical School for eight years. When the law establishing the station went into effect in early 1905, an effort was made to obtain the volunteered services of a regular Public Health and Marine-Hospital Service officer, but to no avail. Realizing it might be difficult to get someone for the job, the act authorized payment to a commissioned or noncommissioned officer of the service detailed for duty at the station, in addition to the pay of his grade, one-half the pay of this grade, plus other allowances as might be provided by the Surgeon-General with the approval of the Secretary of the Treasury. It proved impossible to find a qualified man willing to isolate himself, until Brinckerhoff agreed. He was appointed Director March 2, 1906, and resigned May 31, 1909. To carry out the intent of the act, it was found necessary to make preliminary investigations at the receiving station in Honolulu, the only place where cases in their earliest development could be found and where suspected cases not yet developed could be examined. The laboratory director, handling both executive and technical duties, was expected to spend his time between both Honolulu and Kalawao. Memorandum for the Secretary of the Treasury Regarding the Appointment of Doctor Brinckerhoff as Assistant Director and Doctor Hollmann as Acting Assistant Surgeon at the Leprosy Investigation Station, Molokai, Hawaii, July 3, 1909, in ibid., pp. 2-6.

7. Walter R. Brinckerhoff, Director, Leprosy Investigation Station, to Surgeon-General, U.S. Public Health and Marine-Hospital Service, May 12, 1906, in ibid.



On September 6, 1907, F. W. Pease, Inspector of Repairs of the Marine-Hospital Service, was detailed by the Secretary of the Treasury to proceed to Hawaii to prepare plans and specifications and to construct the hospital station and laboratory. His progress report on the preliminary phase of construction was completed the end of December. In it he noted that he had visited the reservation and Kalaekilo'i'a point, reserved by the federal government and upon which it proposed to build a new landing platform. Access to the point was precarious, the trail at the foot of the bluff, about  $1\frac{1}{4}$  miles long, being impassable except by foot or by pack mules, who used it to carry taro-root from the taro patches up Waikolu Valley to the Kalaupapa settlement. In view of the estimated cost of \$15,000 to \$25,000 to construct a landing at Kalaekilo'i'a point and a road from the point to the selected site, Pease decided that it would be better to use the Kalaupapa landing and transport the building material and supplies by team over the existing road to the site. The territorial Board of Health had already given permission to use that landing and the hand-powered derrick, which was operated by residents of the settlement. Because the workers tired quickly, however, Pease suggested that it might become necessary to install a hoisting engine with drum to operate the derrick.

The quantity of lumber, shingles, and other materials scheduled would be sufficient for the director's quarters, pharmacist's quarters, storehouse, stable, shops, animal pens, powerhouse, cold storage facility, and for the temporary barracks and dining room for workmen. Pease had witnessed the landing of a lot of lumber at the Kalaupapa breakwater in mid-November. The steamer approached to within about 1,000 feet of shore and anchored, whereupon the lumber, made up into bundles of about 1,000 square feet, was bound securely and thrown overboard. On coming to the surface, the end of the binding rope was caught by someone in a landing boat and the small raft was towed through the surf to the beach. There the rope end was passed to the shore, made fast to the derrick rope, and the lumber raft raised onto the shore.

Because the landing at Kalaupapa was dangerous, the mules would be landed at Kaunakakai on the south side of Moloka'i. From there they would be driven over the mountains and down the pali trail. The trail was three feet wide and cut out of the cliff face in short stretches of about twenty-five percent grade, zig-zagging down to the foot of the mountains. There was always danger of slipping and of falling rock, but still it was deemed less dangerous for animals than to put them overboard at Kalaupapa to swim to shore through the surf and rocks.

The concrete piers, foundations, and floors of the station buildings would be made with Portland cement. There was a quantity of loose rock on the site and sand was available from the beach near Kalaupapa. A stone crusher was in operation at Kalaupapa and its owners agreed to clear the building site, crush the loose rock, and pile it adjacent to the building locations.<sup>8</sup>

After the plans and specifications for the construction of the buildings had been prepared by the supervising architect, advertisement was made for bids. After several unexpected delays, the bids were opened on March 4, 1907, at which time it was discovered that the lowest one was far in excess of the amount of money available. Attempts were made to obtain supplemental bids based on modifications of the original plans, but with no success. By May 31, 1907, the Treasury Department had rejected all bids. Consideration was then given to buying the required material and erecting the structures by day labor under the superintendence of an agent of the department. This plan was adopted. The Inspector of Repairs was sent to Honolulu with orders to prepare the necessary drawings, purchase building materials, contract for labor and transportation, and superintend construction.

---

8. Pease to Surgeon-General, December 26, 1907, in ibid., pp. 1-4. On December 30, portions of the supplies, mules, wagons, and men were shipped to the island.

#### 4. The Station Takes Shape

On January 2, 1908, work commenced on the temporary barracks and dining room building for the workmen. By August 1908 it was reported that the director's and pharmacist's quarters were ready for laying the floors; the storage building was practically complete; the powerhouse and cold storage buildings were ready for siding; the framing for the attendants' building and the administrative building was completed, as was that for the walls of the laboratory building and the covered way between the laboratory and administration building; the concrete foundation piers for the morgue, laboratory, and laundry buildings were in place; the frames for the piers for the hospital, kitchen, and surgery room were being placed; and the construction of the stable and barn would follow. It was proposed to install an electric generator and light the buildings with electricity; the generator would be powered by water, if possible.<sup>9</sup>

#### 5. Boat Landing

At the same time that the area of land at Kalawao was selected for a hospital site, another parcel of land was set aside for the station by the territory that included the boat landing at Makaluahau Cove and all the land on the western exposure of the adjacent hill, as well as the right-of-way over the path leading from the reservation proper around the foot of the cliff and along the beach to the landing.

After the construction of the station buildings had commenced, it became apparent that the Makaluahau landing should be improved to enable landing passengers and supplies. This was because the only available means of access to the station at that time was through the leprosy settlement, two and a half miles away, through which the U.S. had no right-of-way. Permission to land there and pass through

---

9. F.W. Pease to Surgeon-General, Public Health and Marine-Hospital Service, August 21, 1908, in ibid., pp. 1-2.

had to be requested as a privilege from the Board of Health, a pass signed by the director being required of each person going or coming from the station.

Not only was the Kalaupapa landing difficult and dangerous, but Brinckerhoff felt it objectionable to have foodstuffs for station personnel handled by the sick or by persons in daily contact with them. It was also unfortunate, he felt, that persons landing would be needlessly exposed to the disease. Another landing spot would not only avoid this problem but would also avoid friction with local health officials. The new landing would also emphasize the independence of the station from the settlement, which would be an asset when trying to employ workers.

An item regarding this problem was therefore included in the estimates to Congress, and in the act making appropriations for the sundry civil expenses of the government for the year ending June 30, 1909, an appropriation of \$1,000 was made to construct a boat landing for the use of the leprosy investigation station. Mr. Pease was instructed to complete the job, and in his report of June 28, 1909, he stated the landing had been built for \$993.31, including construction of a footbridge over Waikolu Stream to afford access to the landing. An approach to the landing was formed by throwing the beach boulders into the sea. A portion of the lava rock bluff overhanging the landing site was blasted off, timber work was constructed, and the surface of the lava rock shelf at the bluff base and the floor of the boulder approach were covered with concrete, including walks from the beach. The landing was 112 feet long, with an average width of 12 feet.<sup>10</sup>

---

10. Walter R. Brinckerhoff, Director, Leprosy Investigation Station, to Surgeon-General, Public Health and Marine-Hospital Service, October 5, 1908, in ibid.; Annual Report of the Surgeon-General of the Public Health and Marine-Hospital Service of the United States for the Fiscal Year 1909, in Annual Reports, 1901-11, RG 90, NA. F.W. Pease, Inspector of Repairs, Public Health and Marine-Hospital Service, to Surgeon General, June 28, 1909, General Files, 1897-1923, RG 90, NA, pp. 1-2.

Illustration 44. Director's quarters, Leprosy Investigation Station, 1908. Courtesy of National Archives, Washington, D.C.



No.2, U.S.Leprosy Investigation Station,Molokai,T.H.

DIRECTOR'S QUARTERS.  
August 10,1908.

## 6. Miscellaneous Details During Construction

### a. Garden

In early 1909, Brinckerhoff requested authority to establish a vegetable garden at the station to supply fresh vegetables to the personnel and green feed for the laboratory animals (rabbits, guinea pigs, and the like). Such an enterprise would help prevent the station's 114 acres from growing up into an unsightly wilderness of weeds and brush. The workmen had been raising their vegetables for the past year and found the soil and climate ideal. Plenty of pasture would still be left for milch cows, sheep, and other necessary animals.<sup>11</sup>

### b. Workmen

It was deemed necessary to isolate the station workmen from the leprosy settlement by confining them to the bounds of the portion of the government reservation on which the buildings were to be erected. Chinese were favored as being easily controlled and indifferent to isolation, while their labor was obtainable at reasonable rates. Also they would provide their own food.<sup>12</sup>

### c. Staff

The following attendants were specified by Brinckerhoff as being necessary from time to time as their specific services were required:

---

11. Walter R. Brinckerhoff to Surgeon-General, Public Health and Marine-Hospital Service, February 18, 1909, File 1500, General Files, 1897-1923, RG 90, NA. In March Brinckerhoff specified that one acre would be needed for corn and potatoes, two acres for other vegetables, and two acres for panicum grass or sorghum for stock fodder. Letter to the Surgeon-General, Public Health and Marine-Hospital Service, March 29, 1909, in ibid.

12. F.W. Pease, Inspector of Repairs, Public Health and Marine-Hospital Service, to Surgeon-General, November 10, 1908, in ibid.

one driver to keep the wagons and harness in good order, to haul supplies from Kalaupapa, milk cows, and care for livestock;

two cooks, one for the patients in the hospital compound and the other for attendants in the kitchen of the attendants' building;

one nurse to have charge of the ward during the day and sleep in the hospital compound at night;

one night watchman;

one laundryman in charge of the laundry in the hospital compound where all patients' clothing and bedding were to be washed;

one assistant laundryman to help in the hospital laundry (the intention was to have patients uniformed in white and change clothing twice a week);

one laundryman to wash the attendants' clothing and bedding in the laundry in the attendants' building in the administration compound;

one painter to work on buildings;

one messenger and cleaner to clean offices in the executive building, the storeroom, the porches and covered ways, and to carry mail to and from Kalaupapa, run errands, and be on duty in the pharmacist's office;

three laboratory boys, two to work in the lab and one to take care of the animals and clean and sterilize cages (animal experimentation was to be one of the principal branches of investigation at the station); and

two gardeners to raise vegetables for table use and as feed for the animals.



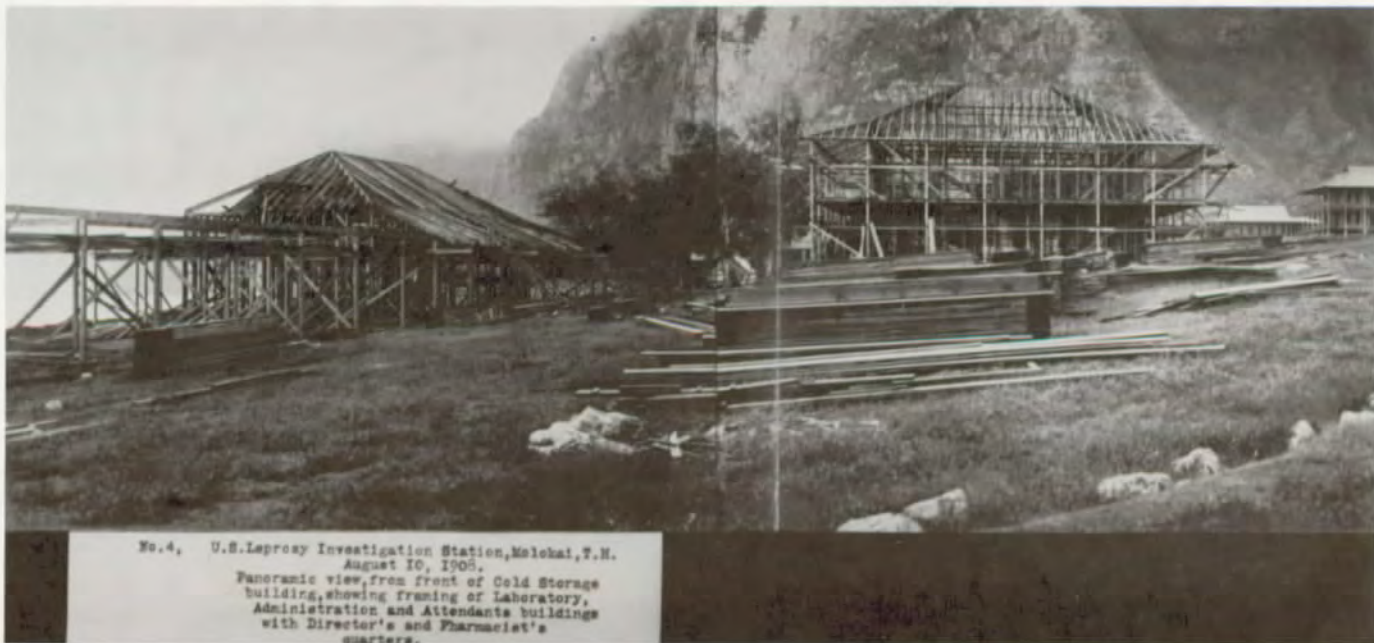
Illustration 45. Pharmacist's quarters, Leprosy Investigation Station, 1908. Courtesy, National Archives, Washington, D.C.



No. 3, U.S. Leprosy Investigation Station, Molokai, T.H.

Pharmacist's Quarters.  
August 10, 1908.

Illustration 46. Construction of Leprosy Investigation Station, 1908. Courtesy National Archives, Washington, D.C.



No. 4. U.S. Leprosy Investigation Station, Malakal, T.H.  
August 10, 1908.  
Panoramic view, from front of Cold Storage  
building, showing framing of Laboratory,  
Administration and Attendants' buildings  
with Director's and Pharmacist's  
quarters.

For the first year or so, several outside men would be required to grade the grounds, plant trees, set lawns, build roads and walks, and fence pastures.

Already employed were a stenographer, engineer, carpenter, seamstress, and laboratory attendant. Altogether twenty-three employees were envisioned, with one director, two assistant medical men, and one pharmacist. Foreseeing some hesitation on the part of his superiors to approve such a large staff, Brinckerhoff pointed out that

This list of employees seems large, for a hospital of 16 beds, at the first glance, but when it is considered that this is a hospital and laboratory station, with the necessity of duplicating kitchen and laundries on account of the nature of the disease treated, the interior painting of the buildings, the large number of animals that will be necessary for the laboratory work and the isolated location of the Hospital site, it will be seen<sup>13</sup> that the number is not in excess of the needs of the station.

#### 7. Construction Progresses

The first permanent building erected was the storage building, followed by the power house and cold storage building, director's quarters, pharmacist's quarters, administration and laboratory buildings, attendants' quarters, morgue, lavatory, laundry, hospital, surgery, and stable. Because of the large quantity of lumber required, proposals were invited from local lumber firms for supplying lumber by vessel from the Pacific Coast. All lumber and equipment had to be either floated ashore or loaded into small boats from the decks of inter-island steamers. A steady water supply was of course a necessity for the proper functioning of the various duties of the station. Back in 1906 the Board of Health had given permission for the Marine-Hospital Service to connect with the eight-inch main of the settlement water system and take a supply of water not to exceed a maximum of 200,000 gallons each

---

13. Walter R. Brinckerhoff, Director, Leprosy Investigation Station, to Surgeon-General, Public Health and Marine-Hospital Service, February 25, 1909, in ibid., p. 4.

twenty-four hours. For this service, the federal government would pay the territory two hundred dollars a year.<sup>14</sup>

An extension of the water supply system of the settlement was deemed necessary to provide the additional water needed for both the settlement and the station, and this was completed under the direction of the Superintendent of Public Works of the Territory of Hawai'i by the summer of 1909. To ensure a continuous and bountiful supply of water to the settlement and the station, the eight-inch-diameter pipeline was extended higher up Waikolu Valley to a new and additional perennial water source, enabling 480,000 gallons of water to be discharged each twenty-four-hour day. Check-valves and air valves were used to regulate the input to the main pipe from the several springs in the valley, thus ensuring a continuous flow.

An ample sewer system was provided, with one line from the director's and pharmacist's quarters, the other from the administration and hospital buildings, both discharging into the sea at the low water line. A complete plumbing system was installed in all the buildings, including sinks, water closets, lavatories, bathtubs, showers, slop sinks, and also garden hose outlets and fire hose standpipes in the grounds adjacent to the buildings.

The electric lighting system installed was run by a thirty-horsepower gasoline engine and direct-current dynamo, generating 17½ kilowatts supplying 290 sixteen-candlepower lamps. The combined ice-making and refrigeration plant had a capacity of one ton and could produce about 1,000 pounds of ice per day. It was operated by a twelve-inch-diameter water wheel. A fifty-light gas machine was also installed to supply gas for use in the laboratory, surgery, and elsewhere.

---

14. L.E. Pinkham, President, Board of Health, to Walter R. Brinckerhoff, Director, Leprosy Investigation, Kalawao, Molokai, May 8, 1906, in ibid.

Illustration 47. View from east of Leprosy Investigation Station, ca. 1908. Courtesy Bishop Museum, Honolulu.







Illustration 48. Wire rope landing, Kalawao, ca. 1908. Alfred Gibson photo.

Illustration 49. Leprosy Investigation Station, ca. 1909. Buildings completed, right-of-way fenced. Director's and pharmacist's quarters enclosed with glass. Photos courtesy Hawaii State Archives, Honolulu.



Illustration 50. Drawing of Administrative Compound, Leprosy Investigation Station. Courtesy National Archives, Washington, D.C.

# HOSPITAL Compound

PACIFIC OCEAN. 1000

Laboratory

Engine Room  
and  
Electric Light  
plant

WALK

WALK

ADMINISTRATIVE  
COMPOUND

WALK

Staff office  
Director  
Store room  
Store room  
Executive Building

Attendant  
Quarters

Stable

Public Showers and Bathing  
gates

PASTURE AND ORCHARD.

# RESIDENCE Compound

The exterior of all the buildings was painted light yellow, with white trim on the door and window openings and white porch posts and rails. The shingle roofs were stained green. A post and picket fence with gates was built on one side of the right-of-way across the reservation, and also on a line separating the hospital from the administration compound (see Illustration 47). The hospital accommodated about fourteen patients with ample space for a nurse, kitchen, dining room, bath rooms, and toilet room. The attendants' quarters held twelve rooms, plus a dining room, kitchen, laundry, and toilet rooms. The stable had six stalls, a feed room, harness room, and wagon space. The buildings were of wood on concrete foundations and of the bungalow type. The floor and porch space of all the buildings equalled 48,000 square feet. Average height of ceilings was twelve feet. The large porch spaces permitted outdoor living and were intended to make more bearable the prolonged high temperatures of the area. As it turned out, the porches of the director's and pharmacist's quarters had to be enclosed because their exposure to storms resulted in rain being driven across the porches and into the rooms. Constant mopping was the result. It was proposed that porches be enclosed with glass on the most exposed sides (see Illustration 45).

Use of the old hand-powered derrick at Kalupapa soon became unsuitable. Not only did it take too long to hoist the material from the boats to the wharf, but the Board of Health also proposed to charge for the labor involved in handling the materials and supplies. When an opportunity arose to purchase a second-hand steam hoisting engine at a reasonable price, the federal government jumped at it, and the new engine was soon installed. Not long afterwards, the old derrick broke, and a new, stronger one was erected by the territorial government.<sup>15</sup>

---

15. F.W. Pease, Inspector of Repairs, Public Health and Marine-Hospital Service, to Surgeon-General, July 1, 1909, in ibid., pp. 1-5.

#### 8. Work of the Station

Walter R. Brinckerhoff resigned as director of the station in 1909. He and his wife had never lived on Moloka'i. Instead, Brinckerhoff decided to work at Kalihi Hospital near Honolulu. This was probably due as much to his preoccupation with staying germ-free as with his society wife's determination to never set foot on the island. Upon her death in childbirth in 1909, Dr. Brinckerhoff resigned the directorship and declined in mental and physical health. He died in Boston two years later. He was succeeded by Donald H. Currie, a scientist of the regular corps of the Marine-Hospital Service, previously on duty in Honolulu, who had been interested in Brinckerhoff's investigations and volunteered to take his place. In a letter of late 1909 he outlined the planned work of the station for the next few years. Original research and studies were to be conducted on the culture of the bacillus of leprosy, on the transmission of the bacillus, on the infection of lower animals with leprosy, and on the products of certain bacteria to ascertain if a substance of therapeutic or diagnostic value could be obtained. Animals to be employed in this research were rabbits, hares, guinea pigs, wild rats, wild mice, white rats, white mice, dogs, cats, goats, swine, pigeons, chickens, and monkeys (old world, prehensile-tailed, and apes). Dr. Harry Hollmann would perform routine medical and surgical treatment of patients, administer certain special remedies, keep complete clinical records including photographs of cases, and pursue other miscellaneous studies. The station would also periodically publish preliminary reports and short articles for the use of health officers and general practitioners.<sup>16</sup>

#### 9. Opening of the Station

The buildings of the Kalawao Leprosy Investigation Station were finished by July 1, 1909, but because of the possible danger of transmission of the disease by flies, mosquitoes, or other insects, the

---

16. Donald H. Currie, Passed Assistant Surgeon, Director, Leprosy Investigation Station, to Surgeon-General, Public Health and Marine-Hospital Service, November 11, 1909, in ibid., pp. 1-2, 5-6.

Illustration 51. Leprosy Investigation Station, ca. 1913 or a little later. Baldwin Home in foreground, St. Philomena opposite. Pasture and wash and drying houses for clothes near sea. Courtesy National Archives, Washington, D.C.





Illustration 52. Location plan, Leprosy Investigation Station, 1908, Public Health Service Correspondence, 1893-1923, Record Group 90, National Archives, Washington, D.C.



station had to be thoroughly screened before patients could be admitted. The making of the necessary wire cloth and its transport from the eastern United States to Honolulu took longer than anticipated. Investigations at the temporary laboratory in Honolulu continued during this delay and would continue, as stated earlier, after the main station opened because the incipient cases there provided the best opportunity for studying early methods of diagnosis and means of relief. Experiments on animals and other systematic investigations of a clinical and laboratory nature could best be carried out on Molokai. Each line of investigation assisted the other and both worked toward the important results for which the station was established.

The Kalawao Leprosy Investigation Station, whose buildings and equipment cost about \$80,000, opened on December 23, 1909, for the reception of patients. Staff consisted of Donald H. Currie, director; Walter R. Brinckerhoff, assistant director; Harry T. Hollmann, medical assistant; Frank L. Gibson, pharmacist and administrative officer in charge of the building project; John Kluge, translator and librarian; and Ernst A. von Arnswaldt, technical assistant and translator. Dr. Brinckerhoff, as mentioned earlier, resigned as director of the station on May 31, 1909, and his duties were taken up by Dr. Currie. However, Brinckerhoff was willing to accept the position of assistant director, and it was decided to retain his services so that there would be no break in the line of scientific investigations that he had started.

#### 10. Recollections of Mrs. Frank L. Gibson

Our best day-to-day descriptions of life at the Molokai station were penned by the wife of the station pharmacist. An intelligent and adventuresome young bride, Emma Gibson thoroughly delighted in her husband's Hawaiian post. The following are some of her observations.

##### a. Structures

The station was divided into three compounds Residence, Executive, and Hospital. The Executive, or Administration, compound included storehouses, quarters for thirty-two Chinese workmen, the ice house, laboratories, cages for the animals, and a barn. Though

Pease had charge of the building plans, an island contractor, William Mutch, did the work. Brinckerhoff, germ conscious to the extent that he would not have rugs or draperies in his house, also stipulated all single-face walls in the structures so that mice and rats could not hide out and breed as they might between double walls. The entire station was surrounded by a double fence, ten feet apart, to insure no outside contact. A twenty-foot runway in the hospital compound paralleled the patients' rooms. Covered by a roof, it was open on three sides and held wash basins for the convenience of the doctors.

Regarding their own house, Mrs. Gibson recalled that the floor was painted jet black to soften the glare of the ocean's reflection. The lānai screens had been made of copper to prevent corrosion by the salt spray, but the green dust that soon covered the ocean-side lānais forced their enclosure by sliding glass windows. This also lessened storm damage. The back lānais were left open to the mountains. The upstairs lānai had hammocks, chairs, and couches, and each room opened onto the lānai through French doors. The electric fans supplied were seldom used because of the cool breezes.

b. Island Growth

The Gibsons planted several hundred three-inch-high ironwood trees brought from the Honolulu Agricultural Station, which by the time they left, were higher than the house. She also mentioned that in the valley back of the station were found abundant tropical flowers as well as orchards--papayas, peaches, plums, apples, sour cherries, figs, and guavas. Bananas, grapes, pineapples, and coconuts grew on the hillsides. Watermelons also thrived. The lantana shrub grew wild and frequently had to be cleared out of the pastures where it tended to make life miserable for the milk cows. Algaroba (kiawe) trees grew in the valley and kukui trees lined the trail to Kalaupapa settlement.

c. Trails

Gibson had a "hunting lodge" in the mountains over the cliffs, and there he stalked herds of deer and wild goats. The trail up the cliff was described as steep and precarious, chains having been

inserted in several places in the dirt and rock to help climbers pull themselves up. This trail was back of the Gibson house.

d. Boat Landings

The trip from Honolulu to Moloka'i took the better part of three days when Mrs. Gibson first went to Kalawao, with several stops along the way to pick up and deliver passengers and supplies. The only decent wharf on Moloka'i was at Kaunakakai, over the pali on the other side of the island. It was reached by horseback over the pali trail. Kalaupapa had its unimproved landing--a platform only for loading and unloading into surf boats that relayed passengers and supplies back and forth from the steamers. From there huge bullock wagons were used to get to Kalawao, because the rocks and holes made the going too tough for horses. At Waikolu (Alapa'i Point near Makaluahau Cove), the nearest point of landing to the station, disembarkation necessitated jumping into a small rowboat from a steamer, floating toward the shore, and waiting for the right moment to leap onto the land. From there a stone path at the base of the cliffs led to the station.<sup>17</sup>

e. Relationship with Brother Dutton

The station had a private post office, with Gibson as postmaster and his wife as assistant. Brother Dutton's extensive correspondence also went through this post office and was delivered to his messenger at the station gate. Dutton often visited the Gibsons at the station, especially for Thanksgiving and Christmas meals. To prevent possible contamination, he would come in fresh clean garments for each visit. A special and enduring friendship grew up between the Gibsons and Brother Dutton, who undoubtedly enjoyed the change of scenery and the short walk over to the station from the Baldwin Home.

11. Limited Operation of the Station

Prior to April 1909, all apprehended leprosy victims were sent to the colony on Moloka'i. On April 14, 1909, the territorial

---

17. Emma' Warren Gibson, Under the Cliffs of Molokai (Fresno, Ca.: Academy Library Guild, 1957), pp. 14, 18, 44, 47-48, 53, 59-60, 72-73.



legislature passed an act that provided for the establishment of a hospital on Oahu for the care of persons afflicted with leprosy. The act further stated that no patient would be taken to the settlement until he had been at the hospital for at least six months, unless at least three licensed physicians felt he could not benefit from further treatment there. The effect of the act was to detain all incipient cases at the hospital, precluding the study of early cases at the station on Moloka'i.

In addition, only nine patients volunteered for treatment and research at the Kalawao station. Although during the building process the leprosy sufferers made daily treks to watch the activity, in the end there was no desire on their part to confine themselves to the mercies of the latest medical equipment. To people accustomed to ministrations by devoted missionaries such as Father Damien, Brother Dutton, and Mother Marianne, as well as by various clergymen, Board of Health employees, and others who had no qualms about mingling with the patients, the sterile atmosphere, locked gates, and unfamiliar equipment of the station held no attraction. No more patients were ever admitted. The complete isolation of the station, in terms of lack of patients and thus opportunities for research and experimentation, did not bode well for its future.

The station at Kalihi seemed much more viable as a headquarters for experiments. Because the greatest field for investigation appeared to be on Oahu, and because it was found that transferring investigations from Moloka'i to the Kalihi receiving station reduced costs, Currie was authorized at the beginning of fiscal year 1911 to limit operations on Moloka'i and transfer the scientific and laboratory staff to Kalihi where the work would be continued in buildings furnished by the territory. Station records were still kept on Moloka'i and correspondence was conducted from there. Otherwise it was utilized primarily as a depot of operations. The only improvements or repairs made were those considered absolutely necessary for maintenance. Soon after the beginning of the fiscal year, workers at the station announced their successful cultivation of the leprosy bacillus on artificial media. Cultivation of the bacillus, a great advance in the scientific investigation

of the disease, had first been accomplished by M.T. Clegg in 1909.<sup>18</sup> Dr. George W. McCoy became director of the leprosy station on October 23, 1911, and served until 1915.

During 1912 time was spent doing experimental work in the treatment of leprosy by vaccine and serum therapy. Research was also done on possible transmission of the disease by lice, bedbugs, fleas, flies, and mosquitoes. During most of fiscal year 1913, both the Honolulu and Moloka'i laboratories were in operation. While the assistant director and acting assistant surgeon worked in Honolulu, the director spent most of his time at the Kalawao lab, where a better supply of pathological material was provided through the cooperation of Dr. W. J. Goodhue, who in 1902 had become medical superintendent of the settlement.<sup>19</sup>

By the next year, however, the buildings and fences were beginning to show signs of wear and decay due to their proximity to the sea, exposure to winds, and excessive rain. Much of the old fence had blown down and it was suggested that stone fences, such as those generally used in the settlement, might last longer. Dr. McCoy and Leighton Gibson finally closed the station on August 7, 1913. There was still a station post office at Kalawao in 1915, conducted by a non-leprous person and handling "clean" mail only. It was located in the pharmacist's office, in the executive building, in the administrative compound. The office was begun primarily to provide mail service for "clean" persons at the federal station, but it now handled all mail for Kalawao and all "clean" outgoing mail.

---

18. Annual Report of the Surgeon-General of the Public Health and Marine-Hospital Service of the United States for the Fiscal Year 1911 (Washington: Government Printing Office, 1912), pp. 71-73.

19. George W. McCoy, Passed Assistant Surgeon, Director, U.S. Leprosy Investigation Station, Kalawao, T.H., to Surgeon-General, U.S. Public Health and Marine-Hospital Service, July 31, 1912, File 1500, General Files, 1897-1923, RG 90, NA; Annual Report of the Surgeon-General of the Public Health and Marine-Hospital Service of the United States for the Fiscal Year 1913 (Washington: Government Printing Office, 1914), p. 58.

In 1916 scientific investigations continued at Kalihi, as did medical treatment. The station also performed bacteriological work for the territorial Board of Health, while the director functioned as sanitary advisor to the Governor of Hawai'i and served as a member of the Sanitary Code Commission of the territory. The end was near for the Moloka'i station, however. Not only was the Kalihi station more convenient and accessible, but it had continued to be impossible to induce the native Hawai'ian patients to enter the Kalawao hospital, a fact that had greatly hindered investigations there. By 1917 the station records and library had also been moved to the Kalihi office of the station. From there the station director supervised three caretakers at Kalawao. No scientific investigations were being conducted on Moloka'i.

Soon thereafter, the station at Kalawao was dismantled and its property transferred to Honolulu. By January 1921 the empty station was left in the charge of a single caretaker. At that point the territorial government requested that the buildings be put under its control so that the structures and/or materials could be used in another part of the settlement to add to the efficiency of treatment and comfort of the residents. This seemed a logical argument. Because the buildings could not be used for the purpose for which they had been designed, they would only continue to be a source of expense for maintenance and preservation in their original location. The Public Health Service had already removed all salvageable equipment. A bill providing for the transfer of the federal leprosy station buildings and land at Kalawao from the federal government to the Territory of Hawai'i was approved by the President of the United States on September 21, 1922. Custody of the property was relinquished on December 1.<sup>20</sup>

In the late 1920s the old federal buildings were still standing at Kalawao. A newspaper article regarding a visit by legislators noted that:

---

20. Assorted documents, File 1500, General Files, 1897-1923, RG 90, NA.



A half mile from the Baldwin home is the federal leprosy station built several years ago at a cost of \$300,000 and later abandoned. The legislators visited the station and found that the buildings are still in relatively good shape. The 1927 legislature appropriated \$10,000 for the removal of the structures from Kalawao to Kalaupapa but the territory has not been able to get any one to take the contract.

Superintendent Cooke informed the party that arrangements have been made with homesteaders on the lee side of Molokai to remove the structures to the village on a daily wage basis and the work is to be started April 1.<sup>21</sup>

Finally, in 1929, the old station was torn down and materials salvaged were taken to Kalaupapa for use in the repair of existing buildings.

The research activity carried on at the U.S. Leprosy Investigation Station at Kalihi Hospital, directed and financed by the National Institute of Health, which continued up until the beginning of World War II, was an important contribution to the territory's public health program. The proximity to Honolulu physicians and surgeons made the federal scientists available for consultation and other cooperative endeavors in the field of scientific research and also afforded opportunities to meet with other scientists temporarily stationed in Honolulu or passing through. The Kalihi Hospital for a time had the potential of serving as a research center of world interest and importance.

---

21. Undated clipping, possibly titled "Optimistic Spirit Noted by Visitors at Leper Colony," n.d. (1928 or 1929?), in Letterbook of news clippings, 1907-29, Hawaii State Archives, Honolulu.