Form 60

LIGHT HOUSE BOARD
JAN 1907
Received.

12

~~Eighteenth~~ 12th DISTRICT

Department of Commerce and Labor
LIGHT-HOUSE ESTABLISHMENT

DESCRIPTION OF LIGHT-HOUSE TOWER,

BUILDINGS, AND PREMISES

AT

Alcatraz Island Light Station, Cal

June 30, 1907.

Superseded by #43

filed 17 Feb. '08.

Form 60

Twelfth DISTRICT

Department of Commerce and Labor

LIGHT-HOUSE ESTABLISHMENT

DESCRIPTION OF LIGHT-HOUSE TOWER,

BUILDINGS, AND PREMISES

AT

Alcatraz Island Light Station, Cal

June 30, 1907

NOTE.

This Form is designed mainly to guide in preparing accurate descriptions of new light-stations, but will be used also in describing those that have been long established, when required. Screw-pile structures and lights on keepers' dwellings should be fully described without reference to this Form.

DEPARTMENT OF COMMERCE AND LABOR,
LIGHT-HOUSE BOARD, *February, 1906.*

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NAME AND POSITION OF THE LIGHT-HOUSE AND LIGHT-STATION.

Alcatraz Island Light-Station, Cal.

1. By whom described, H. W. Young, Keeper.
2. Date of description, June 30, 1907.
3. Distinguishing character of light or lights, White, revolving, Flash every fifteen seconds.
4. Latitude of tower, 37° 49' 29" } Authority, List of lights and fog-signals of 1906.
5. Longitude of tower, 122° 25' 21" }

PREMISES—A DETAILED DESCRIPTION OF, EMBRACING—

6. Site of station—Public land, purchase, Military or Naval reservation, lease: Military.
7. Date of reservation,
8. Date of deed,
9. Date of permission to occupy, North fog bell Oct 23, 1899. South fog-bell Oct 30, 1900.
10. Date of lease,
11. Area of the entire site,
12. Area inclosed, 111 ft. 6 inches long, 46 ft. wide. (Light Station)
13. Character of surface soil, sand and rock.
14. Distance of tower from nearest high-water mark, About 100 feet.
15. Inclosures to premises, one.
16. Wharf or landing on premises, Military wharf, used by the light-station people.
17. Road to landing or wharf, character of, and distance from tower, About 1/4 of a mile.
18. Means by which the light-station may be reached, Government steamer.

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PREMISES—A DETAILED DESCRIPTION OF—CONTINUED.

19. Distance to the nearest public road, railroad station, or steamboat landing, and to which: To steamboat landing, about three miles.
20. Distance to the nearest post office, Military, on our premises.
21. Distance to the nearest village or town, 2 1/2 miles.
22. Facilities for reaching the light-station by public conveyance, Government steamer.
23. Facilities for reaching the light-station by private conveyance from the nearest village, town, railroad station, or steamboat landing, and the distance: Obtain a pass from the Army officials, 2 1/2 miles.
24. Tower or other means used for supporting the lantern and apparatus, Tower.
25. Number of separate lights, One.
26. When first built or established, 1854.
27. When last thoroughly rebuilt, repaired, or renovated,
28. Condition at this date, In fairly good order.
29. Shape of tower in plan, Cylindrical.
30. Form of tower—Cylindrical, conical, or pyramidal,
31. Height of tower from base to ventilator ball of lantern, 174', 3/4"
32. Height of focal plane of lantern above mean high water (on sea and gulf coasts) or mean lake level on northern lakes and rivers: 164 ft
33. Background of the light-house, upon which it is projected, as seen from the sea or lake: None.
34. Color of tower, White and black.
35. Color of tower, how produced: Tower whitewashed, Lantern, black.
36. Tower—Connected with keeper's dwelling, and how, or detached. The dwelling is built around the tower.
37. Object—Seacoast, lake coast, bay, harbor, channel, or range; for general or local navigating purposes: For general navigation.
38. Materials of which the tower is built: Brick, Iron.
39. General description, embracing—
40. Thickness of walls at base, 16"
41. Thickness of walls at parapet, 12"
42. Diameter of tower (inscribed, if polygonal) at base, 8 feet, inside.

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PREMISES—A DETAILED DESCRIPTION OF—CONTINUED.

General description, embracing—Continued.

43. Diameter of tower (inscribed, if polygonal) at parapet, 7 ft. 10 inches.
44. Kind of stairway and steps, Circular, wood.
45. Number of landings of stairway, Two.
46. Size of glass for glazing tower windows, 9" x 9"
47. Number of windows in tower, and size of sash, 1. 2'3" x 3'4"
48. Number of doors, 4. All through the dwelling.
49. Kind of foundation and depth below the surface, Brick, about 3 ft.
50. Character of soil at and surrounding the light-house, Sand and rock.
51. Soil susceptible of being protected by grass, shrubbery, or trees: Yes.
52. Miscellaneous remarks upon tower and site: Though the lantern is glazed on all sides, the light cannot be seen to the north west, owing to a large brick building (The Citadel, I think it is called) acting as a wall.

LANTERN AND LANTERN FIXTURES.

53. Order or class of lantern, Fourth.
54. Polygonal or cylindrical, Cylindrical.
55. Diameter, inscribed, to glass, 8' 4"
56. Number of sides in plan, 10
57. Vertical or helical bars, Vertical.
58. Height glazed, 5' 4 1/2"
59. Number of plates in height, 2
60. Number of plates in each side, 2
61. Thickness of plates, 1/4"
62. Size of different plates, Upper 2' 7 1/2" x 2' 3" Lower 3' 3/4" x 2' 7 1/2"
63. Number of storm panes of glass, 4
64. Unglazed side of lantern in plates and degrees of arc, All sides glazed ; between what bearings (magnetic and *from seaward*),
65. Materials of which the lantern is constructed, Iron, copper and brass.

LANTERN AND LANTERN FIXTURES—CONTINUED.

66. Roof, Copper.

67. Ventilator ball, 3 feet high.

68. Lightning-conductor spindle, None.

69. Lightning conductor, of what material; how attached to spindle; how led, and how far below the surface of dry earth, or otherwise, as the case may be: None.

70. Balustrade and outside gallery, Iron

71. Lantern doors, and how fitted: One, iron, on hinges opening out

72. Floor of lantern—Of what materials: Stone and brick.

73. Watchroom door leading into the lantern, and how fitted: No watchroom.

74. Parapet, inside diameter (inscribed, if polygonal), 7' 10"

VENTILATORS.

75. In parapet, wall, or lower part of lantern: Lower part of lantern.

76. Lantern ladders for cleaning plate glass, outside: One, home-made.

77. Curtain hooks inside of lantern—How fitted: Rollers.

WATCHROOM.

78. How fitted: No watch-room.

WATCHROOM—CONTINUED.

79. Bell wires, or speaking tubes, or telephones for calling relief keepers—Kind: None

80. Where led:

ILLUMINATING APPARATUS, ETC.

81. Name of maker, Barbier & Renard, Paris Year made, no date

82. Marks and number on apparatus, none

83. Order of apparatus, Fourth Inside diameter (inscribed circle) of central drum, 19½ 21 inches

84. Characteristic of light shown by apparatus, White flash every 15 seconds

85. If movable; time of revolution, Revolving. Thirty seconds

86. Intervals between flashes, 15 seconds Center of flashes

87. Duration of flash, 2 seconds

88. If fixed, or fixed varied by flashes; state arc of each fixed part in degrees:

89. Number of panels in the lens apparatus, two

90. Number of flash panels, two ; arc of each, in degrees,

91. Number of elements in each panel of central drum of the lens, Three

92. Number of prisms in each panel *above* the central drum of the lens, seven

93. Number of prisms in each panel *below* the central drum of the lens, three

94. How are the flashes produced—By the whole apparatus revolving ; by revolving belt only ;
if by panels of vertical elements revolving outside of fixed lens, state the number of such panels:
Describe how: The whole apparatus turning around a central iron, on steel balls

95. If by vertical elements, (*a*) state the number in each panel, ; (*b*) and the number of elements of fixed lens covered by the panel:

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ILLUMINATING APPARATUS, ETC.—CONTINUED.

96. Pedestal, 4 iron rods covered with brass

97. Service table, iron.

98. Tube leading through the center of the upper metal ring of the lens into the ventilator ball, to carry off the gases of combustion and to assist in producing a proper draft in the lantern—Of what material, diameter, and how fitted and connected with damper tube when in place: A tin tube 2 3/4" dia., secured to cross braces, fitted with a funnel at lower end; it stands clear of the lens, about six inches, no damper.

99. If revolving, revolving machinery: Barbier and Benard, Paris.

100. Revolving on chariot, mercury float, or balls: on balls

101. If a chariot, describe it and state the number and size of each pattern of wheels in it:

102. If on balls, describe the construction of the ball-raceways, whether flat surface, or semicircular or V grooves: Flat plate inclosed in brass box

103. State number of balls: 21 ; diameter of balls, 5/8"

104. Revolving cord or chain—How led: Through the center of tower down drop tube.

105. Length of drop tube, 28 feet

106. Length of time revolving machinery will run after one winding: Eight hours.

107. How is the machinery protected: By a glass case.

ILLUMINATING APPARATUS, ETC.—CONTINUED.

108. How regulated? Describe: By opening or closing the wings of the governor, or by putting on or taking off small leaden weights. (about 1 lb. each.) This savrs tampering with the dilicate garnor.

IF COLORED LIGHT—

109. How is the color produced? Describe:

~~By the whole apparatus revolving.~~

110. Red sectors—Between what bearings (from seaward); magnetic, if on sea or gulf coasts; true on northern lakes and rivers:

111. State where colored glass is attached, if to illuminating apparatus or to the lantern: none

112. If colored glass is inside of illuminating apparatus describe its form:

LAMPS AND BURNERS.

113. Description of lamp in use and number of wicks to burner: Heins, one.

114. Number of spare lamps at the station, One

115. Number of spare lamp burners at the station, None

CLOSETS IN TOWER.

116. How fitted and used: One, with shelvrs for spare articles used in the towrr.

OIL HOUSE OR ROOM.

117. Describe where placed and how fitted: Ten feet S. W. from dwelling, built of brick, plastred, tin roof, iron door, shelvrs allaround the building, with a cement floor.

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CLOSETS AND STOREROOMS.

118. Where placed, how fitted and used: A carpenter's shop with benches for work, tools hung up in sight, cupboards for paints and all spare articles, a shed for coal, all in rear of dwelling.

119. Damp or dry, suited or unsuited to the purposes for which they were designed: Suited.

FOG SIGNAL.

120. Kind and character of apparatus: Gamewell, No. 3.

121. How much time is required to start the signal? Immediately if Electric plant is in order 5 to 8 minutes when started by hand.

122. Where, or by whom, made; Year made, The Gamewell Fire Alarm Telegraph Co., New York

123. Characteristic distinction of: S. E. bell strikes 5 blows with silent interval of 10 sec. between each stroke followed by a silent interval of 25 seconds.

Blast	Silent interval	Blast	Silent interval
sec.	sec.	sec.	sec.

The N. W. bell strikes one blow every 6 seconds.

124. What parts of the fog-signal machinery are in duplicate? none

125. If a bell, state (*a*) weight, none given lbs.; (*b*) metal, composition; (*c*) diameter, 4' 4" 4' 5"; (*d*) height, 3' 8" 3' 11"; (*e*) if struck by clockwork, state time it will run with one winding: one runs 3 hours One runs 1 hour 40 minutes.

126. If a steam signal, (*a*) describe boiler: none

(*b*) Kind:

(*c*) Flue-tube or water-tube,

(*d*) Dimensions: length, diameter,

(*e*) Number and length of tubes,

(*f*) Diameter of tubes,

(*g*) Furnace: Kind, ; length, ; width, ; height,

(*h*) Total heating surface in square feet,

(*i*) Grate surface in square feet,

(*j*) Number of grate bars,

FOG SIGNAL—CONTINUED.

(*k*) Kind of grate bars,

(*l*) Kind of coal or other fuel generally used,

(*m*) Kind of safety valve,

(*n*) Maximum pressure the boiler is capable of,

(*o*) Usual working pressure,

(*p*) Diameter of smokestack,

(*q*) Height of smokestack from grate,

(*r*) Height or length of steam drum, ; diameter,

(*s*) Kind of covering or jacket,

(*t*) Present condition of boiler,

(*u*) When built,

(*v*) Where built,

(*w*) By whom built,

(*x*) Is there a heater? ; what kind? ; what size?

How much does its use reduce the time of starting the fog signal?

127. If a steam engine is used, kind: Number of revolutions per minute,

(*a*) Diameter of cylinder,

(*b*) Stroke of piston,

(*c*) Size of steam pipe,

(*d*) When built,

(*e*) Where built,

(*f*) By whom built,

128. Whistle, trumpet, or siren, pressure at which blown,

129. Diameter of whistle, ; height, ; distance between orifice and edge of whistle, ; single tone, ; chime,

130. Disk or cylindrical siren, ; diameter of revolving part, ; when made, ; by whom made, ; number, width, and length of ports, ; revolutions per minute, ; type of governor, ; condition of revolving part,

131. Daboll trumpet, . Reed, ; length, ; breadth, ; thickness at base, ; thickness at tip,

132. Trumpet: Length, ; diameters, ; material,

133. Timing device:

FOG SIGNAL—CONTINUED.

134. Height of whistle or trumpet above mean high water,

135. Direction, by compass, in which trumpet points,

136. If signal is blown by compressed air, describe compressing machinery:

Kind of engine, ; by whom made, ;

when made, ; nominal size, horsepower, ;

kind of compressor, ; name of maker,

State if compressor is on same bed and geared with engine, or separate and belt-driven:

137. Location, with reference to the light-house, to a particular danger or channel, or to the special object for establishing it: There are two bells, one on each end of the island, for passing vessels.

138. Distance and direction from the light-house, One is 1300 ft., the other 450 ft.

139. Water supply for it, None needed.

140. How it is reached from the light-house: By walking around the road.

141. Description of fog-signal building or buildings: The S.E. bell house has 14'x12'x8' walls, the roof projects over the bell 7 ft, fitted with 2 windows, and tool closet. The N.W. bell is the same but no extension of roof over bell

DWELLINGS FOR KEEPERS. The light tower 30 ft. high

142. Location, with reference to the light-house tower:

Built around the tower

143. Coloring: White, red roof, green blinds.

144. Materials of which built, The old part is brick and plastered. The new part is of wood.

145. Number of rooms in each dwelling, One dwelling. Keeper 4 rooms, Each assistant one room with one spare room and a kitchen between them.

146. Number of keepers and assistants to each dwelling,

Three.

147. Outhouses, Two Toilet and wash room.

148. Coloring: Whitewashed. Trimmings lead color.

149. Paths or walks on the premises, None

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DWELLINGS FOR KEEPERS—CONTINUED.

150. Area of premises inclosed, and how: 111 feet 6in. x 46 ft. By fence on west side. By the dwelling, carpenter shop and coal shed on the East side, by the dwelling on the north and by the post office on the south.

151. Area of garden, 16 x 100ft.

152. Area in timber or shrubbery, none

153. Area susceptible of profitable cultivation,

154. Area cultivated or prepared for cultivation,

155. Character of adjacent surrounding country—Soil, sandy, clay, marsh, swamp, wood, fast ground, or shifting sands: sand and rock.

WATER FOR FOG SIGNAL, DRINKING, AND DOMESTIC USES GENERALLY.

156. How procured, From San Francisco, by Government steamer.

157. Quality, Good.

158. Quantity ample or not for the station at all seasons of the year, Plenty.

159. Liable or not to be injured by the inroads of storm tides and seas, Not likely.
Water supplied by Military authorities of the island.

160. If rain water in tanks or cisterns, what precautions have been taken to insure its purity?

161. Capacity of tanks or cisterns, and where placed:

162. Tanks or cisterns—Of what material made: An old cistern has been filled with rock and dirt to prevent sickness from stagnant water. It had not been used for many years. It measures 7 x 10 x 16 ft, extends under the floor of the assistants' kitchen. It was washed out, then white washed and then filled. Done in December, 1905, by order of the Commanding Officer of the Post at the request of the keeper.

WATER FOR FOG SIGNAL, DRINKING, AND DOMESTIC USES GENERALLY—CONTINUED.

163. Is there a distilling apparatus at the station? none

Name of maker:

Capacity, ; when installed, ; condition, ;

efficiency,

164. If from a well, describe and give depth:

165. Diameter,

166. Lined or not,

167. Water obtained by pump or bucket,

168. Distance from keeper's dwelling,

HEALTHFULNESS OF THE LIGHT-STATION AND VICINITY.

169. General opinion in regard to the healthfulness or unhealthfulness of the light-station and vicinity: Healthful

170. Diseases—What are most prevalent at the station and in the vicinity? None.

171. Do they prevail at particular seasons of the year, or not?

172. Are there any local causes, such as swamps, marshes, etc., in the immediate vicinity of the light-house which are likely to be the cause of these diseases? None.

HEALTHFULNESS OF THE LIGHT-STATION AND VICINITY—CONTINUED.

173. Would draining or other artificial means employed on the light-house premises be likely to improve the sanitary condition of the light-station?

LANDING, WHARF, BOATHOUSE, AND ROAD TO THE LIGHT-HOUSE.

174. Describe: We have no boat house, or wharf. A government steamer makes several trips a day. We use this steamer when necessary

175. Distance and direction from light-house: Down hill about 1/4 of a mile.

176. Hoisting engine, what kind? none

Number of revolutions per minute, ; diameter of cylinder, ; stroke,

Kind of boiler:

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177. MISCELLANEOUS REMARKS UPON THE GENERAL CHARACTER AND CONDITION OF THE PREMISES, TOWERS, BUILDINGS, AND ILLUMINATING APPARATUS AT THIS DATE.

A portion of the coalshed has been fitted up as a Battery room for starting and stopping the bells, and to keep the watch book, journal and letter book so that they can be seen by the Keepers at any time.

The plastering of the upper portion of the tower, inside, is kept from falling by painting often. One of the Keeper's rooms, has the same trouble,- patch and paint. It is not neat and cannot be made to look decent in this way.

The illuminating apparatus is in excellent condition. Both fog-bells are in good condition.

Respectfully,

A. Mackenzie

Major, Corps of Engineers, U. S. A.,
Engineer, 12th Light-House District.

18-43

Form 60

Retained
3583
BUREAU OF LIGHT-HOUSES
NOV 9 1910

12

18th LIGHT-HOUSE DISTRICT

Department of Commerce and Labor

LIGHT-HOUSE ESTABLISHMENT

DESCRIPTION OF

BUILDINGS, PREMISES, EQUIPMENT, ETC.,

AT

ALCATRAZ

LIGHT-STATION,

SAN FRANCISCO BAY, CAL.

JULY 1st, 1910

Superseded By #435

Form 60

18th LIGHT-HOUSE DISTRICT

Department of Commerce and Labor

LIGHT-HOUSE ESTABLISHMENT

DESCRIPTION OF

BUILDINGS, PREMISES, EQUIPMENT, ETC.,

AT

ALCATRAZ

LIGHT-STATION,

SAN FRANCISCO BAY, CAL.

July 1st, 1910

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NAME AND POSITION OF STATION.

Alcatraz ~~Island~~ Light Station, Cal.

1. By whom described, Milo Hoadley, Supt.
2. Date of description, July 1st, 1910
3. Distinguishing character of light or lights, White, revolving, flash every fifteen seconds
4. Latitude of light, 37° ~~49~~ 28" } Authority, ~~List of lights and fog signals of 190~~ Notice to Mariners Dec. 10th 1909
5. Longitude of light, 122° 25' 21" }

PREMISES—A DETAILED DESCRIPTION OF.

6. Site of station—Public land, purchase, lease, military or naval reservation: Military
7. Date of reservation,
8. Date of deed,
9. Date of lease,
10. Date of permission to occupy, North fog bell, Oct 23' 1899, South fog bell Oct 13' 1900
11. Area of the entire site, 2725 sq. ft. } Buildings, tower + area cover the entire site
12. Area inclosed, 2725 sq ft. }
13. Character of surface soil, sand and rock
14. Distance of tower from nearest high-water mark, About 200 ft.
15. Inclosures to premises, Covered by buildings, tower and area

PREMISES—A DETAILED DESCRIPTION OF—Continued.

16. Wharf or landing on premises, Military wharf, used by the light station people

17. Road to landing or wharf, character of, and distance from tower, winding road, in good condition, heavy grades in places, about 1/4 of a mile

18. Means by which the light-station may be reached, Government steamers and water craft

19. Distance to the nearest public road, railroad station, or steamboat landing, and to which: To steamboat landing in San Francisco, about 3 miles

20. Distance to nearest post office, Military about 50 ft.

21. Distance to nearest village or town, 2 1/2 miles

22. Facilities for reaching the light-station by public conveyance, Government steamers or water craft

23. Facilities for reaching light-station by private conveyance from nearest village, town, railroad station, or steamboat landing, and the distance: By obtaining pass from Army officials either in San Francisco or on the Island

24. Tower or other means used for supporting the lantern and apparatus, Reinforced concrete tower

25. Number of separate lights, One

26. When first built or established, 1854

27. When last thoroughly rebuilt, repaired, or renovated, 1909 new buildings throughout

28. Condition at this date, Good

29. Shape of tower in plan, Square at base, Octagonal balance of distance

30. Form of tower—Cylindrical, conical, or pyramidal, Pyramidal

31. Height of tower from base to ventilator ball of lantern, 90 ft- 2 1/4 in.

PREMISES—A DETAILED DESCRIPTION OF—Continued.

32. Height of focal plane of lantern above mean high water (on sea and gulf coasts) or mean lake level on northern lakes and rivers: 214 ft.

33. Background of the light-house, upon which it is projected, as seen from the sea or lake: none, except on North side by new military prison

34. Color of tower, Grey

35. Color of tower, how produced: Natural color of concrete

36. Tower—Connected with keeper's dwelling, and how; or detached: Connected, abutting two sides of base of tower

37. Object—Seacoast, lake coast, bay, harbor, channel, or range; for general or local navigating purposes: Harbor and range light

38. Materials of which the tower is built: Concrete, reinforced by steel rods

PREMISES—GENERAL DESCRIPTION OF.

39. Thickness of walls at base, 2 ft. 5 in

40. Thickness of walls at parapet, 10 in.

41. Diameter of tower (inscribed, if polygonal) at base, 13'-9"

42. Diameter of tower (inscribed, if polygonal) at parapet, 10'-8"

43. Kind of stairway and steps, Iron

44. Number of landings of stairway, four

45. Size of glass for glazing tower windows, Varied, on plan.

46. Number of windows in tower, and size of sash, 11 varied

47. Number of doors, 2

48. Kind of foundation and depth below the surface, Reinforced concrete, 5 ft.

49. Character of soil at and surrounding the light-house, Rock

PREMISES—GENERAL DESCRIPTION OF—Continued.

50. Soil susceptible of being protected by grass, shrubbery, or trees:

51. General remarks upon tower and site:

LANTERN AND LANTERN FIXTURES.

52. Order or class of lantern, Fourth

53. Polygonal or cylindrical, Cylindrical

54. Diameter, inscribed (*a*) to glass, 7'-7 4/2"; (*b*) in the clear, 7'-0 1/16"

55. Number of sides in plan, Circular

56. Vertical or helical bars, helical

57. Height glazed, 2'-11 1/2"

58. Number of plates in height, two 2nd one alternate

59. Number of plates in each side, ———

60. Thickness of plates, 1/4 inch

61. Size of different plates, Varied, see Standard 4th order lantern

62. Number of storm panes of glass, none

63. Unglazed side of lantern in plates and degrees of arc, ; between what bearings (*true* and *from seaward*),

64. Materials of which the lantern is constructed, Iron & Brass

65. Roof, Iron

LANTERN AND LANTERN FIXTURES—Continued.

66. Ventilator ball, Iron

67. Lightning-conductor spindle, Iron, platinum point

68. Lightning conductor, of what material; how attached to spindle; how led, and how far below the surface of dry earth, or otherwise, as the case may be:

69. Balustrade and outside gallery, Iron

70. Lantern doors, and how fitted: One, Iron, hinged to swing outward

71. Floor of lantern—Of what materials: Iron

72. Watch-room door leading into lantern, and how fitted: Open hatch

73. Parapet, inside diameter (inscribed, if polygonal), 7'-1 9/16"

VENTILATORS.

74. In parapet, wall, or lower part of lantern: In parapet

75. Lantern ladders for cleaning plate glass, outside: none

76. Curtain hooks inside of lantern—How fitted: Spring rollers, inside

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WATCH ROOM.

77. How fitted: .....

78. Bell wires, speaking tubes, or telephones for calling relief keepers—Kind: .....

79. Where led: .....

ILLUMINATING APPARATUS, ETC.

80. Name of maker, Barbier & Renard, Paris ; Year made, no date

81. Marks and number on apparatus, none

82. Order of apparatus, Fourth ; Inside diameter (inscribed circle, tangent to *glass*) of central drum, ~~21 in.~~ 19½ in

83. Characteristic of light shown *by apparatus*, white flash every 15 seconds

84. If movable; time of revolution, Revolving, 30 seconds

85. Intervals between flashes, 15 seconds center of flashes

86. Duration of flash, ¾ seconds

87. If fixed; or fixed, varied by flashes, state arc of each fixed part in degrees: .....

88. Number of panels in the lens apparatus, two

89. Number of flash panels, two ; arc of each, in degrees, ...

90. Number of elements in each panel of central drum of lens, Three

91. Number of prisms in each panel *above* central drum of lens, seven

92. Number of prisms in each panel *below* central drum of lens, three

ILLUMINATING APPARATUS, ETC.—Continued.

93. How are the flashes produced—By the whole apparatus revolving Yes; by revolving belt only ——; if by panels of vertical elements revolving outside of fixed lens, state the number of such panels: The whole apparatus revolving around a
Describe how: central pin, on steel balls.

94. If by vertical elements, (*a*) state the number in each panel, ——; (*b*) and the number of elements of fixed lens covered by the panel: ——

95. If light is occulting, state (*a*) the characteristic, ——

(*b*) Between what time limits may characteristic be varied without structural changes in mechanism, ——

(*c*) Are eclipses produced by sleeve, revolving screens, or valve (if gaslight), ——

(*d*) Size of sleeve and amplitude of movement, ——

(*e*) Axis of rotation of screens, horizontal or vertical, ——; (*f*) relation of axis to vertical axis of illuminating apparatus, ——

Screens: (*g*) Do they revolve as parts, or independently, of illuminating apparatus, ——

(*h*) If about vertical axis, how many in circumference, ——; (*i*) time required for complete revolution, ——; (*j*) form, ——;

(*k*) how mounted (see Questions 101–109), ——;

(*l*) if actuated by standard clockwork, state order, ——;

(*m*) date made, ——

If occultation is effected by valve (*n*) state name of maker, ——

(*o*) pattern, ——;

(*p*) does it operate reliably, ——

96. Pedestal, 4 iron pods, covered with brass, Stock 4th order pedestal plate 55 Price List Standard Articles

ILLUMINATING APPARATUS, ETC.—Continued.

97. Service table, Iron

98. Tube leading through center of upper metal ring of lens into ventilator ball, to carry off gases of combustion and to assist in producing proper draft in lantern—Of what material, diameter, and how fitted and connected with damper tube when in place:

99. If revolving, revolving machinery: Clockwork driven by weight

100. Revolving on chariot, mercury float, or balls: on balls.

101. If a chariot, describe it and state the number and size of each pattern of wheels in it:

102. If on balls, describe the construction of the ball-raceways, whether flat surface, or semicircular or V grooves: Flat plate enclosed in brass box.

103. State number of balls: 21 ; diameter of balls, 5/8 in.

104. Revolving cord or chain—How led: Metal cord, Through centre of tower and down drop tube

105. Length of drop tube, ~~42 ft 8 in~~ 25ft- 2in

106. Length of time revolving machinery will run after one winding: ~~4 hrs~~ 10 hrs

ILLUMINATING APPARATUS, ETC.—Continued.

107. How is the machinery protected? By a glass case

108. How regulated? Describe: By governor, Opening or closing the fans of same, or by putting on or taking off small weights (about 1 lb. each)

109. If colored light, how is the color produced? Describe:

110. Red sectors—Between what bearings, true (from seaward):

111. State where colored glass is attached, if to illuminating apparatus or to lantern:

112. If colored glass is inside of illuminating apparatus describe its form:

LAMPS, BURNERS, ETC.

113. (*a*) Description of lamp in use and number of wicks, or mantels, to burner, Hinks, one; (*b*) diameter of outside wick, 1½ in.; (*c*) diameter of mantel, ; (*d*) if more than one mantel, also diameter of circumscribing circle, ; if gaslight, (*e*) state kind, ; (*f*) number of burners, if

LAMPS, BURNERS, ETC.—Continued.

more than one burner in group, ____; (*g*) kind of burner, ____; (*h*) candlepower per burner, ____; (*i*) total candlepower of group, ____; (*j*) consumption of gas per burner per hour, ____ cubic feet; (*k*) total consumption per hour, ____ cubic feet; (*l*) how is gas obtained? ____; if generated at station, (*m*) describe generator, ____; (*n*) state name of maker, ____; (*o*) date of pattern, ____; (*p*) maximum capacity per hour, ____ cubic feet. If compressed gas is used, (*q*) describe container, ____; (*r*) capacity, ____ cubic feet of free gas; (*s*) to what pressure charged, ____ lbs.; (*t*) how is supply renewed? ____; (*u*) if by substitution of full for empty container, at what intervals? ____

114. Number of spare lamps at station, One

115. Number of spare lamp burners at station, none

CLOSETS IN TOWER.

116. How fitted and used, ____

OIL HOUSE OR ROOM.

117. Describe (*a*) where placed and how fitted, In area between buildings. Bowser system; (*b*) inside dimensions, 8'-6" x 9'-2"; (*c*) materials of which built, concrete; (*d*) capacity in 5-gallon cans, 112

CLOSETS AND STOREROOMS.

118. Where placed, how fitted and used, lamp closet in hallway of building with shelves for extra lamps and fixtures

CLOSETS AND STOREROOMS—Continued.

119. Damp or dry, suited or unsuited to the purposes for which they were designed, Dry, suited.

FOG SIGNAL.

120. Kind and character of apparatus: Gamewell No. 3

121. How much time is required to start the signal? At once; how long may the signal sound its characteristic with the quantity of air stored under pressure?

122. Where, or by whom, made: The Gamewell Fire Alarm Telegraph Co. New York

Year made, (no date)

123. Characteristic distinction of: South Bell strikes 5 blows with silent intervals of 10 sec. between each stroke followed by silent intervals of 25 seconds. North Bell strikes 1 blow every 6 sec.

Blast (sec.)	Silent interval (sec.)	Blast (sec.)	Silent interval (sec.)

124. What parts of the fog-signal machinery are in duplicate?

125. If a bell, state (*a*) weight, ____ lbs.; (*b*) metal, Composition; (*c*) diameter, 4'-4" 4'-5"; (*d*) height, 3'-8" 3'-11"; (*e*) if struck by clockwork, state time it will run with one winding: ~~south~~ one runs 3 hours, the other (north) 1 hour 40 min.

126. If a steam signal, (*a*) describe boiler:

(*b*) Kind,

(*c*) Flue-tube or water-tube,

(*d*) Dimensions: ____ length, ____ diameter,

(*e*) Number and length of tubes,

(*f*) Diameter of tubes,

(*g*) Furnace: Kind, ____; length, ____; width, ____; height, ____

(*h*) Total heating surface in square feet,

(*i*) Grate surface in square feet,

FOG SIGNAL—Continued.

(*j*) Number of grate bars, ...

(*k*) Kind of grate bars, ...

(*l*) Kind of coal or other fuel generally used, ...

(*m*) Kind of safety valve, ...

(*n*) Maximum pressure the boiler is capable of, ...

(*o*) Usual working pressure, ...

(*p*) Diameter of smokestack, ...

(*q*) Height of smokestack from grate, ...

(*r*) Height or length of steam drum, ...; diameter, ...

(*s*) Kind of covering or jacket, ...

(*t*) Present condition of boiler, ...

(*u*) When built, ...

(*v*) Where built, ...

(*w*) By whom built, ...

(*x*) Is there a heater? .....; what kind? .....; what size? .....;

how much does its use reduce the time of starting the fog signal? .....

127. If a steam engine is used, kind: .....; number of revolutions per minute, ...

(*a*) Diameter of cylinder, ...

(*b*) Stroke of piston, ...

(*c*) Size of steam pipe, ...

(*d*) When built, ...

(*e*) Where built, ...

(*f*) By whom built, ...

128. Whistle, trumpet, or siren, pressure at which blown, ...

129. Diameter of whistle, ...; height, ...; distance between orifice and edge of whistle, ...; single tone, ...; chime, ...

FOG SIGNAL—Continued.

130. Disk or cylindrical siren, ...; diameter of revolving part, ...;
when made, ...; by whom made, ...;
number, width, and length of ports, ...; revolutions per minute, ...;
type of governor, ...; condition of revolving part, ...

131. Daboll trumpet, ... Reed, ...; length, ...; breadth, ...; thickness
at base, ...; thickness at tip, ...

132. Trumpet: Length, ...; diameters, ...; material, ...

133. Timing device, ...

134. Height of whistle or trumpet above mean high water, ...

135. Direction, *true*, in which trumpet points, ...

136. If signal is blown by compressed air, describe compressing machinery:
Kind of engine, ...; by whom made, ...;
when made, ...; nominal size, ...; horsepower, ...;
kind of compressor, ...; name of maker, ...
State if compressor is on same bed and geared with engine, or separate and belt-driven: .....

.....

137. Location, with reference to light-house, to a particular danger or channel, or to the special object for which established: One at each end of the Island, navigation of the waters of the bay of San Francisco.

138. Distance and direction, *true*, from light-house, 312°-35' & 132°-35' about

139. Water supply for it, Not needed

140. How is it reached from the light-house? By roadway

.....

141. Description for fog-signal building or buildings: The South bell house 14'x12'x8' the roof projecting over bell 7 ft. fitted with 2 windows and tool closet. The North bell house the same but roof does not extend over bell, Height towers 30 ft. high

DWELLINGS FOR KEEPERS.

142. Location with reference to light-house tower: Abutting on two sides of tower

143. Coloring: Natural plaster with seal brown trimming Red tile roof

144. Materials of which built, Frame, covered with cement plaster

145. Number of rooms in each dwelling, Principal keepers dwelling, 4 rooms & bath Assts, double quarters, 4 rooms & bath each.

146. Number of keepers and assistants to each dwelling, one in keepers, two in assts.

147. Outhouses, none

148. Coloring:

149. Paths or walks on the premises, Area inclosing angle formed by dwellings

150. Area of premises inclosed, and how: 2725 sq. ft Buildings occupy entire site

151. Area of garden,

152. Area in timber or shrubbery,

153. Area susceptible of profitable cultivation,

154. Area cultivated or prepared for cultivation,

DWELLINGS FOR KEEPERS—Continued.

155. Character of adjacent surrounding country—Soil, sandy, clay, marsh, swamp, wood, fast ground, or shifting sands: Sands & rock

WATER FOR FOG SIGNAL, DRINKING, AND DOMESTIC USES GENERALLY.

156. How procured, From tanks on Military Prison, which are filled from supply obtained in San Francisco by govt steamers & pumped to tanks.

157. Quality, Good

158. Quantity ample or not for the station at all seasons of the year, Ample

159. Liable or not to be injured by the inroads of storm tides and seas, Not

160. If rain water in tanks or cisterns, what precautions have been taken to insure its purity?

161. Capacity of tanks or cisterns, and where placed: Drawn from supply pipes

162. Tanks or cisterns—Of what material made:

163. Is there a distilling apparatus at the station?

Name of maker:

Capacity, ; when installed, ; condition, ;

efficiency,

164. If from a well, describe and give depth:

165. Diameter,

166. Lined or not,

167. Water obtained by pump or bucket,

168. Distance from keeper's dwelling,

HEALTHFULNESS OF THE LIGHT-STATION AND VICINITY.

169. General opinion in regard to the healthfulness or unhealthfulness of the light-station and vicinity: Excellent

170. Diseases—What are most prevalent at the station and in the vicinity?

171. Do they prevail at particular seasons of the year, or not?

172. Are there any local causes, such as swamps, marshes, etc., in the immediate vicinity of the light-house which are likely to be the cause of these diseases?

173. Would draining or other artificial means employed on the light-house premises be likely to improve the sanitary condition of the light-station?

LANDING, WHARF, BOATHOUSE, AND ROAD TO THE LIGHT-HOUSE.

174. Describe: Government landing on Island, where steamer can and do land several times per day

LANDING, WHARF, BOATHOUSE, ETC.—Continued.

175. Distance and direction from light-house: Down hill about ¼ mile

176. Hoisting engine, what kind? .....

Number of revolutions per minute, ...; diameter of cylinder, ...; stroke, ...

Kind of boiler: .....

177. **MISCELLANEOUS REMARKS UPON THE GENERAL CHARACTER AND CONDITION OF THE PREMISES, TOWERS, BUILDINGS, AND ILLUMINATING APPARATUS AT THIS DATE.** The fog bells can be started and stopped by an electrical device, the switch board of which is situated in the hallway common to both dwellings. The strokes of the bells can also be indicated on said board. The wires for this system are strung on redwood poles placed outside of roadway, connecting both bell houses.

MISCELLANEOUS REMARKS, ETC.—Continued.

The work of reconstructing Alcatraz Light-Station, including new tower and new Keepers' quarters, was practically completed on June 30th 1910

Respectfully,

W. A. Mapplett

Lieut. Commander, U.S.N.,

Inspector, 18th L.H.Dist.

18-45

Form 60

12

~~18th~~ LIGHTHOUSE DISTRICT

DEPARTMENT OF COMMERCE
LIGHTHOUSE SERVICE

DESCRIPTION

OF

ALCATRAZ

LIGHT STATION

State: California

May, 1915

1914

DESCRIPTION OF LIGHT STATION.

1. By whom described D. W. Day, date May 22, 1915

STATION.

2. Name of station, Alcatraz Light Station

3. Characteristic of light, Flashing white every 5 sec.

4. Geographical position of light: Latitude, 37° 49' ~~28~~ 36"; longitude, 122° 25' ~~81~~ 17".

5. Location, On southeast part of Alcatraz Id. in San Francisco Bay.

PREMISES.

6. Origin of title to site of station (public land, purchase, lease, military or naval reservation), Military Reservation

7. Date of reservation, deed, lease, or permission to occupy, N. fog Bell Oct 23, 1899 S. fog Bell Oct 13, 1900

8. Area of the entire site, 2725 ft; (*b*) area inclosed, 2725 ft; (*c*) type of fence,

9. Distance of tower from nearest high-water mark, About 200 ft.

10. Wharf or landing on premises, Military wharf used for Lighthouse purposes.

11. Means by which the light station may be reached and distance to nearest post office or town, with name, Government steamers and water craft — About 3 miles to San Francisco.

12. Tower or other means used for supporting the lantern and apparatus, Reinforced concrete Tower

13. Number of separate lights, One

14. When first built or established, 1854

DESCRIPTION OF LIGHT STATION.

PREMISES—Continued.

15. When last thoroughly rebuilt, repaired, or renovated, 1909 New buildings throughout.
16. Height of focal plane of lantern above mean high water (on sea and gulf coasts) or mean lake level on northern lakes and rivers, 214 ft.
17. Background of the lighthouse, upon which it is projected, as seen from seaward, None, except by new Military Prison on North side.
18. Color of tower, and how produced, White, paint.
19. Tower—Connected with keeper's dwelling, and how; or detached, Connected, abutting two sides of base of Tower.
20. Purpose of aid—Seacoast, lake coast, bay, harbor, channel, or range; for general or local navigation, Harbor and range light.
21. Materials of which the tower is built, Reinforced concrete.
22. Kind of stairway and steps, Iron.
23. Size of glass for glazing tower windows, Varied — see plan.
24. Number of windows in tower, and size of sash, 11 — varied
25. Number and size of doors, 2 — 2'-0" x 8'-0"
26. General remarks upon tower and site, Tower built on solid rock.

LANTERN AND LANTERN FIXTURES.

27. Order or class of lantern, Fourth.
28. If polygonal, state number of sides; if cylindrical, state diameter, 7'-7 42" diam.
29. Vertical or helical bars, Helical; thickness of bars, 7/8"; height glazed, 2'-11½"
30. Number of plates in height, Two and one, alternately; in each side, —
31. Thickness and size of plates, ¼" — varied — see standard 4th Order Lantern.
32. Unglazed side of lantern in plates and degrees of arc, None; between what bearings (true and from seaward), —
33. Materials of which the lantern is constructed, Iron & brass
34. Roof, Iron

LANTERN AND LANTERN FIXTURES—Continued.

35. Ventilator ball, Iron
36. Lightning-conductor spindle, Iron, platinum point
37. Balustrade and outside gallery, Iron
38. Lantern doors, and how fitted, One, iron, hinged to swing outward
39. Floor of lantern—Of what materials, Iron
40. Watch-room door leading into lantern, and how fitted, Open hatch

VENTILATORS.

41. In parapet, wall, or lower part of lantern, In parapet
42. Lantern ladders for cleaning plate glass, outside, None
43. Curtain hooks inside of lantern—How fitted, Spring rollers

WATCH ROOM.

44. How fitted,
45. Bell wires, speaking tubes, or telephones for calling relief keepers—Kind, Electric bells
46. Where led, To sleeping quarters from hallway

ILLUMINATING APPARATUS, ETC.

47. Kind of apparatus, Flashing; intensity in English candles, 80,000
48. Name of maker, No name; year made, No date
49. Marks and number on apparatus, None
50. Order of apparatus, 4th Order; inside diameter (inscribed circle, tangent to glass) of central drum, 20 inches
51. **If the apparatus is a parabolic mirror,** state (*a*) diameter of opening, ; (*b*) depth of mirror, ; (*c*) its focal length, ; (*d*) material of which it is made,
52. **If revolving,** time of revolution, 30 seconds
(*a*) duration of flash, 0.5 sec.; (*b*) duration of eclipse, 4.5 sec.
53. **If fixed,** or fixed varied by flashes, state arc of each fixed part in degrees, ;
(*a*) duration of fixed light, sec.; (*b*) eclipse, sec.; (*c*) flash, sec.

ILLUMINATING APPARATUS, ETC.—Continued.

54. Number of panels in the lens apparatus, Six

55. Number of flash panels, Six; arc of each, in degrees, 60°

56. Number of elements in each panel of central drum of lens, 1

57. Number of prisms in each panel *above* central drum of lens, 4; are they fixed or flash? flash

58. Number of prisms in each panel *below* central drum of lens, 4; are they fixed or flash? flash

59. How are the flashes produced—By the whole apparatus revolving yes; by revolving belt only —; if by panels or vertical elements revolving outside of fixed lens, state the number of such panels, —

60. **If by vertical elements,** state (*a*) the number in each panel, ; and (*b*) the number of elements of fixed lens covered by the panel,

61. **If light is occulting,** state (*a*) the characteristic,

(*b*) Between what time limits may characteristic be varied without structural changes in mechanism?

(*c*) Are eclipses produced by sleeve, revolving screens, or valve (if gaslight)?

(*d*) Size of sleeve and amplitude of movement,

(*e*) Axis of rotation of screens, horizontal or vertical, ; (*f*) relation of axis to vertical axis of illuminating apparatus,

(*g*) Do the screens revolve as parts, or independently, of illuminating apparatus?

(*h*) If about vertical axis, how many in circumference, ; (*i*) time required for complete revolution, ; (*j*) form, ;

(*k*) how mounted (see Questions 62–65), ;

(*l*) if actuated by clockwork, state order and maker, ;

(*m*) date made,

If occultation is effected by valve, state (*n*) name of maker, ;

(*o*) pattern, ;

(*p*) does it operate reliably?

62. **If revolving,** does the apparatus revolve on chariot wheels, mercury float, or balls? Balls

63. **If a chariot,** describe it and state the number and size of each pattern of wheels in it,

ILLUMINATING APPARATUS, ETC.—Continued.

54. Number of panels in the lens apparatus, Six

55. Number of flash panels, Six; arc of each, in degrees, 60°

56. Number of elements in each panel of central drum of lens, 1

57. Number of prisms in each panel *above* central drum of lens, 4; are they fixed or flash? flash

58. Number of prisms in each panel *below* central drum of lens, 4; are they fixed or flash? flash

59. How are the flashes produced—By the whole apparatus revolving yes; by revolving belt only —; if by panels or vertical elements revolving outside of fixed lens, state the number of such panels, —

60. **If by vertical elements,** state (*a*) the number in each panel, ; and (*b*) the number of elements of fixed lens covered by the panel,

61. **If light is occulting,** state (*a*) the characteristic,

(*b*) Between what time limits may characteristic be varied without structural changes in mechanism?

(*c*) Are eclipses produced by sleeve, revolving screens, or valve (if gaslight)?

(*d*) Size of sleeve and amplitude of movement,

(*e*) Axis of rotation of screens, horizontal or vertical, ; (*f*) relation of axis to vertical axis of illuminating apparatus,

(*g*) Do the screens revolve as parts, or independently, of illuminating apparatus?

(*h*) If about vertical axis, how many in circumference, ; (*i*) time required for complete revolution, ; (*j*) form, ;

(*k*) how mounted (see Questions 62–65), ;

(*l*) if actuated by clockwork, state order and maker, ;

(*m*) date made,

If occultation is effected by valve, state (*n*) name of maker, ;

(*o*) pattern, ;

(*p*) does it operate reliably?

62. **If revolving,** does the apparatus revolve on chariot wheels, mercury float, or balls? Balls

63. **If a chariot,** describe it and state the number and size of each pattern of wheels in it,

ILLUMINATING APPARATUS, ETC.—Continued.

64. **If on mercury float,** give (*a*) inside diameter of trough, ____; (*b*) inside depth of trough, ____; (*c*) outside diameter of float, ____; (*d*) depth of float, ____; (*e*) weight of mercury required, in pounds, ____; (*f*) how often mercury is renewed? ____

65. **If on balls,** (*a*) describe the construction of the ball-raceways, whether they are flat surface or semicircular or V grooves, Flat surface; (*b*) is a cage used to separate balls? yes; (*c*) state number of balls, 21; (*d*) diameter of balls, 3/8

66. Clock cord or chain, kind, Wire cord; size, 1/8"; length, 75 ft.; how led, directly from drum to weight 5 ft; diam. and length of clock drum, 4"x 4"

67. Length and inside dimensions of drop tube or weight box, 20 ft 8" diam.; clock weight, 80 pounds.

68. Length of time clock will run after one winding, 4 hours.

69. Does clock drive apparatus while being rewound? No.

70. How is the machinery protected? Glass case.

71. How regulated? Adjusting fans — increasing or decreasing weights.

72. Describe the pedestal, Four stanchions supporting clockwork and lens.

73. Lens protector—Is there one? Yes; kind, linen

74. Draft tube leading into ventilator ball—Of what material, diameter, and how fitted and connected with damper tube when in place, None used. fitted with 4 buttons which connect it into tube

75. **If colored light,** (*a*) how is the color produced? ____

(*b*) state where colored glass is attached, if to illuminating apparatus or to lantern, ____

76. If colored glass is inside of illuminating apparatus, describe its form, ____

77. Red sectors—Between what bearings, true (from seaward), ____

LAMPS, BURNERS, ETC.

78. Description of lamp: (*a*) give order, Form 5 D.C. Luminous Arc Lamp.; (*b*) kind of illuminant, Electricity.

(*c*) intensity in English candles, 8,500

If oil, or oil vapor:

(*a*) number of wicks, or mantels, to burner, ...;

(*b*) diameter of outside wick, ...; (*c*) diameter of mantel, ...;

(*d*) if more than one mantel, also diameter of circumscribing circle, ...

If gaslight:

(*e*) state kind, ...; (*f*) number of burners, if more than one burner in group, ...; (*g*) kind of burner, ...;

(*h*) candlepower per burner, ...; (*i*) total candlepower of group, ...;

(*j*) size of burner in cubic feet of gas per hour, ...;

(*k*) consumption of gas per hour, ... cubic feet; (*l*) how is gas obtained?

.....

If gas is generated at station:

(*m*) describe generator, ...;

(*n*) state name of maker, ...;

(*o*) date of pattern, ...; (*p*) maximum capacity per hour, ... cubic feet.

If compressed gas is used:

(*q*) describe container and give number in service, ...; spare .....;

(*r*) capacity, ... cubic feet of free gas; (*s*) to what pressure charged, ... lbs.; (*t*) how is supply renewed? .....;

(*u*) if by substitution of full for empty container, at what intervals? .....

.....

79. Number of spare lamps at station, None, 1 wick lamp for emergency

80. Number of spare lamp burners at station, Extra electrodes kept on hand

CLOSETS IN TOWER.

81. How fitted and used, None.

OIL HOUSE OR ROOM.

82. Describe (*a*) where placed and how fitted, In area between buildings (Not used)
(*b*) inside dimensions, 8'-6" x 9'-2"; (*c*) materials of which built, Concrete;
(*d*) capacity in 5-gallon cans, 112.

CLOSETS AND STOREROOMS.

83. Where placed, how fitted and used, Lamp closet in hallway of building with shelves for supplies.

84. Damp or dry, suited or unsuited to the purpose for which they were designed, Dry, suited

FOG SIGNAL.

85. Kind and character of apparatus, Sirens, electrically operated.

86. How much time is required to sound the signal? At once; how long may the signal sound its characteristic with the quantity of air stored under pressure? ———

87. Characteristic:

If whistle, trumpet, or siren:				If bell:			
Blast	Silent	Blast	Silent	____strokes	Silent	____strokes	Silent
5 sec.	15 sec.	5 sec.	15 sec.		sec.		sec.
N. 4 .	4 ..	4 .	18 ..				
S.							

88. What parts of the fog-signal machinery are in duplicate? Extra sirens at N end of island.

89. Location, with reference to lighthouse, to a particular danger or channel, or to the special object for which established, On each end of island — used for navigation of the waters of San Francisco Bay —

90. Distance and direction, true, from lighthouse, 312°35' and 132°35'

91. Water supply for it, Not needed

92. How is it reached from the lighthouse? By roadway —

FOG SIGNAL—Continued.

93. Description of fog-signal building or buildings, Small frame buildings - 4'-0" by 7'-0"

94. **If a bell,** state (*a*) weight, ... lbs.; (*b*) metal, ...; (*c*) diameter, ...; (*d*) height, ...; (*e*) if struck by clockwork, state time it will run with one winding, ...; (*f*) maker and date, ...; (*g*) weights for operating, ... lbs.

95. **If a steam signal,** describe boiler: (*a*) type, ...; (*b*) length, ...; (*c*) diameter, ...; (*d*) horsepower, ...; (*e*) maker and date, ...

(*f*) Is there a heater? .....; what kind? .....; what size? .....; how much does its use reduce the time of starting the fog signal? .....

96. **If a steam engine is used:** (*a*) kind, ...; (*b*) number of revolutions per minute, ...; (*c*) diameter of cylinder, ...; (*d*) stroke of piston, ...; (*e*) horsepower, ...; (*f*) maker and date, ...

97. **If internal combustion engines are used:** (*a*) kind of engine, ...; (*b*) maker, ...; (*c*) date, ...; (*d*) nominal size, ...; (*e*) horsepower, ...; (*f*) fuel used, ...; (*g*) how started, ...; (*h*) kind of compressor, ...; (*i*) maker and date, ...

State if compressor is on same bed and geared with engine, or separate and belt-driven, or both pistons on same rod, ...; if geared or belt-driven, state ratio, ...

Describe compressor machinery, (*a*) diameter of cylinder, ...; (*b*) stroke of piston, ...; (*c*) number of revolutions per minute, ...; (*d*) character and size of air-inlet valves, ...; (*e*) kind of unloader, ...; (*f*) diameter of delivery pipe, ...

FOG SIGNAL—Continued.

98. (*a*) Number air receivers, ____; (*b*) diameter, ____; (*c*) height, ____; (*d*) capacity cubic feet, each, ____; (*e*) pressure in each, ____; (*f*) make of reducing valve, if used, ____; (*g*) remarks, ____

99. **If whistle, trumpet, or siren,** pressure at which blown, ____

100. Diameter of whistle, ____; height, ____; distance between orifice and edge of whistle, ____; single tone, ____; chime, ____

101. **If disk or cylindrical siren,** ____; diameter of revolving part, ____; when made, ____; by whom made, ____; number, width, and length of ports, ____; revolutions per minute, ____; type of governor, ____; condition of revolving part, ____

102. **If Daboll trumpet:** Class, ____; reed: length, ____; breadth, ____; thickness at base, ____; thickness at tip, ____

103. **If trumpet:** Length, ____; diameters, ____; material, ____

104. Timing device, Electric sign flasher.

105. Height of whistle or trumpet above mean high water, About 25 ft.

106. Direction, *true*, in which trumpet points, 312° 15' & 132° 15'

107. Pressure and recording gauge, ____

DWELLINGS FOR KEEPERS.

108. Location with reference to lighthouse tower, Abutting on two sides of Tower.

109. Coloring, White, seal brown trimming; red tile roof.

110. Materials of which built, Frame, covered with cement plaster.

111. Number of dwellings, 3; number of rooms in each, 4 rooms & bath.

112. Describe heating plant, None.

113. Number of keepers and assistants in each dwelling, One in each.

114. Which keepers are furnished quarters? All.

115. Which keepers are not furnished quarters? None.

116. Outhouses, None; coloring, ____

117. Paths or walks on the premises, Cemented area formed by dwellings.

118. Area susceptible of profitable cultivation, ____; area cultivated or prepared for cultivation, ____

DWELLINGS FOR KEEPERS—Continued.

119. Character of adjacent surrounding country—Soil, sandy, clay, marsh, swamp, wood, fast ground, or shifting sands, Sand and rock

120. Furnish following data for stoves, kitchen sink, sink pump, and lamps in quarters:

Articles.	Keeper.	1st Assistant Keeper.	2d Assistant Keeper.	3d Assistant Keeper.
Stove, maker,	Wedgewood	Wedgewood	Wedgewood	
Stove, size,	68-20 A	68-20A	68-20A.	
Sink, maker,	Crane Co	Crane Co	Crane Co.	
Sink, size,	20x36	20x36	20x36	
Pump, maker,	None	None	None	
Pump, size,				
Lamps. (Give name, number, and make of all lamps in such set of quarters.)	1 Tubular Table lamp 1 hand lamp	1 Tubular Table lamp 1 hand lamp.	1 Tubular Table lamp. 1 hand lamp.	

Electric current in quarters for lighting.

WATER FOR FOG SIGNAL, DRINKING, ETC.

121. How procured, From Tanks on Military Prison which are filled from supply obtained in San Francisco by Government steamers and pumped to Tanks.

122. Quality, Good

123. Quantity ample or not for the station at all seasons of the year, Ample

124. Liable or not to be injured by the inroads of storm tides and seas, Not liable.

125. If rain water in tanks or cisterns, what precautions have been taken to insure its purity?

126. Capacity of tanks or cisterns, and where placed, Direct from supply pipes.

127. Tanks or cisterns—Of what material made,

WATER FOR FOG SIGNAL, DRINKING, ETC.—Continued.

128. Is there a distilling apparatus at the station? .....

Name of maker and date, ...;

capacity, ...; when installed, ...; condition, ...;

efficiency, ...

129. If from a well, describe and give depth, ...

130. Diameter, ...; lined or not, ...

131. Water obtained by pump or bucket, Direct from pipes; what power is used? .....

132. Distance from keeper's dwelling, ...

HEALTHFULNESS OF STATION.

133. General opinion in regard to the healthfulness of the light station and vicinity, Healthy.

.....

134. Diseases—What are most prevalent at the station and in the vicinity? None

135. Do they prevail at particular seasons of the year, or not? .....

136. Are there any local causes, such as swamps, marshes, etc., in the immediate vicinity of the lighthouse which are likely to be the cause of these diseases? No.

.....

137. Would draining or other artificial means employed on the lighthouse premises be likely to improve the sanitary condition of the light station? .....

BOATS.

138. Furnish following data for each boat at station:

Number.	Type.	Length.	Width.	When Built.	Date Received at Station.	Is Boat Fitted with Sails?	Suited to Work Performed.

BOATS—Continued.

139. **If power boat,** kind of engine, ...; horsepower, ...;
maker of engine, shop number, and date, ...
(*a*) type, size, number, and maker's name of spare coil, ...
....
(*b*) type, size, number, and maker's name of magneto, ...
....
(*c*) type and number of batteries, ...
(*d*) propeller wheel, diameter, ...; pitch, ...

140. Where are boats kept at station? ....

LANDING, WHARF, BOATHOUSE, AND ROAD TO THE LIGHTHOUSE.

141. Description, Government landing on island where steamers land several times a day.

142. Distance and direction of landing from lighthouse, About ¼ mile east.

143. Hoisting engine, what kind?....;
diameter of cylinder, ...; number of revolutions per minute, ...;
stroke, ...; kind of boiler, ...;
maker and date, ...

144. General Remarks: Timing device controlling sirenos is in lower part of Tower, and signals are started from that point. Dwellings supplied with electric light.

H. W. Rhodes

Inspector, 18th Light-House District.