REPRODUCED AT THE NATIONAL ARCHIVES

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Form 60

Chicago

9-~~Cleveland~~

~~Twelfth~~ LIGHTHOUSE DISTRICT

BUREAU OF LIGHT-HOUSES
APR 13 1911
DEPT OF COMMERCE AND LABOR

Department of Commerce and Labor

LIGHTHOUSE SERVICE

DESCRIPTION

OF

Little Sable

LIGHT STATION

State: Michigan

April 11th, 1911

(Ed. Feb., 1911—500.)

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DESCRIPTION OF LIGHT STATION.

1. By whom described Irving L. Gill Asst Lgt K, date April 11-1911

STATION.

2. Name of station, Little Sable, Michigan

3. Characteristic of light, Fixed white varied by a white flash every thirty seconds.

4. Geographical position of light: Latitude, 43° 39' 10"; longitude, 86° 32' 23".

5. Location, Little Sable Point, east shore of Lake Michigan

PREMISES.

6. Origin of title to site of station (public land, purchase, lease, military or naval reservation), Public land reserved by President U. S. Grant.

7. Date of reservation, deed, lease, or permission to occupy, July 2nd 1872

8. Area of the entire site, 41.8 acres; (*b*) area inclosed, none; (*c*) type of fence, ——

9. Distance of tower from nearest high-water mark, About 150'

10. Wharf or landing on premises, None

11. Means by which the light station may be reached and distance to nearest post office or town, with name, By Pere Marquette Ry to Mears Mich (nearest town) eight miles from light station

12. Tower or other means used for supporting the lantern and apparatus, Brick tower on pile and timber grillage foundation

13. Number of separate lights, One

14. When first built or established, 1874

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DESCRIPTION OF LIGHT STATION.

PREMISES—Continued.

15. When last thoroughly rebuilt, repaired, or renovated, Spring of 1911

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, 108 feet

17. Background of the lighthouse, upon which it is projected, as seen from seaward, Sand hills partially covered with light timber.

18. Color of tower, and how produced, White produced by paint.

19. Tower—Connected with keeper's dwelling, and how; or detached, Connected by covered way.

20. Purpose of aid—Seacoast, lake coast, bay, harbor, channel, or range; for general or local navigation, Lake coast light for general navigation

21. Materials of which the tower is built, Brick — stone foundation

22. Kind of stairway and steps, Cast iron

23. Size of glass for glazing tower windows, 10" x 16"

24. Number of windows in tower, and size of sash, Seven (2 of these with circle heads) casement sash $2' 3\frac{1}{2}'' \times 3' - 2\frac{1}{4}''$

25. Number and size of doors, Balcony doors folding Outside $1' - 4\frac{3}{4}'' \times 5' - 5\frac{3}{4}''$ Inside $1' - 7\frac{3}{4}'' \times 5' - 4\frac{3}{4}''$ Iron entrance door $3' - 3\frac{1}{8}'' \times 7' - 5\frac{1}{2}''$

26. General remarks upon tower and site, The reservation is made up of blow or drift sand.

LANTERN AND LANTERN FIXTURES.

27. Order or class of lantern, Third order

28. Polygonal with number of sides, or cylindrical with diameter, Polygonal — 10 sides

29. Vertical or helical bars, Vertical; height glazed, 69"

30. Number of plates in height, One; in each side, One

31. Thickness and size of plates, $\frac{3}{8}$" thick $69\frac{3}{4}'' \times 31\frac{1}{2}''$

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, Cast iron, copper and zinc.

34. Roof, Copper covered.

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LANTERN AND LANTERN FIXTURES—Continued.

35. Ventilator ball, Copper perforated for ventilation
36. Lightning-conductor spindle, attached to cowl
37. Balustrade and outside gallery, One at lantern deck & one at gallery. Cast & wrought iron
38. Lantern doors, and how fitted, Wood folding doors on hinges.
39. Floor of lantern—Of what materials, Cast Iron
40. Watch-room door leading into lantern, and how fitted, Steel trap door fitted with brass hinges.

VENTILATORS.

41. In parapet, wall, or lower part of lantern, Brick parapet wall.
42. Lantern ladders for cleaning plate glass, outside, Wood steps used.
43. Curtain hooks inside of lantern—How fitted, Steel hooks screwed into roof ribs

WATCH ROOM.

44. How fitted, With stove, coal bin, and steel floor.

45. Bell wires, speaking tubes, or telephones for calling relief keepers—Kind, None
46. Where led, —

ILLUMINATING APPARATUS, ETC.

47. Kind of apparatus, Revolving; intensity in English candles, 190440 flash panels (160 lamps & 2240 lens)
48. Name of maker, Sautter & Co— Paris.; year made, —
49. Marks and number on apparatus, None found.
50. Order of apparatus, Third; inside diameter (inscribed circle, tangent to glass) of central drum, 3'—3 3/8"
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, Five minutes
53. **If fixed,** or fixed varied by flashes, state arc of each fixed part in degrees, Arc of fixed light 300°

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ILLUMINATING APPARATUS, ETC.—Continued.

54. Number of panels in the lens apparatus, 8 fixed panels

55. Number of flash panels, 10; arc of each, in degrees, 36

56. Number of elements in each panel of central drum of lens, 7 in fixed part 6 in flash panel

57. Number of prisms in each panel *above* central drum of lens, Fifteen

58. Number of prisms in each panel *below* central drum of lens, Six

59. How are the flashes produced—By the whole apparatus revolving No; by revolving belt only Yes; if by panels of 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 a chariot, mercury float, or balls? Chariot

63. **If a chariot,** describe it and state the number and size of each pattern of wheels in it, Flash panels supported on steel wheel track by 6–5½" diam. chariot wheels, and guided by 2 sets of 6 each wheels 2 5/16" diam. also by 5 wheels 2 5/16" diam at top.

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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, ——

(*b*) state number of balls, ——; (*c*) diameter of balls, ——

66. Clock cord or chain, kind, steel wire cord; size, 1/4"; length, 100'; how led, over 3 pulleys to flue in wall; diam. and length of clock drum, 5 1/4" x 8 5/8"

67. Length and inside dimensions of drop tube or weight box, 12" square length 78'; clock weight, 90 pounds.

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

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

70. How is the machinery protected? Cast iron case with glass panels.

71. How regulated? By fly governor with self adjusting fans.

72. Describe the pedestal, Cast iron supported by clock case.

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

74. Draft tube leading into ventilator ball—Of what material, diameter, and how fitted and connected with damper tube when in place, None - hood over lens protector. Damper tube 3" diam. and connecting tube to top of lens in place,

75. **If colored light,** (*a*) how is the color produced? not colored.

(*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), ——

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LAMPS, BURNERS, ETC.

78. Description of lamp: (*a*) give order, Third; (*b*) kind of illuminant, Kerosene

(*c*) intensity in English candles, 160

If oil, or oil vapor:

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

(*b*) diameter of outside wick, 2 5/8"; (*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*) consumption of gas per burner per hour, — cubic feet;

(*k*) total consumption 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, One

80. Number of spare lamp burners at station, Two

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CLOSETS IN TOWER.

81. How fitted and used, One small locker with shelves used for chimneys.

OIL HOUSE OR ROOM.

82. Describe (*a*) where placed and how fitted, One N.E. from dwelling with steel shelves, One W. from tower 1 no. shelves, One cast iron & brick;
(*b*) inside dimensions, One 7'-3" diam; One 5'-7" x 7'-5"; (*c*) materials of which built, One Brick;
(*d*) capacity in 5-gallon cans, One 72 and One 105

CLOSETS AND STOREROOMS.

83. Where placed, how fitted and used, Eight closets, when remodeling is completed in connection with various rooms of dwelling; Cellar used for store room.

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, None

86. How much time is required to sound the signal? ; 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 sec.	*Silent* sec.	*Blast* sec.	*Silent* sec.	strokes	*Silent* sec.	strokes	*Silent* sec.

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

89. Location, with reference to lighthouse, to a particular danger or channel, or to the special object for which established,

90. Distance and direction, true, from lighthouse,

91. Water supply for it,

92. How is it reached from the lighthouse,

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FOG SIGNAL—Continued.

93. Description of fog-signal building or buildings, ...

.....

.....

.....

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, ...

.....

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, ...

.....

Describe compressor machinery, ...

.....

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FOG SIGNAL—Continued.

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

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

100. **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, ...

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

102. **If trumpet:** Length, ...; diameters, ...; material, ...

103. Timing device, ...

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

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

DWELLINGS FOR KEEPERS.

106. Location with reference to lighthouse tower, Ely connected by covered way.

107. Coloring, Red

108. Materials of which built, Brick walls, stone foundation, metal shingles.

109. Number of rooms in each dwelling, Twelve. One dwelling for two families

110. Number of keepers and assistants to each dwelling, One keeper + one assistant

111. Outhouses, 1 barn 18'-3" x 24'-3", 1 coalshed, 1 privy, and 2 oilhouses.

112. Coloring, Barn white, coalshed white, privy white, oilhouses red.

113. Paths or walks on the premises, Concrete and board walks.

114. Area susceptible of profitable cultivation, None

115. Area cultivated or prepared for cultivation, None

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DWELLINGS FOR KEEPERS—Continued.

116. Character of adjacent surrounding country—Soil, sandy, clay, marsh, swamp, wood, fast ground, or shifting sands, shifting sands along lake - Back country wooded some and soil is heavier.

117. 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,	Not government property	"		
Stove, size,	"	"		
Sink, maker,	Made of wood.	None at present		
Sink, size.				
Pump, maker,	No sink pump	None		
Pump, size,	"	"		
LAMPS. (Give name, nmber, and make of all lamps in such set of quarters.)	Table lamp (old style) 1 hand kerosene lamp.	1 - 5th order improved table lamp 1 hand kerosene lamp		

WATER FOR FOG SIGNAL, DRINKING, ETC.

118. How procured, From 1 1/4" drive well.

119. Quality, Good.

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

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

122. If rain water in tanks or cisterns, what precautions have been taken to insure its purity? No rain water tanks or cisterns

123. Capacity of tanks or cisterns, and where placed, —

124. Tanks or cisterns—Of what material made, —

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

125. Is there a distilling apparatus at the station? No

Name of maker and date, —;

capacity, —; when installed, —; condition, —;

efficiency, —.

126. If from a well, describe and give depth, 1¼" drive well about 15' deep.

127. Diameter, 1¼"; lined or not, 1¼" pipe

128. Water obtained by pump or bucket, Pumps.

129. Distance from keeper's dwelling, Twenty feet.

HEALTHFULNESS OF STATION.

130. General opinion in regard to the healthfulness of the light station and vicinity, Good health prevails.

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

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

133. 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.

134. Would draining or other artificial means employed on the lighthouse premises be likely to improve the sanitary condition of the light station? No.

BOATS.

135. Complete following data for each boat at station: No boats here.

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

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BOATS—Continued.

136. **If power boat,** kind of engine, None; 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, _____

137. Where are boats kept at station? _____

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

138. Description, None.

_____

_____

139. Distance and direction of landing from lighthouse, _____

_____

140. Hoisting engine, what kind? None;

diameter of cylinder, _____; number of revolutions per minute, _____;

stroke, _____; kind of boiler, _____;

maker and date, _____

141. General Remarks: An additional site 1/4 miles north of the light house containing about 240 acres was reserved by the President July 2-1877 for light house purposes

[signature]

Lieut Commander U.S. Navy

Inspector 12th D. L. H. District.