ADDRESS ALL COMMUNICATIONS TO
LIGHTHOUSE INSPECTOR
DETROIT, MICH.

DEPARTMENT OF COMMERCE
LIGHTHOUSE SERVICE

225

LIGHT
DEC 26 1914
HOUSES

CAP-J

Hydrog.
Engr. Cons.
Mar. Engr.
Personnel
Accounts.
Contracts
Chf. Clk.
Johnr.

noted - copy to [illegible] for info.

OFFICE OF INSPECTOR, 11TH DISTRICT
POST OFFICE BUILDING
DETROIT, MICH.

LIGHT
FEB 1 1915
HOUSES

Fog Signals.
re sound deflectors.

~~2/3/15~~
~~1/14/15~~
1/14/15

Copy to 10th by indo on 10th's letter dec. 11/14.

December 23, 1914.

Cop both to 15th

THE COMMISSIONER OF LIGHTHOUSES.

In reply to Bureau letter of December 16, relative to experience of this district with sound deflecting devices, I have to report as follows:-

2. Three stations in this district were originally fitted with parabolic sound deflectors, viz. Marquette, Duluth and Two Harbors Light Stations. All of these signals thus fitted were steam whistles, the deflectors being very deep and confined the sound to a rather narrow angle. All of these deflectors were established with a view to protecting residents of the adjacent towns from the annoyance caused by the direct blast of the whistle.

3. In each case the desired result was apparently achieved in that there were no further complaints after their installations. It is believed, however, that the efficiency of these signals as aid to mariners was somewhat lessened owing to the muffling effect and confusion of sound waves, as well as the reduced angle of sound. It is believed that the installation of some form of deflector may in some cases be justified if for no other reason than the psychological effects resulting

therefrom in satisfying the people, as it seems quite probable that the imagination plays a great part. That the trouble and annoyance is largely psychological would seem to be indicated by the experience this office has had in the removal and alteration of existing deflectors. In 1911 the steam signal at Marquette was dismantled and a standard 6" air siren substituted without other protection to the city than the cowl of the trumpet. In 1912 the parabolic deflector on the Duluth signal was removed and a flat steel plate placed behind the whistle. In 1913 the parabolic deflector on the signal at Two Harbors was removed and a flat steel plate erected instead behind the whistle. The result in each case was a great improvement in the signal from the mariner's standpoint, and in no case did the change bring a protest from citizens.

4. As showing the impracticability of attempting to provide complete protection to residents, the case of the air siren at Superior Entry may be mentioned where a protest was received from an official of the Duluth Water & Light Department who resided in East Duluth, nearly ten miles distant, wherein it was stated that on one occasion church services were almost broken up by the blasts from the Superior Entry siren.

5. It is believed that the most practicable type of deflector to adopt where necessary, would be one approaching

a parabolic shape but very flat, much the shape of a saucer.

Woodruff.

W.B.S.