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B.

(All communications should be addressed to "THE LIGHT-HOUSE BOARD."

Treasury Department,

Inclosures None.

Office of the Light-House Board,

Subject: Grassy Point, O.
Characteristics of lights.

Washington, June 8, 1893.

Lt. Col. Jared A. Smith, U.S.A.,

Engineer 10th Light-House District,

Cleveland, Ohio.

Sir:

The subject of the change in the characteristics of the range lights at Grassy Point, O., as set forth in your joint report of June 2, '93, is referred back to you for further consideration and for joint report with the Inspector of the district.

You recommend in that report that the range be lighted with two red lights. This appears to the Board to be objectionable for the reason that such a large percentage of light is absorbed by the colored glass, the percentage varying from 70 to 97 per cent. according to the circumstances. The range which it is proposed to mark is a long one, being something over four miles in length. It was thought that as this is to be solely a range (seeing that vessels have already gone far inside of the channel) it would be better to use at this point two regular range lenses set, the rear one, of course, higher than the one in front. These range lenses being white could be distinguished from other

white lights on shore by means of eclipses, that proposed for the front light of the range being one second in length alternating with two seconds of light, producing in all, 20 eclipses a minute. For the rear beacon it is proposed to have eclipses two seconds in length alternating with 18 seconds of light; in other words, three eclipses a minute; consequently the eclipses will be synchronous at the beginning of every minute and at no other time, assuming that the apparatus of each light is started at the same time.

These range lights will carry very much further than the light from an ordinary lens, and it will be possible, undoubtedly, to provide for them in the positions intended, as there will be needed no change in the construction of the towers in which they are to be shown.

The Board requests that you examine these ideas in connection with your recommendation and make a new joint report thereon.

Respectfully,

C. W. Raymond

Captain of Engineers, U. S. A.,
Engineer Secretary.