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IN THE

# Supreme Court of the United States

October Term, 1940

STATE OF WISCONSIN, STATE OF MINNESOTA, STATE OF OHIO and STATE OF PENNSYLVANIA,	Complainants,	} No. 2 Original
v. STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO,	Defendants.	
STATE OF MICHIGAN,	Complainant,	} No. 3 Original
v. STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, et al.,	Defendants.	
STATE OF NEW YORK,	Complainant,	} No. 4 Original
v. STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, et al.,	Defendants.	

## EXCEPTIONS BY THE STATES OF WISCONSIN, MINNESOTA, OHIO, PENNSYLVANIA, MICHIGAN and NEW YORK TO THE REPORT OF THE SPECIAL MASTER

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**EXCEPTIONS BY THE STATES OF WISCONSIN,  
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MICHIGAN and NEW YORK  
TO THE REPORT OF THE SPECIAL MASTER**

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FOREWORD

While we realize that the recommendation of the Special Master for a decree herein disposes of the issues involved on the petition of the State of Illinois and the return of the opposing Great Lakes States, we cannot overlook the fact that past experience has shown that both the State of Illinois and the Sanitary District of

Chicago have made repeated efforts to nullify the effect of the decree of this Court dated April 21, 1930.

In order that our position may be understood on the record, we are filing the exceptions herewith because we believe that had the Special Master not concluded that the petition of the State of Illinois should be dismissed on the basis on which he has made his recommendations, he would have made findings as requested in the exceptions herein on most, if not all, of these exceptions and the purpose hereof is to preserve the right to such findings if at any time an issue is presented in which those matters become important.

### EXCEPTIONS

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York in the above entitled Original Causes, Nos. 2, 3 and 4, October Term, 1940, jointly and severally except to the findings of fact made and filed by the Special Master in these causes and to the failure or refusal of the Special Master to make and file findings of fact requested by said States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York in the following particulars, to-wit:

## A.

EXCEPTIONS TO FAILURE OR REFUSAL OF THE SPECIAL MASTER TO MAKE OR GRANT FINDINGS OF FACT REQUESTED BY OR ON BEHALF OF THE STATES OF WISCONSIN, MINNESOTA, OHIO, PENNSYLVANIA, MICHIGAN AND NEW YORK.

## I.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to the failure or refusal of the Special Master to find or grant Complainants' Requested Finding of Fact No. 30, appearing on page 24 of the Requested Findings of Fact, which reads as follows, to-wit:

"The actual condition of the Illinois Waterway at Joliet and Lockport during 1941 is much improved over conditions which existed in previous years and will result in no nuisance with respect to odors during the summer months of the year 1941 (Opponent's Exhibit 14, R. 3030; Mohlman Cross-examination Exhibit 13A, R. 3304; Illinois Exhibit 61, R. 3529; Illinois Exhibits 24A, 25A, 26A, 27A, 28A, 29A, 47A, 50A, 51A, 52A, 54A, 60A, R. 3636, 3638, 3640, 3642, 3644, 3646, 3654, 3658, 3660, 3662, 3664, 3529; Opponent's Exhibits 8 and 16, R. 2762-3387)."

## II.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to the failure or refusal of the Special Master to find or grant Complainants' Requested Finding of Fact No. 31, appearing on page 25 of the Requested Findings of Fact, which reads as follows, to-wit:

"The Illinois Waterway as the result of receiving untreated sewage has not and does not give off any measurable amounts of hydrogen sulphide (Dr. Krumbiegel, R. 2185, 2198-2199; Dr. Enzer, R. 2173; Dr. McNally, R. 2669-2700; Howson, R. 1948; Ellms, R. 2326; Dr. Perkins, R. 2469-2474; Dr. Nichols, R. 3131, 3132)."

## III.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to the failure or refusal of the Special Master to find or grant Complainants' Requested Finding of Fact. No. 32, appearing on page 25 of the Requested Findings of Fact, which reads as follows, to-wit:

"Hydrogen sulphide is a very soluble gas and a great deal of such gas will remain dissolved in water and come up in minute bubbles over a large surface of water and within a few feet of water, and the dispersion of any such gas from the Illinois Waterway would be so great it could never reach a sufficient concentration to be detected by persons residing near or working or traveling along or on the Illinois Waterway (Enzer, R. 2168-2174; Nichols, R. 3131-3135)."

## IV.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to the failure or refusal of the Special Master to find or grant Complainants' Requested Finding of Fact No. 46, appearing on pages 29 and 30 of the Requested Findings of Fact, which reads as follows, to-wit:

"There is no measurable difference in the menace to health due to water taken from a well into which water from the Illinois Waterway has access regardless of whether the direct diversion from Lake Michigan is 1500 c.f.s. or 5000 c.f.s. (Howson, R. 1946-1948; Warrick, R. 2109)."

## V.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to the failure or refusal of the Special Master to find or grant Complainants' Requested Finding of Fact No. 51, appearing on pages 32, 33 and 34 of the Requested Findings of Fact, which reads as follows, to-wit:

"Feasible remedial or ameliorating measures available to the State of Illinois to remedy or ameliorate the conditions complained of along the Illinois Waterway at Lockport and Joliet, Illinois, without any additional diversion of water from Lake Michigan, are:

"(1) \* \* \* \* \*

"(2) Budgeting the flow of the water from Lake Michigan within the terms of the decree of April 21,

1930, so as to provide regulated flow of approximately 4200 c.f.s. including domestic pumpage to be used during each of the four summer months of each year. This would add 22,000 pounds of dissolved oxygen per day to the waters of the Chicago Drainage Canal during the summer months. (Howson, R. 2820).

“(3) Construction of temporary cascades at the old controlling works near Lockport, Illinois, which would add approximately 6-3/4 p.p.m. of dissolved oxygen to the waters of the Chicago Drainage Canal (Howson, R. 2825; Warrick, R. 2107-2233-2236; Enslow, R. 2009; Pearse, R. 195; Mohlman, R. 239; Illinois Exhibit 47A, R. 3654; Illinois Exhibit 20, R. 142-147; Opponents’ Exhibit 10, R. 2828; Illinois Exhibit 20, R. 142-147).

“(4) A greater use of air in the present activated sludge plants of the Sanitary District of Chicago which would add about 40,500 pounds of dissolved oxygen in the form of nitrate and nitrite oxygen (Howson, R. 2825, 3217, 1939, 1943; Warrick, R. 2105; Ellms, R. 2090; Buswell, R. 1892-1895; Opponents’ Exhibit 10 item 2, R. 2828; Opponents’ Exhibit 12, item 1, R. 2847).

“(5) Dredging the Brandon Road Pool below the McDonough Street bridge at Joliet, Illinois, to remove the sludge deposits accumulated there. (Andrew, R. 1503; Howson, R. 1939; Andrew’s Exhibits 4 and 5, R. 212-213; Opponents Exhibit 12, item 6, R. 2847).

“(6) The use of chlorine applied to the waters of the Illinois Waterway at the Brandon Road Pool below the McDonough Street bridge at Joliet, Illinois (Howson, R. 1943-44; Opponents’ Exhibits 11 and 12, R. 2832, 2847; Ellms, R. 2089, 2093, 2303-2304, 2314-2315; Buswell, R. 1896, 1900, 2255, 2262; Warrick, R. 2105, 2111-2112, 2248; Enslow, R. 1987-1994, 2070-2072).



“(7) The use of chemicals applied to the effluent of the West Side Imhoff tanks which would reduce the B.O.D. in the effluent from 57 p.p.m. to 36 p.p.m. or a total of 76,000 pounds of B.O.D. per day (Howson, R. 1941; Buswell, R. 1890-1892, 2287; Opponents’ Exhibit 12, R. 2847; Opponents Exhibit 11, R. 2832).

“(8) Additional treatment of all or a part of the West Side Imhoff tank effluent by putting such effluent through the West Side plant for aeration which would remove 200,000 pounds of B.O.D. per day from such effluent (Howson, R. 2838-2839; Opponents’ Exhibit 11, item 2, R. 2832).

“(9) Prohibit the discharge of any sludge into the main channel of the Chicago Drainage Canal which would keep out 105,000 pounds of B.O.D. per day. (Opponents’ Exhibit 11, item 4, R. 2832; Howson, R. 1940-1942; Warrick, R. 2107-2108, 2231; Ellms, R. 2089-2090; Enslow, R. 1985; Pearse, R. 210; Mohlman, R. 278, 281, 1426, 1875; Calvert, R. 2622-2623).

“(10) The use of chlorine applied to the effluent of the West Side Imhoff tanks (Howson, R. 2840-2842; Ellms, R. 2089-2093; Enslow, R. 2024; Opponents’ Exhibit 12, R. 2847).

“(1) Universal metering of the water supply of the City of Chicago and particularly the South and South West area (Howson, R. 2820-2821; Opponents’ Exhibit 9, R. 2823-2824).

“(12) Treatment of the sewage from Argo, Lemont, Lockport, and Joliet and from the State Prisons at and near Joliet; and also treatment of the industrial wastes that are discharged into the Illinois Waterway. (Jones, R. 294-296; Pearse, R. 1656-1657, 1781, 2555-2558; Cheadle, R. 435-436; Testim, R. 1391).”

## VI.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to the failure or refusal of the Special Master to find or grant Complainants' Requested Finding of Fact No. 52, appearing on page 34 of the Requested Findings of Fact, which reads as follows, to-wit:

"The waters from Lake Michigan abstracted by the Sanitary District of Chicago through the Chicago Drainage Canal has been and is being manipulated for power purposes to provide greater flows during the nighttime when the power load goes on (Christman, R. 630, 632-633; Cheadle, R. 426-427; Ramey, R. 1586; Illinois Exhibit 43, R. 1431-1432; Deneau, R. 799)."

## VII.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to the failure or refusal of the Special Master to find or grant Complainants' Requested Finding of Fact No. 55, appearing on page 35 of the Requested Findings of Fact, which reads as follows, to-wit:

"Universal metering of the City of Chicago water supply would reduce the per capita daily consumption by about one-half and would result in a similar reduction in the sewage flow which would extend the usefulness and available capacity of the parts of the sewage treatment plants of the Sanitary District of Chicago and would enable better results to be attained

at sewage disposal plants primarily designed on a liquid volume basis (Howson, R. 1942, 1965-1966, 2820-2821; Pearse, R. 1795)."

## VIII.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to the failure or refusal of the Special Master to find or grant Complainants' Requested Finding of Fact No. 56, appearing on pages 35 and 36 of the Requested Findings of Fact, which reads as follows, to-wit:

"In the event that the State of Illinois wishes to furnish any additional assurance to the inhabitants of the complaining communities the State of Illinois should first proceed with each and every remedial or ameliorating measure suggested in requested Findings of Fact No. 51, either singly or in combinations before any additional diversion of water from Lake Michigan is recommended as an ameliorating measure."

## B.

EXCEPTIONS TO FINDINGS OF FACT MADE AND  
FILED BY THE SPECIAL MASTER

## IX.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to that portion of the Finding of Fact appearing in the Report of the Special Master at page 50, which reads as follows, to-wit:

“ \* \* \* These odors are due in part to hydrogen sulphide and in part to other unidentifiable gases. \* \* \* ”

because insofar as said finding of fact finds or implies that measurable quantities of hydrogen sulphide are given off by the Illinois Waterway, such finding of fact is not supported by any competent evidence and is contrary to all the competent evidence in these causes.

## X.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to that portion of the Finding of Fact appearing in the Report of the Special Master at page 71, which reads as follows, to-wit:

“ \* \* \* it is also most probable that there will be no dissolved oxygen at the Pool in the summer of 1941 and that there are likely again to be offensive odors at Joliet and Lockport. \* \* \* ”

because insofar as said finding of fact finds or implies any concession by the opposing Great Lakes States that conditions in and along the Illinois Waterway at Joliet and Lockport will not be satisfactory during the summer months of 1941 said finding of fact is not supported by any competent evidence and is contrary to all the competent evidence in these causes.

## XI.

The States of Wisconsin, Minnesota, Ohio, Pennsylvania, Michigan and New York and each of them except to that portion of the Findings of Fact appearing in the Report of the Special Master at pages 110 to 113, inclusive, which read as follows, to-wit:

“(2) With respect to remedial or ameliorating measures available to the State of Illinois without an increase in the diversion of water from Lake Michigan, my findings are as follows:

“(a) The dredging of the Brandon Road Pool would remove chiefly old accumulations of sludge which have completely or largely lost their potency as causes of nuisance and would therefore be of extremely doubtful efficacy. It would cost between \$400,000 and \$750,000, plus the cost of providing spoil banks and lagoons. It would present problems as to possible nuisance from such spoil banks and lagoons and require further expense for chlorination. I do not think this is a feasible ameliorating measure.

“(b) The draining of Brandon Road Pool cannot be accomplished without some interference with navigation, to which the War Department, which has sole jurisdiction over navigation problems, will not con-

sent. For this reason I do not think this suggestion feasible. There would also be presented problems with respect to the water intake pipes of several industries which take water for industrial purposes from the Pool.

“(c) Chlorine is an effective measure to reduce and eliminate odors, but owing to the size of the Brandon Road Pool and the large sludge deposits therein and the continuing discharge into the Waterway of incompletely treated sewage, it is impossible to make a reasonably certain estimate of the amount of chlorine which would have to be applied to produce a substantial result.

“In order to have a reasonable prospect of substantially controlling offensive odors, it would be necessary to spend \$3,000 to \$4,000 a day for chlorine, plus several hundred thousand dollars for chlorinating equipment.

“(d) Cascading the water at Lockport or sending it over the dam there would be remedial to the extent of producing some oxygen at Lockport. How much oxygen would be produced and how much it would reach Joliet and the Brandon Road Pool is uncertain and could only be determined by actual trial. The use of the water in this way would cost the Sanitary District \$1,500 a day in the loss of power and it would be necessary to use an undetermined amount of chlorine to prevent an odor at the point of cascading.

“(e) The supply of additional oxygen through production of nitrates by increase of air on the North Side and Calumet plants is not a feasible ameliorating suggestion for the summer of 1941. The evidence before me is not sufficient to prove that it is feasible for 1942, in view of the testimony of the Sanitary Dis-

trict experts that it would require an increase in aeration tank capacity. The proof before me is insufficient to support a conclusion that this suggestion, if it could be put into effect for the summer of 1942, would be substantially ameliorating.

“(f) Chemical treatment at the West Side plant would involve a very large permanent expenditure, which could not be made effective in 1941 and if it could be installed by 1942 would be almost immediately superseded by the activated sludge treatment which is provided for by the District's permanent program. This does not seem to me a feasible ameliorating measure.

“(g) The estimates as to cost of chlorinating West Side Imhoff tank effluents are too uncertain and the opinions of the experts too conflicting as to the extent of amelioration which it would afford, to enable me to make any finding that such chlorination is a feasible ameliorating measure.

“(h) It is feasible for the Sanitary District to budget the 1,500 c.f.s. of water now permitted to be diverted in addition to domestic pumpage so as to divert only 1,150 c.f.s. in the months of January, February, March, November and December, and to allocate the aggregate saving in diversion in those months to the summer months. This ameliorating measure will not, however, materially reduce the B.O.D. at Lockport, and will not, therefore, substantially relieve the odor nuisance.

“(i) The adoption of compulsory water metering by Chicago is an ameliorating measure, but the evidence before me is not sufficient to enable me to make any finding as to the extent of amelioration which it would afford or the time within which it could be made available.

“(j) The provision of activated sludge treatment at the Southwest plant for the West Side Imhoff tank effluent is a very important and feasible ameliorating measure to which the Sanitary District is committed, and toward which it has made some progress. The extent of the progress will depend upon the industry and enterprise of the Sanitary District. There is no prospect that this ameliorating measure will be operative in the summer of 1941. It is possible, but doubtful, that by special diligence it might be made operative in the summer of 1942, instead of only by the end of 1942, as claimed by the District.

“(k) As additional equipment is installed, it will become possible to give complete treatment during the course of 1941 and 1942 to increased quantities of sewage at the Southwest plant. \* \* \* The extent of relief from offensive odors which will be afforded at Lockport and Joliet in the summer months of 1941 is very doubtful, but there is a better outlook for the summer months of 1942. Weather conditions will have an important influence,”

because, insofar as said findings of fact find or imply that the ameliorating measures suggested by the opposing Great Lake States would not remedy or afford substantial amelioration of the condition complained of, such findings of



fact are not supported by any competent evidence and are contrary to all the competent evidence in these causes.

Respectfully submitted,

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