P U B L I C H E A R I N G

before

ASSEMBLY AND SENATE COMMITTEES ON AIR,
AND WATER POLLUTION AND PUBLIC HEALTH

[Re Plan of Passaic Valley Sewerage Commission to discharge untreated sewage into the Passaic River - Assembly Concurrent Resolution 23 and Senate Resolution 15]

Held:
July 16, 1969
Hall of Records
Newark, New Jersey

Members of Committees present:

Senator James H. Wallwork [Chairman, Senate Committee]
Assemblyman Kenneth T. Wilson [Chairman, Assembly Committee]
Assemblyman Herbert H. Kiehn

Also:

Assemblyman Ralph R. Caputo
Assemblyman C. Richard Fiore
Assemblyman Alfred E. Fontanella
Assemblyman Harold C. Hollenbeck
Assemblyman Peter J. Russo
Assemblyman Joseph F. Scancarella

* * * *

I N D E X

- - - -

Index [Continued]

- - - -

ASSEMBLYMAN KENNETH T. WILSON [Chairman, Assembly Committee]: I would like to now open the hearing.

This is a hearing of the Air, Water Pollution and Public Health Committees of both the Senate and the Assembly which in accordance with Senate Resolution 15 and Assembly Resolution 23 was ordered to hold hearings on the proposed plan of the Passaic Valley Sewerage Commission to discharge 100 million gallons of raw untreated sewage in the Passaic River daily for a six- to seven-week period, commencing September 1st, 1969.

We have been directed by the Legislature to hold these hearings. I am the Chairman of the Air, Water Pollution and Public Health Committee for the Assembly. Senator Wallwork is Chairman of the Committee in the Senate. He is at my right. We also have Assemblyman Russo from Bergen County, Assemblyman Hollenbeck from Bergen County, and on my left Assemblyman Fiore from Essex County and Assemblyman Kiehn from Union County.

As to the order of testimony this morning, first we will extend legislative courtesy to any legislators who would like to give testimony before this Committee and they will be put on first. Next we are going to have the officials from the Passaic Valley Sewerage Commission testify, then the representatives from the State Health Department, the officials from the Federal government, and the other individuals who wish to testify, other elected officials.

I want to apologize for the cramped quarters. Because of the fact it was such a hot and humid day, we did move into the

Conference Room of the Board of Freeholders. But I would like to express the thanks of the members of the Legislature for the kind extension of their hospitality by the Board of Freeholders, allowing us to hold our public hearing in their public meeting room.

Senator Wallwork would now like to make a statement.

SENATOR WALLWORK: Thank you, Assemblyman Wilson. I did want to read the list of the people who have signed up so that we do know who is here to testify and we will try to keep the hearing moving along just as rapidly as possible.

We have Councilman Turco. We have Mr. Potter from Kearny and I don't know whether he is a Councilman; Assemblyman Doyle; Commissioner Janowski from Lyndhurst; Mayor Chenoweth from Nutley; Mr. McCormick, Essex County Engineer; Mr. O'Neill from Harrison; Freeholder Cooper from Bergen County; Mr. McMahon; Mr. Biunno from the City of Newark; Mr. Lubetkin; Mr. Nicol, the Health Officer of Kearny; Mr. Manganaro is here; Mayor Lapinsky from North Arlington; and the Health Officer from North Arlington, Mr. Kientz.

(Several members of the audience asked that their names be added to the list.)

What we will do is have one of Mr. Alito's people circulate this around so we won't waste time at this point calling each person's name out to sign up on the list and so we know who is here. We appreciate everyone appearing here. Assemblyman Wilson and I will move this as expeditiously as we possibly can.

ASSEMBLYMAN WILSON: I would like to now call the first witness and I believe that Assemblyman Doyle from Hudson County has a statement he would like to present to the Committee.

A S S E M B L Y M A N N O R M A N A. D O Y L E, J R.:

Senator, gentlemen and members of this Commission: I am Assemblyman Norman A. Doyle, Jr. from District 12D in Hudson.

Three communities of my district front on the Passaic River, those communities being Harrison, East Newark and Kearny. I am sure I don't have to tell you all as elected officials the public consternation this plan of the Passaic Valley has created among the people, especially among the communities fronting on the Passaic River.

I have discussed this with the Mayors and Councilmen of the three communities in question and they are unqualifiedly opposed to this dumping plan and urge that either Passaic Valley or this Commission come up with a workable alternative. I think I probably on that statement echo the sentiments of everybody in this room.

The crux of the problem is, of course, coming up with a workable alternative. A meeting was held on Monday, July 14th, at the Passaic Valley Sewerage Commission. I know Senator Wallwork was there and Assemblyman Russo and many engineers of the involved municipalities and a few mayors. And I thought it very significant that no one from an engineering standpoint had any serious criticism to level at the Passaic Valley Sewerage Commission nor did anyone seriously challenge their engineering conclusions, namely, that an emergency does exist, that this tunnel is in serious danger of collapsing. What we heard mainly was a number of officials getting up and saying, "We are against pollution." As I say, I think everybody is against pollution. But the crux of the problem is how to find a workable

alternative. Listening to the Passaic Valley engineer at that meeting, my impression was that we are down to about three, that probably no less than 40 or 50 plans were discussed and discarded either because of dangers outweighing the advantages or because of astronomical expense. And from my discussions and listening at this meeting, the three plans are: one, to create a temporary by-pass tunnel at a cost of approximately $2.1 million; a permanent by-pass tunnel at a cost of approximately $2.5 million; and a screening and chlorination process which would mitigate the pollution but not do away with it, at a cost of approximately $600,000.

The point I would like to make is that I think at this hearing the municipalities ought to go on record. Either they are for the more expensive method or they are against it. I think I can safely speak for the Mayors of Kearny, East Newark and Harrison by saying that they are in favor of the permanent tunnel at a cost of $2.5 million and it will cost the Town of Kearny, of which I am a resident, somewhere in the neighborhood of $64,000. Most of the telephone calls I have received and the people I have discussed this with say it is well worth the money. I don't propose to speak for any other municipality. I think Harrison and East Newark are willing to foot their share of the bill, even though they are already laboring under an astronomical tax burden, but I am sure that is another problem that I don't have to address myself to here.

Another recommendation I have is the immediate passage of Senate Bill 719 which will allow Passaic Valley to issue bonds for any project required by law. I might point out in passing

that I think that this dumping plan is much like the tip of an iceberg. It is merely a facet of a much more serious problem involving money quite simply. I see Deputy Attorney General Schwartz and I am sure that he will have something to say about the increased efforts of the State in the area of mitigating water pollution. As a result of one law suit, Passaic Valley is now going to have to construct a secondary treatment plant at again an astronomical cost and again at ultimate cost to the taxpayers of the municipalities within the Passaic Valley District. This problem also has to be faced and again I say I think it is a problem of money.

I am glad to see that Senate 719 has passed the Senate and I hope that every Assemblyman of the districts Hudson, Essex, Bergen, Passaic, the counties that are affected by this, can join together without regard for political persuasion and push to get this bill passed through the Senate.

Another suggestion I have is that maybe in November when we come back, we might get an emergency appropriation of somewhere in the neighborhood of a million or a million and a half dollars so that the permanent by-pass tunnel could be constructed at the same cost that the screening and chlorination could be constructed. In other words, the municipalities would foot part of the bill, but the Legislature, the State, would pick up the major part of it. And I don't think this is too outlandish because I remember at the emergency session of the Legislature that we had just about a month ago, we rushed through an emergency bill to provide flood control for Passaic County. I remember about a year ago we had no trouble providing, I think

it was Cape May County, with emergency appropriations to repair their jetties and I think this problem is just as emergent as that one. Thank you very much.

ASSEMBLYMAN WILSON: Are there any questions?

ASSEMBLYMAN FIORE: Mr. Doyle, the figures that you have here, they were computed when?

ASSEMBLYMAN DOYLE: Just recently. They were furnished by the Passaic Valley Sewerage Commission.

ASSEMBLYMAN FIORE: I see that you are talking about a screening and chlorination treatment.

ASSEMBLYMAN DOYLE: Yes.

ASSEMBLYMAN FIORE: And you are talking about a permanent by-pass. I believe one of our representatives in Washington claimed that Federal moneys will come in if we can show new construction or a treatment process. And I don't know how much the money will be. This happened to be Congressman Peter Rodino.

ASSEMBLYMAN DOYLE: Right.

ASSEMBLYMAN FIORE: I assume if Federal moneys come in, these figures would be dropped or the State moneys would be less.

ASSEMBLYMAN DOYLE: I would certainly hope so.

ASSEMBLYMAN FIORE: Thank you.

ASSEMBLYMAN WILSON: Any other questions from the members of the Committee? Assemblyman Kiehn.

ASSEMBLYMAN KIEHN: Assemblyman Doyle, what is the approximate length of the pipeline that is in danger of collapse?

ASSEMBLYMAN DOYLE: About 165 feet. One thing I didn't get into - I think probably the Passaic Valley engineer will

get into it in more detail - that this does present a very critical situation, not only is the road in danger of collapse, but there are buildings located near this tunnel where if the tunnel goes and the road collapses, the buildings may very well go too and I can envision law suits against Passaic Valley and again an even larger tab presented to the involved municipalities. I believe, to answer your question specifically, it was about 165 feet and the engineers' conclusion was that this tunnel could collapse at any moment. It could go right while we are discussing the problem or it might last five years from now.

ASSEMBLYMAN KIEHN: Where is the exact location of this?

ASSEMBLYMAN WILSON: Assemblyman Kiehn, we are going to have the Passaic Valley Sewerage Commission on and they will testify to the exact damage and location which might be better than have Assemblyman Doyle answer that.

Any other questions? [No response.] All right, thank you,Assemblyman Doyle.

I would like to read into the record a statement by the Town Engineer of Kearny, Mr. Gerhardt A. Joa. I will not read the whole thing, but he says: "The Honorable Joseph M. Healey, Mayor of the Town of Kearny, and the Town Council strongly oppose the by-passing of the sewage into the Passaic River. It is their sincere feeling that the addition of 4.5 billion gallons of raw sewage dumped into the river will create a serious health hazard and an obnoxious nuisance to the municipalities bordering the banks of this tidal waterway." They favor the repairs be made to the sewer by constructing a

closed pipe, or pipes, sewer line for an approximate distance of 3500 lineal feet along the bank of the Passaic River to carry the sewage around the damaged area of the intercepter line. The estimated cost would be $2,100,000. They appreciate the additional cost involved, but they feel the health hazard has to be overcome.

I would like to enter that into the record.

[Letter from Mr. Joa can be found on page 165 of this transcript.]

I would also like to enter into the record a list of signatures, a petition, that was sent to me by Mrs. George Woertz from Lyndhurst. The petition has been signed by over 100 citizens of the municipality of Lyndhurst, and reads as follows:

"We, the undersigned residents of Lyndhurst, New Jersey, who will be vitally affected by the pollution of the Passaic River, caused by the dumping of raw waste materials (untreated) into this river starting September 1, 1969 and to continue for forty-five days thereafter, do hereby petition and urgently request said Passaic Valley Sewerage Commission to delay the onset of this operation until such a time as an alternate solution is found."

And the Passaic Valley Sewerage Commission has stated that they will not commence with this plan on September 1st; they are waiting until after the findings of this hearing. I would like to also enter this into the record.

We will now have the Passaic Valley Sewerage Commission members testify and I believe Mr. McMahon who is the Chairman of the Board of Commissioners will be the first person to testify.

Mr. McMahon, will you please state your name and position.

J A M E S J. M c M A H O N: I am James J. McMahon, Chairman of the Passaic Valley Sewerage Commission.

At the outset, let me say that the Commission welcomes this opportunity to discuss with you gentlemen of the Senate and the House this particular project which has caused so much public concern.

We also would like the record to show that we welcome any recommendations or ideas from any Federal, State, local or other agency that will enable us to solve the problem within the limits of our resources and with recognized procedures. We believe that any fair, qualified or competent appraisal of our handling of this problem will show that we have proceeded with extreme caution, with prudence, with responsibility and good judgment. The misleading, erroneous and non-factual publicity given to this project by the news media and some public agencies and officials, most of it without any attempt to obtain accurate information from reliable sources, has given the public a false and fictitious impression of the conduct of this Commission with respect to this particular project.

Let me say at this point that the concern of this Commission for the health and the welfare of the people of our district as well as the State is equal or superior to that of anybody who has been writing or talking on this matter.

I think the record ought to show where the jurisdiction of the Passaic Valley starts and where it ends. Under the law, the jurisdiction of the Passaic Valley starts at the Great

Falls in Paterson and extends along the Passaic River to Newark Bay. We are not responsible for the debris that is found on the river banks of the river. This is the responsibility and within the police power of the municipalities and the Corps of Engineers. Our police power along the river is limited to the detection and the elimination of pollution that violates the statutes which describe what pollution consists of.

I want the record to show that no water in the portion of the river under our control is used for drinking purposes and bathing in the river in this same portion is prohibited by law. It might also be stated that jurisdiction above the Great Falls is with the State Department of Health and the Passaic Valley Water Commission and any pollution entering the river at that juncture is not the responsibility nor is it under the control of the Passaic Valley Sewerage Commission.

The tides affect the condition of the river pollution. Pollution entering Newark Bay is carried on the tides at various times up the Passaic as far as Wallington. The City of New York is depositing every day 300 million gallons of raw sewage in New York Harbor. The Hackensack River, the Hudson River, and the Kills also deposit pollution in New York Harbor. The effluent, after primary treatment, in our plant at Wilson Avenue and Newark Bay also deposits in New York Harbor. This deposit in New York Harbor after primary treatment of our operation is authorized as a result of a stipulation that was entered into by the Supreme Court of the United States and the City of New York and the Passaic Valley many, many years ago in 1914 or '15, at which time the City of New York instituted a suit to

prohibit the Passaic Valley from emptying its effluents in New York Harbor.

Presently the City of Newark beyond the point of our control is dumping somewhere between 20 and 25 million gallons of raw sewage into the Newark Bay, this as a result of a breakdown in their system which does connect with the Passaic Valley. Violations which have been called to the attention of the City of Newark from several of its outlets are also deposited in the Passaic River within the confines of our control. It has been suggested in some publications that the Passaic Valley has resisted the ideas of cleaning up the river in accordance with the decision of the Hudson River Enforcement Council and the Directors of the State Board of Health. This is fartherest from the truth. We have from the very beginning expressed the idea and the ambition to clean up the Harbor of New York as well as the surrounding and tributary rivers.

The suit instituted by the Passaic Valley against the State Board of Health was clearly for the purpose of establishing jurisdiction. This Commission came into existence sometime around 1904 or 1905 and from that period up until the period that the directives were issued, the State Board of Health constantly referred to every complaint that they received with respect to the condition of the Passaic River as not being within their jurisdiction and directing any complaints to Passaic Valley. It was not until this directive that was issued that they began to impose the idea that they had control of this river and the Harbor of New York. I only pass this on; it has

nothing to do with this present situation. But publicity has been given to this matter and I think the matter ought to be explained clearly as to the position of the Passaic Valley, and I repeat it: We are not opposed to secondary treatment or to any other treatment that will bring the waters in New York Harbor into the classification desired by the Hudson River Enforcement Council and the Directors of the State Board of Health.

Now with respect to this break about which so much talk has been had, this first came to our attention in 1963 in a communication with the State Board of Health and I am not going to go into the details because Mr. Lubetkin and Mr. Manganaro - I should say the State Highway, not the State Health Department -- They were concerned about a levelling off of the roadbed at this particular point, at which time they asked us for information concerning the original construction. This information was furnished to them. We assumed because we heard nothing further from them for three or four years that the matter had been settled and they had found the information they desired and the situation had been corrected.

In the fall of 1967, we again received a communication from the State Highway Department, indicating concern about a sinking in the pavement of this location. At this time, we made arrangements to go into the tunnel and see what the situation was. Up to this point, it was the determination of our engineers that any attempt to go into this tunnel which is 11 feet in diameter and which runs most of the time at a capacity of better than 60 to 70 per cent might be harmful and

injurious to anybody to do this. Mr. Lubetkin will discuss this matter. Following his visitation and the establishment beyond any doubt that cracks did exist in our line and that there might be a seepage, we employed the engineering firm of Woodward-Clyde and Associates, who have the reputation of being experts in soil conservation. They made a report to us and the contents of that report, the full report, will be filed with the assemblage here for your information. Mr. Lubetkin will undoubtedly discuss it as will Mr. Manganaro.

When we were ready to proceed with the plan that was finally suggested, which is the plan presently being considered, consultation was had with our engineers and the State Department of Health and the Interstate Sanitation Commission and I want the record to show that up until that point and since then up until the present time, no objection has been entered by either of these agencies as to the plan that was suggested.

May I also say at this time that no responsible public agency has stated that diversion to the river in November and December would constitute a health hazard.

Now all of the engineers who have expressed opinions with respect to this particular break, express the idea that there is a possibility of an imminent break in the sewer or a cave-in. None of them will say definitely when it will occur. Some say it might occur tomorrow, next week, next year or even five years from now. But if the condition is as they represent it, it seems to me that a hazardous situation exists and I am suggesting at this time that McCarter Highway ought to be closed off to traffic so as to prevent the possibility of a cave-in

because all of these engineers maintain that the constant use of McCarter Highway would undoubtedly contribute to the possibility of the break.

Along this highway in addition to the possibility of the cave-in is the maintenance of the buildings that are erected right on the line. There is one building there five stories in height that employs a thousand people. If this tunnel is in the condition that it is represented to be, and there is no doubt that it is, then the lives of these people that are working there ought to be of concern. So this also contributes to my thought that the time has arrived when McCarter Highway ought to be closed off.

When publicity was given to this proposal, we received a telegram from Dr. Kandle of the State Board of Health suggesting that we postpone any further proceedings with respect to the repair of the bridge, which we agreed to do. Following that, we received a request from Mr. Wilson of your Committee making a similar request and in accordance with these requests we have postponed and delayed any further action pending the outcome of these hearings and any possible suggestions that may come forward from this meeting or from this Committee.

At our meeting last week, the Commissioner of Public Health, Director Richard Sullivan, submitted a communication which I will read for the record. It is dated the 7th of July, addressed to the Passaic Valley Sewerage Commission.

[Reading]

"Gentlemen:

"This letter confirms the telephone conversations I had yesterday with Chairman McMahon and Chief Engineer Lubetkin concerning the plans of the Commissioners to repair the McCarter Highway trunk line. In conference here with our engineering staff and in meetings among your representatives, your consulting engineer and staff of the Water Pollution Control Program, we have considered the advantages and disadvantages of the five alternative methods of repair set forth by your consultant.

"Based upon this review, it is our judgment that the bypass tunnel designated as repair method (a) on Table 2 of the material given to us should be the method of choice. Our engineers have not yet received the full report of your consultants on the study of alternative methods but through conferences we understand that the bypass tunnel method is considered feasible.

"We would urge that to the extent possible construction techniques be employed which would prevent the temporary bypass of untreated wastes into the Passaic River. We would also urge that you direct your consulting engineers to examine carefully all possible methods of protecting the existing structure from collapse during the period of construction of the tunnel, including the detouring of traffic to eliminate avoidable stress on the fractured part of the interceptor. We have notified the chief engineer of the State Department of Transportation that further failure of the sewer structure might endanger the roadway.

"In expressing our preference as to the method of choice, we are fully mindful of your legitimate concern with the costs to be assessed upon municipal participants in the Commissioners' system. We are aware that based upon preliminary estimates the tunnel method is five to six times as expensive as plan (d) which calls for interior repair with the temporary bypassing of wastes into the river. We also appreciate your interest in gaining the principal advantage of plan (d) which is to repair the damaged sewer line in the shortest time possible.

"All things considered, however, in our opinion it would be inconsistent with the basic statutory responsibilities of this Department to sanction a repair method which would result in large quantities of untreated waste entering the Passaic River if, as appears to be the case, there is a feasible alternative.

"It is my intention to be present at the public meeting of the Commissioners to be held at your offices on 9 July 1969. I will be glad at that time or at another meeting thereafter to discuss the subject more fully with you and your representatives."

May the record show that Mr. Sullivan was in attendance at this meeting of the Commission on July 9th.

Now the plan which the State and which Mr. Sullivan believes is the desirable one will take 18 months to complete according to the engineers and the cost of that will be to the extent of $2,500,000. The cost under Plan (d) which is mentioned in Mr. Sullivan's letter, which is the method that the Commission devised would cost $500,000 and would take six months to complete. To use the method designed by the Commission would require the diversion to the river for a period of 45 days. To use the method that the State Board is indicating would require somewhere between 7 to 15 days.

We have prepared for the information of the concerned people a memorandum showing what the respective costs would be to the municipalities and to the lessees that would be required to assume the cost of both of these projects. This I will file with your Committee. Some of you have already had access to it.

There have been many alternative plans spoken of. We had two suggestions, one from the Engineer of Bergen County, one from Mr. McCormick, the Engineer of Essex County. The Commission is giving due consideration to those situations.

I think the testimony of Assemblyman Doyle ought to be corrected with respect to the item of chlorination, which he said would cost $600,000. The record ought to show that this would be $600,000 in addition to the $500,000 that was spoken about, making a total of $1.1 million rather than $600,000 as he said.

There are many alternatives. If this Commission had the

power, it might suggest that the industries along our river might be closed and the elimination coming from some of these plants could of necessity be eliminated. Hoffmann-LaRoche, which is located in Nutley, gives us somewhere between 7 and 9 million gallons per day. The Garden State Paper Company which is owned by the Newark Evening News gives to us some 2 million gallons of sewage each day and many other industries, the Kidde Industry and many chemical outfits - all of these. The Commission has never given any real thought to this for the simple reason that we could not afford to stagnate industry with the consequent loss in revenue, in payrolls, etc.

We had a meeting with the municipalities concerned with this on Monday afternoon in an effort to get an expression from them as to their attitude with respect to these expenditures. And I think that those in attendance could not safely say that there was any definite conclusion because many of the municipalities represented at that meeting were not in a position to give expression to what the position of their municipalities might be with respect to this situation.

There is - and I think that in any final decision the time element must be given consideration. I think the consideration has to be given to the possible hazardous condition of this break at the present time with the consequences of possible cave-in, damage to property, injury to human beings.

We have had great difficulty over the years in getting any financial assistance beyond the confines of our sewerage district. In the past 11 or 12 years, we have performed some $14 million worth of construction work on this system and we

have received from the Federal government during that period of time and the State of New Jersey - from the State of New Jersey two grants, one to make an engineering study of what it would cost to divert the Passaic River to accommodate new Route 21, another from the State to determine what would be necessary to chlorinate the effluents which would carry out an order of the State Board of Health, to the amount of $20,000; a $250,000 grant from the Federal government at a time when the Federal statutes made it possible for our Commission, if the statute meant anything, for us to receive $600,000, but we only received $250,000, the excuse being given that it was necessary for the State Board of Health to divide the allotment of Federal moneys coming to New Jersey to the best interest of the entire State. Despite the fact that we are accommodating perhaps 2.5 to 3 million of the population of the State, we received the same amount of money, $250,000, as small communities in South Jersey with a total population perhaps of 50 or 60 thousand people.

In 1966 we filed with the Federal government an application for a grant for $375,000. After much delay and after several conferences, including a visit by our Commission and a conference with our Federal representatives, consisting of all of the members of the House of Representatives in our district, the two United States Senators, we finally got approval of the grant in the amount of $375,000 in September 1966, almost a year after the application.

A contract was awarded in March of '67. Our first application for grant money of 25 per cent was made in November

of '67 and for the first time the Federal Control Commission indicated they would not approve the grant because we were not in a position to show that we had definite commitments to go to secondary treatment.

Outside of having conferences and passing of correspondence with the Federal Control Board, we finally came to a meeting again in Washington with the representatives of our State, the United States Senators and the Public Health authorities in Washington, at which time the grant was finally approved and we have received three hundred and some thousand dollars from that grant and the balance of it will be forthcoming at the completion of the job.

In the communication to us, dated January 31, 1969, Mr. Moore who was then Commissioner had this to say in one of his paragraphs: "Our approval of future grant applications must of necessity depend upon what further progress your Commission will have made towards reaching the ultimate goal of the degree of treatment to be provided in accordance with all Federal requirements governing our decisions. Acceptable progress can be best documented by a combination of (1), evidence of work completed and (2), plans and binding commitments for additional actions." This I believe is an indication that if we are to get any Federal moneys, we will have to show definite commitments for the completion of a secondary treatment in the future.

The original demands made by the Hudson River Enforcement Council in the State of New Jersey require that this secondary treatment be completed in '72 and I want the record to show

that no community that has been served with papers or been served with this order has completed their facilities for secondary treatment and none of them is in a position to do it and the great holdup, as indicated by Mr. Sullivan, has been the lack of Federal and State moneys to accomplish this purpose.

Following this communication and following a conference with our municipalities - and I think the record ought to show that we are dependent entirely upon the contributions by the communities involved in this district to finance any work that is performed by our Commission - we had introduced through the instrumentality of the good Senators from Essex County our Bill 719 which would give the Commission the authority to bond any of this work that is necessary under law to bond so that we could do the bonding and collect yearly from the municipalities their portion of the expense. Now their portion of the expense is allotted on the basis of the flow from each community. We know, and I think the members of this Committee understand, that there are few, if any, municipalities in our district that are able financially to include an expenditure, even if we get Federal money, of $20 or $25 million in their yearly budgets during the period of construction to meet their proportionate share of the cost. So it appears that the most feasible way is to obtain the permission of the Legislature to bond whatever expenditures are involved.

Our experts in this matter will testify in behalf of the Commission. If there is anyone present who desires to ask any questions of myself or the engineers, we are available

and we will try to give them the answer they want. I want to reiterate that this Commission is not anxious to do anything that is offensive to anybody. We have an obligation to the communities that support us. We have discharged this obligation in my opinion with good judgment and sound discretion and whatever the decision of your Committee is and the municipalities desire, we certainly will be very happy to carry them out.

I might say in conclusion that it is my opinion that there is nothing in this particular problem that can't be cured if we get the money. This seems to be the crux of the whole situation.

I want to reiterate again to dispel any fear that exists among our people that we have had no responsible agency say to us that the deposit of any polluting matter in the river is a hazard to the public health. It may be unpleasant, but it has not been established to our satisfaction or anybody else's in this field that the deposit of sewage in this state would be a hazard.

Now I am ready if there are any questions anybody wants to ask at this particular time, to try to answer them.

ASSEMBLYMAN WILSON: I would first like the record to show that Assemblyman Scancarella of Passaic County is now here on my left and on my far right is Assemblyman Fontanella of Passaic County. I would also like to advise the members of the Committee - and they will be the only ones that will be asking questions because it is a legislative hearing - that the technical questions involving the crack and the repair should be saved for Mr. Lubetkin, the engineer, who will testify for the Passaic Valley Sewerage Commission.

Now does any member have any questions?

SENATOR WALLWORK: I do want to say Commissioner McMahon that I think you and your Commission members and your engineer, Mr. Lubetkin, have been very cooperative with Assemblyman Wilson and with me over the past two weeks and I do feel, and I want to say publicly, that your Commission and your people have the public interest at heart and you are searching and looking for the best type of an answer and hopefully we can help you in that quest today and in the succeeding days.

I would like to ask one question on pollution so far as the health hazard is concerned. Have you communicated and gotten responses specifically from agencies or departments that there is no health problem or has this been an informal type of discussion that you have had with the agencies?

MR. MC MAHON: Well, it has always been our concern that we would not tolerate any pollution of that river that would be injurious to public health and we have a continuing check on this. We know of no agency who has specifically with our particular type of effluent made a statement that it is injurious to public health. I don't know whether anybody has made tests recently to establish this.

SENATOR WALLWORK: I mean in the proposal of the bypass of the so-called raw sewage into the Passaic River under the plan, has the Department of Health or any other agencies indicated to you that this would be a health hazard?

MR. MC MAHON: Not up to this time.

SENATOR WALLWORK: Have you specifically requested that

information?

MR. MC MAHON: Well, you had better ask Mr. Lubetkin that because I personally did not talk with them so I don't know whether the question was posed. If you will note, the communication from Mr. Sullivan does not go into that phase of it. It talks about the feasibility and in that connection the plan that is being projected of the $2.5 million contemplates - although I said it before and I repeat it - a period when there will have to be a deposit of the polluted matter in the river.

SENATOR WALLWORK: Just one further question because I think this is important: What is your projection, even if you use the bypass method with the $2.5 million program - how much time will you be required to dump raw sewage in effect into the river before the connections are made on this bypass plan?

MR. MC MAHON: It has been estimated from 7 to 15 days. Of course, they are not in a position to accurately say because they don't know how long it is going to take to prepare the tunnel at that point to perform this particular task.

ASSEMBLYMAN WILSON: Assemblyman Russo.

ASSEMBLYMAN RUSSO: Mr. McMahon, the Passaic Valley Commission announced a plan to discharge this 100 million gallons of raw material, untreated sewage, in the Passaic River daily for a period of 6 to 7 weeks. Now did you receive the O.K. in writing from the Health Department of the State of New Jersey?

MR. MC MAHON: No, we did not because we don't believe this is necessary. We did consult with the State Board of Health before the plans were finally completed. They were informed

of the intent and they interposed no objection, neither did the Interstate Sanitation Commission.

ASSEMBLYMAN RUSSO: Now you didn't get it in writing. Did they give you this O.K. verbally?

MR. MC MAHON: I am saying they didn't give us any rejection or O.K. They had no objection.

ASSEMBLYMAN RUSSO: The Health Department of the State of New Jersey had no objection to dumping raw sewage into the Passaic River, none whatsoever. Is that what you are saying?

MR. MC MAHON: At this conference - and Mr. Lubetkin who was a participant in the conference reported this to the Commission. I was not present at the meeting.

ASSEMBLYMAN RUSSO: Now in your testimony you stated that we should close the McCarter Highway.

MR. MC MAHON: That's right.

ASSEMBLYMAN RUSSO: If you say we should close it today, is there any reason why this McCarter Highway shouldn't have been closed a year ago?

MR. MC MAHON: Well, the State Highway Commission in the first place has authority over the highway. They are familiar with the situation because the pictures of the condition were supplied to them. The ultimate decision, I assume, will be theirs. And up to this point - and this is why I am definitely recommending now on behalf of our Commission because of the testimony we have heard in the last 10 days from these engineers as a result of visitations to the location that the highway be closed off. But we do not have the power - I am talking about

our Commission - to close off that highway.

ASSEMBLYMAN RUSSO: Mr. McMahon, did the State Highway Department recommend this?

MR. MC MAHON: Recommend what?

ASSEMBLYMAN RUSSO: The closing of McCarter Highway.

MR. MC MAHON: Not that I know of.

ASSEMBLYMAN RUSSO: They didn't recommend it.

MR. MC MAHON: No.

ASSEMBLYMAN WILSON: Assemblyman Fiore.

ASSEMBLYMAN FIORE: Mr. McMahon, I believe at one time there was a cave-in at McCarter Highway where this pipe was located. How long ago was that?

MR. MC MAHON: Well, apparently, it started in 1963. The depressions showed up and it was cured by the deposit of asphalt or something else. This is the period of that five or four years that I spoke of when we heard no further word from the State Highway Department.

ASSEMBLYMAN WILSON: Let me clarify something for the record. There was never a cave-in, was there?

MR. MC MAHON: Not a cave-in to the extent it was serious. There were depressions.

ASSEMBLYMAN FIORE: Were there inspections made of the pipe at this time?

MR. MC MAHON: Not an inspection. We could not make the inspection at that time because the facilities available for making that type of an inspection were not available because of the conditions. Mr. Lubetkin will discuss that with you when he testifies, why it was not possible.

ASSEMBLYMAN FIORE: Mr. McMahon, at any time was there any violation by the Passaic Valley Sewerage Commission for dumping in Newark Bay leading into the Hudson Bay or by the City of Newark or by the State of New Jersey against the Passaic Valley? In other words, you people were dumping sewage and let's say that the Army Corps of Engineers more or less warned you about this and I believe the Passaic Valley Sewerage Commission at this time said it was an emergency measure. Well, whenever you have had an emergency, do you just dump or do you get permission from someone to dump?

MR. MC MAHON: No, we dump when an emergency exists because we don't feel it is incumbent upon us to wait in an emergency to get permission from anybody.

ASSEMBLYMAN FIORE: But you are polluting the area?

MR. MC MAHON: There is some degree of pollution, but I want the record to show that in our opinion the deposits that we are making through our nozzles in New York Harbor is not in violation of the sipulation entered into with the State of New York under the direction of the Supreme Court of the United States.

ASSEMBLYMAN FIORE: At the present time are there seals on these flows? In other words, when you open up are there seals you have to open up?

MR. MC MAHON: Well, there are gates at certain spots that may be opened, not sealed.

ASSEMBLYMAN FIORE: Do you have to have permission from anyone or do you do it yourself?

MR. MC MAHON: We have the jurisdiction.

ASSEMBLYMAN WILSON: Assemblyman Fiore, could you save those questions for Mr. Lubetkin, the engineer, when he testifies.

Assemblyman Scancarella.

ASSEMBLYMAN SCANCARELLA: Mr. McMahon, in your suggestion that McCarter Highway be closed, how long would that closing involve?

MR. MC MAHON: Well, this would depend upon how long it is going to take to correct this situation. There are two plans before us at the present time. One would involve a six-month period; the other would involve an eighteen-month period. So this would have to be the determination of the State Highway Commission, at what point will they determine that it is safe to traverse this highway.

ASSEMBLYMAN SCANCARELLA: You wouldn't recommend closing the highway unless an emergency in fact existed, isn't that right?

MR. MC MAHON: We believe an emergency exists as of this time based upon the testimony of the engineers given us over the period of the last couple of weeks.

ASSEMBLYMAN SCANCARELLA: Do you think it would be prudent to adopt a plan that would take eighteen months in the light of this emergency?

MR. MC MAHON: Well, we have withheld our final decision on this. I think it is reasonable to assume that this Commission was going to proceed on the plan that had been devised which would take a six-month period. We have postponed a final decision on that. I think the record ought to show that up

until the present time, we were of the opinion that the best method was the one we suggested.

ASSEMBLYMAN SCANCARELLA: But the eighteen-month plan or the bypass plan would involve, you say, seven to fifteen days?

MR. MC MAHON: That's right.

ASSEMBLYMAN SCANCARELLA: And the other one or Plan (d) would involve --

MR. MC MAHON: Forty-five days approximately.

ASSEMBLYMAN SCANCARELLA: How realistic do you think those estimates are?

MR. MC MAHON: We are dependent in both times upon the advise of the engineers.

ASSEMBLYMAN SCANCARELLA: Do you think the fifteen days could be more and the forty-five days could be less?

MR. MC MAHON: Maybe you had better ask the engineers that so I won't be contradicting them because I am not competent to do it.

ASSEMBLYMAN SCANCARELLA: How about the plan that Assemblyman Doyle testified to?

MR. MC MAHON: This is a plan that has been suggested. It is presently under consideration.

ASSEMBLYMAN SCANCARELLA: You say that would cost six hundred on top of the five hundred thousand?

MR. MC MAHON: It would cost $1.1 million.

ASSEMBLYMAN SCANCARELLA: How many days would that involve?

MR. MC MAHON: You had better ask the engineers on

that because they are presently studying it.

ASSEMBLYMAN HOLLENBECK: Is that plan, the $1.1 plan, the only plan that would totally avoid dumping raw untreated sewage into the river?

MR. MC MAHON: The engineers will tell you all of the plans that they have explored.

ASSEMBLYMAN HOLLENBECK: That is the only one that totally avoids it?

MR. MC MAHON: None of them totally avoids it.

ASSEMBLYMAN HOLLENBECK: Well, in this one there will be some treatment before it is dumped.

MR. MC MAHON: That's right.

ASSEMBLYMAN WILSON: Assemblyman Fontanella.

ASSEMBLYMAN FONTANELLA: Mr. McMahon, on behalf of the Commission are you willing to state categorically that the dumping of this raw sewage into the Passaic River is not going to create a health hazard?

MR. MC MAHON: This is the advice of ours currently.

ASSEMBLYMAN FONTANELLA: Is the Commission willing to state that categorically?

MR. MC MAHON: Yes. This is the position of the Commission because I want to repeat again that this Commission will never be party to any scheme or to any deposit in that river that obviously affects the health of the people.

ASSEMBLYMAN RUSSO: Mr. McMahon, getting back to the same problem here, are you saying that this will not affect the townships in the lower end of Bergen County healthwise? When we have a high tide in this area - and I am speaking about

the lower end of Bergen County, North Arlington, Lyndhurst, Rutherford and Nutley - are you stating that when there is a high tide and this raw material goes right into the Township of Lyndhurst, it is not going to cause a health problem?

MR. MC MAHON: Well, now, when you say "Go right into the Township of Lyndhurst," what do you mean, on the banks of the river or are you talking about it being in the street?

ASSEMBLYMAN RUSSO: No, I am saying this: In a high-tide situation, the water goes right into the Township of Lyndhurst, it goes right into North Arlington, it goes right into these communities. Are you saying that this is not a health problem with this raw sewage going into the towns?

MR. MC MAHON: I am saying that and I am saying also it is no more of a hazard than when the manholes pop in your place in a storm.

ASSEMBLYMAN RUSSO: Well, who in the Health Department recommended this or who in the Health Department made this statement?

MR. MC MAHON: Which statement?

ASSEMBLYMAN RUSSO: That this is not injurious.

MR. MC MAHON: We have no statement from the Health Department. I am saying this is what the Passaic Valley Sewerage maintains. I am saying up until this point nobody has made the statement that it is.

ASSEMBLYMAN WILSON: Assemblyman Russo, we will have the officials from the Health Department testify today and you can question them at that time.

Assemblyman Kiehn.

ASSEMBLYMAN KIEHN: Assemblyman Doyle mentioned that there was 165 feet of this so-called tunnel that was in danger of collapse.

MR. MC MAHON: That's right.

ASSEMBLYMAN KIEHN: Where is that exactly located?

MR. MC MAHON: Do you know where Gouverneur Street is? Do you know where Clay Street is?

ASSEMBLYMAN KIEHN: Yes.

MR. MC MAHON: Gouverneur is about two blocks above that and McCarter Highway is Route 21 at that juncture and this is the location of it.

ASSEMBLYMAN KIEHN: In other words then, it is just this one section of the sewer.

MR. MC MAHON: That's right. The testimony of the engineers and those who have been through is that on both sides of this break, the tunnel is perfect.

ASSEMBLYMAN KIEHN: And would you name the particular building that is in danger of collapse?

MR. MC MAHON: I think it is owned by the General Instrument Company because we checked it and they informed us there are about a thousand people employed in that building. There is another building across the street that currently is not occupied. I think it is used for warehouse purposes.

ASSEMBLYMAN KIEHN: And the sewer line goes right under the building or alongside?

MR. MC MAHON: No, in the street. So if there was a cave-in, none of these buildings are underpinned, of course. It must be remembered that this tunnel of ours is 40 feet below

the surface of the highway and it is 5 feet below the level of the river.

ASSEMBLYMAN WILSON: Commissioner McMahon, how long have you been a commissioner?

MR. MC MAHON: I was a commissioner for ten years between '34 and '44 and I am now a commissioner since 1958. I am at the end of my 12th year on these last two appointments.

ASSEMBLYMAN WILSON: I believe the commissioners are appointed by the Governor.

MR. MC MAHON: They are appointed by the Governor and confirmed by the Senate.

ASSEMBLYMAN WILSON: And the Passaic Valley Sewerage Commission is more or less an autonomous body, is it not?

MR. MC MAHON: It is.

ASSEMBLYMAN WILSON: Let me ask you a question. Suppose the Passaic Valley Sewerage Commission - and this is just hypothetical - suppose that you wanted to go along with your particular plan at this particular time regardless of what the Commission and the elected officials say, what is the only way that the elected officials, the State legislators or local officials, could actually stop you from going along with your plan?

MR. MC MAHON: Well, I don't think that we ought to accept a hypothetical question. I think the consideration ought to be as to the intelligence of the members of our Commission and what they would do under the circumstances.

ASSEMBLYMAN WILSON: But what I want to ask you is ---

MR. MC MAHON: But speaking legally, my advice from our legal authority is that we would have a right to proceed.

ASSEMBLYMAN WILSON: Yes. Then what I want to establish is what control have the elected officials, say, for example, the State legislators or the Governor, over the Passaic Valley Sewerage Commission?

MR. MC MAHON: None that I know of. We are an autonomous body and our existence depends upon contracts between these municipalities. We are operating under contracts. You ought to be informed too that when this sewer was originally constructed, the City of Paterson and the City of Newark were the largest contributors to it. The City of Newark put up 60 per cent of the original cost and they receive only about 35 per cent of its capacity.

ASSEMBLYMAN WILSON: For example, the Governor of the State of New Jersey does not have the right to veto your minutes as he does with the Turnpike and the Port of New York Authority.

MR. MC MAHON: No, he does not. He has the power of removal of any commissioner if he doesn't behave himself.

ASSEMBLYMAN WILSON: Only for just cause along with confirmation by the Senate.

MR. MC MAHON: No. He can determine whether or not McMahon's conduct is proper and remove me under the statute.

ASSEMBLYMAN FIORE: Does anyone have jurisdiction over the Passaic Valley Sewerage Commission? Would it be the Federal Control Commission? Does someone have jurisdiction over it?

MR. MC MAHON: The Federal Control Commission has a right to establish the classification of the water and we also subscribe

to the idea that the State Board of Health has that right. And as I tried to say before, the dispute that we had with the State Board of Health was more to establish the jurisdiction and perhaps the method of accomplishing the purposes of the Hudson River Enforcement Council.

ASSEMBLYMAN FIORE: Getting back to the jurisdiction, the State of New Jersey, I believe, took you into court once.

MR. MC MAHON: This is the matter I am discussing now.

ASSEMBLYMAN FIORE: And they established there that there was no jurisdiction or did the court reverse itself?

MR. MC MAHON: The court said that the Passaic Valley Commission had authority of the operation of the water in the river but when it entered the harbor, the State had jurisdiction. Do you believe that is a correct statement, Mr. Sullivan?

MR. SULLIVAN: Maybe I could comment on it later.

MR. MC MAHON: I said my interpretation of the opinion of the court was that the Passaic Valley retained control over the river and that the State Department of Health had jurisdiction at the point it entered New York Harbor or Newark Bay.

ASSEMBLYMAN WILSON: We will have Director Sullivan on and he will make a statement as to that later on.

MR. MC MAHON: All right.

ASSEMBLYMAN WILSON: Are there any other questions?

ASSEMBLYMAN FONTANELLA: Mr. McMahon, have any studies been done with reference to the movement of the sewage in the waters along New Jersey?

MR. MC MAHON: Along New Jersey or are you talking about

in our jurisdiction?

ASSEMBLYMAN FONTANELLA: Well, you are going to release this sewage into the Passaic River and into the bay.

MR. MC MAHON: That's right.

ASSEMBLYMAN FONTANELLA: And this sewage is going to move. If we have two million gallons a day over a 21-day period, we have a large amount of raw sewage.

MR. MC MAHON: That's right.

ASSEMBLYMAN FONTANELLA: Have any studies been done with respect to the movement of this sewage in the water? Is it going to affect our beaches? That is what I am interested in especially at this time of the year.

MR. MC MAHON: If you listen to the City of New York, you will hear them say to you that the damage to the beaches is caused by our effluent that is currently being deposited in New York Harbor. But they will never say anything about the 300 million gallons of raw sewage that is being poured in by the City of New York every day and they won't say anything about the pollution that comes up or down the Hackensack River or down the Hudson River and enters into the harbor and on the tides, which is carried up and back.

ASSEMBLYMAN FONTANELLA: Now let me ask my question again. Have any studies been done by your Commission with respect to this effluent that is going to be put into the water by your Commission?

MR. MC MAHON: We know from our experience what will happen and this depends upon the tides and storms and many other things.

ASSEMBLYMAN FONTANELLA: So the Commission is assured that there is going to be some effect upon the New Jersey beaches?

MR. MC MAHON: No, no. We at no time have admitted that nor will we do so. When you talk about the Jersey beaches, I am assuming you are talking from the Highlands down.

ASSEMBLYMAN FONTANELLA: Right.

MR. MC MAHON: We say categorically in our opinion our deposit does not affect those beaches down there and that the great pollution that exists along the beaches down there emanates from the municipalities in that territory.

ASSEMBLYMAN FONTANELLA: Well, what about this specific deposit, these two million gallons for 21 days?

MR. MC MAHON: There are 100 million gallons for each day. This is not going to change that situation.

ASSEMBLYMAN FONTANELLA: It is not going to affect the New Jersey beaches.

MR. MC MAHON: It is not going to change the current situation.

ASSEMBLYMAN WILSON: Are there any other questions?

I would like the record to show that Assemblyman Caputo of Essex County is now in attendance.

Thank you, Commissioner McMahon, for testifying before this Committee.

Are there any other commissioners that would like to testify before Mr. Lubetkin testifies? [No response.]

Mr. Lubetkin are you going to testify now for the

Passaic Valley?

MR. LUBETKIN: Yes.

ASSEMBLYMAN WILSON: We are going to recess at 12:15 and begin again promptly at 12:45, a half hour break, because we have a lot of people who wish to testify. The reason we are going to recess at 12:15 is that at 1:00 o'clock most of the courts close and recess. The cafeteria is located on the second floor and it will be overcrowded. So if we go down between quarter after twelve to twelve forty-five, we will be able to eat and come back up and resume testimony. We would like to complete the hearing today.

Mr. Lubetkin, will you state your name and position for the record.

S E Y M O U R A. L U B E T K I N: My name is Seymour A. Lubetkin, Chief Engineer, Passaic Valley Sewerage Commissioners.

After hearing Mr. McMahon's testimony, I feel I can go on vacation easily enough. I think he is quite competent to fill in.

I think Mr. McMahon has presented most of this very, very accurately. In some very technical areas, naturally he wasn't aware of some of the situations.

I will skip over the history since it was presented by Mr. McMahon, except to go into a little bit more detail with the consulting engineers, Woodward-Clyde and Associates. When we discovered the crack in the sewer - and incidentally the business of going into the sewer, although recently appearing very easy, was not considered a very easy thing in the early

days. We didn't have the technical know-how of any equipment to properly exhaust air and internal inspection of sewers in those days was usually done by either a television camera or a camera floated through on a boat. And I would like the record to show on the first attempt to make a study of this, the camera was lost and the cameraman was hurt. He had to be taken to the hospital. The second attempt --

SENATOR WALLWORK: Which was what year?

ASSEMBLYMAN WILSON: Do you have copies of your statement or do you just have the one copy?

MR. LUBETKIN: I have separate sheets which I will present when it comes to reports, but I have no statement as such.

The first attempt was July 9, 1967. The camera was lost and the photographer was hurt. We went back September 23 and September 30, 1967, and this time they photographed the inside of the sewer by boat. They had a camera on a boat flowed through. The pictures were viewed on November 9, 1967, with the State Highway Department. After viewing the pictures, we felt there was something there and we made arrangements on November 20, 1967, to walk through the sewer.

Now let me explain something so that people don't think we are trying to sneak things over on them as seems to be the case. We cannot go into that sewer at normal times. We must go in when the sewer is low. The ideal time is the 4th of July weekend when factories in Paterson, Passaic and the Bergen County area are closed in general for vacations. Even during this time, and it must be after midnight, we must bypass sewage to the river in order to do this. We must bypass

at Yanticaw. We must bypass at Union outlet and with all of this low flow and bypassing, the sewage is still approximately three feet high. You, Senator and Assemblyman, know this, but I want to get this in the record. It is not something you do easily. If a rain should come, it is cancelled. There are many things that have to be considered, including exhaust fans and everything else.

November 20, 1967, was the first time this was attempted. We designed and laid out this thing. We walked through the sewer and that was the first time we saw the crack. Seeing the crack and knowing the effect of the crack are two different things. I have seen cracks where there is an opening and still not a failure. We made preparations to make measurements. We set up equipment and on April 28, 1968, we went in the sewer with equipment to take measurements and that was the first time we found the sewer was out of round. You gentlemen know it is a very large sewer and the amount of out of roundness is not exaggerated and it is difficult to see whether you really have a collapsing section. I have drawings made to show the situation.

[Mr. Manganaro holds up drawings and points out various things as they are discussed.]

The measurements indicated two things. Number one, looking at the first drawing, there were four cracks. Three we could see, the upper three, and one we could not see since it was below the water, but we could feel with probes.

The left upper drawing shows the sewer as it would first have cracked and the right upper drawing shows the sewer exaggerated as we saw it. The upper crack was spread open. The

side cracks were merely cracks and we presumed were spread open on the outside. The bottom crack was spread open. This indicated complete failure of the sewer. When I say "complete failure," I mean there is nothing in the concrete holding the sewer together. The sewer is being held together by the earth loads on the side. In other words, in order for it to collapse, the dirt from the side must be displaced. However, water is coming in from the top of the sewer and the bottom of the sewer. At the time in April they were just drips. We didn't feel too much water coming in from the bottom. Quite frankly, at that time, it didn't appear urgent because it looked like progression was slow. It looked like it was holding its face, holding its form, and we intended to go in very shortly and measure to see if there was a change.

Will you hold up the other drawing. Measurements showed that the sewer had sagged. The top had come down and the bottom had recessed which also supported the fact that the sewer was failing. I reported this to the Commission. I reported that it was urgent, that we should get consulting engineers immediately to attempt to construct or reinforce the sewer. At the time I thought the best way to do it, the cheapest and one that would cause no problem would be drilling down from the surface and pumping grout around the whole sewer. You would pump the grout. It would surround the sewer, form an outside to it and be a soil stabilization. This would be the most economical. I would need no diversion and it would appear to solve the problem.

I contacted a firm who are expert in soils engineering

by the name of Woodward-Clyde and asked for a proposal and received a proposal on June 28th. I pointed out to the Commissioners that this study was not positive, I didn't know where it was going, but it was worth investigating. There were problems with the proposal. Finally on September 9, 1968, Woodward-Clyde resubmitted their proposal which was more acceptable to the Commissioners, which defined more closely what they were going to do. The original proposal was apparently very vague.

The Commissioners accepted their proposal and Woodward-Clyde made their first progress report on September 27, 1968 and I am submitting this for the record. In the progress report, they stated that they have examined the situation, they feel it is serious and it should not be walked away from. They made a second progress report on October 30th and in their second progress report they indicated that they had discussed the matter with other tunnel experts, James L. Sherard and people well known in the field in California, and in their report they came to the conclusion that the method that we had first contemplated was not feasible because it was not certain. They said you could pump the concrete around, it may appear to seal it, but you could never be sure you might not get something happen at a later date.

Under the circumstances, after a discussion with them, we terminated their services as of November 15, 1968, because it appeared that the field in which they were experts would not be used to solve this particular problem. I will backtrack and say that when we first hired them, they told us

that if another method than the soil stabilization and grouting were to be used, then other engineers should be hired because they are not construction people.

However, after terminating their services, we received an opinion from one of the consultants which had been used by them, which appeared to contradict their report, and in his letter he said if he were doing it, he would do it with outside work and he felt for $200,000 he could stabilize the thing and this is the method he would use. Woodward-Clyde called me and told me about the letter and subsequently sent the letter to me for my record.

We were confused. We appeared to have divergent views among the experts and in rereading Woodward-Clyde's report, there appeared to be no statement of this earlier recommendation. So even though their services had been terminated officially as of November 15th, we subsequently told them that we wanted a third report which we felt was due Passaic Valley reconsidering the recommendation of James L. Sherard, which I will also submit.

We received a third progress report on March 11, 1969, wherein they reviewed the report given by James Sherard and then again asserted that they recommend against grouting as a remedial measure with or without soil enforcement rods as described by Dr. Sherard.

Before we received the third report, we wrote to the Department of Transportation because we knew that soil was continuously coming into the sewer and we were concerned that the highway might be undermined and cause a collapse of the highway which might trigger the failure of the sewer. So on February

26, 1969, we wrote to the Highway Department concerning the settlement, confirming a telephone conversation and in the letter we said, "We suggest that small diamater drill holes . . . be made at this time to determine" the possibility of voids. "The Commissioners are willing to cooperate with the transportation Department in making these test holes."

We received a reply from the Department of Transportation, dated March 11th, thanking us for our letter of February 26th. They said that they have been concerned about the problem for several years and that they photographed it in 1967 with our cooperation and that they have viewed the photographs and are familiar with it. They then stated: "The pavement at Gouverneur Street seems stable at this time. There is a minor depression in the roadway which we plan to fill as soon as weather conditions permit and hot-mix asphalt is available. The Department of Transportation at this time does not plan to drill any holes or conduct any test borings on the cite."

We contacted Manganaro, Martin and Lincoln, told them the problem, told them we were going to hire them as consultants to make the repair and we wanted them to study all feasible alternate methods. Now at this point I want to state that many, many, many alternates were considered, some of them very bizarre, some of them considered Rub Goldberg affairs. Many of them were discarded after just a preliminary perusal because they were obviously unfit and a final determination was made that we felt was in our opinion the best for the job. And only after we decided on the method did we realize we would have to bypass because, gentlemen, we concentrated on methods that would not require

bypassing. We thought of the pipe through the center of the sewer. We thought of pumping around. We thought of open cut. We thought of laying a platform on the lower 3 feet letting water go on and many, many things that are, as I said, way out. But in all the publicity it may have appeared that we didn't consider many of these things.

When it appeared that the best method as far as structure and economics and time, three things that we felt were important, not necessarily in that order, would require a bypassing, first of all, we received a proposal from Manganaro, Martin and Lincoln on April 19th and we had a sewer inspection with Mr. Manganaro on April 27, 1969. We signed an agreement with him on May 6th. We sent a letter to the State Department of Health, sending a copy of the agreement on May 7th, also asking if there was any financial aid available for this type of thing.

On May 26th we had a conference in my office with Mr. Christian Hoffman, Mr. Douglas Clark, both of the State Department of Health, and Mr. Tom Glenn of the Interstate Sanitation Commission, Mr. Manganaro and myself, at which we discussed the problem. We told them the situation. We told them that the plan that we had evolved as what we considered the best would involve diverting sewage to the river for approximately 45 days. At that time we felt the thing was relatively critical and we wanted to move ahead as fast as possible. At that time the schedule of bypassing would have been in August. We would have been practically ready to do the construction.

The State Department of Health and the Interstate Sanitation

Commission naturally didn't like the plan and, gentlemen, we didn't like it ourselves. But I asked did they have a better alternate. Nothing naturally was forthcoming and possibly it was unfair to expect an alternate immediately. But we did discuss our other alternates. The only remark that was pertinent was that both the Interstate Sanitation Commission and the State Department of Health felt that this should be postponed to winter months - could we possibly not divert this material into the river during the summer months? I told them I would be very happy if they would issue such an order and that we would follow it. I was concerned about the sewer and we were proceeding as rapidly as possible, but if they would issue such an order to postpone the diversion to the winter months, we would follow it. I didn't feel that they felt they should issue it. I got the feeling that they would have preferred it, but that no order would be forthcoming.

However, in reviewing our scheduled time of delivery of material, it then was discovered that we couldn't have done it by August because of late deliveries of some of the materials we thought we could have gotten earlier. So as the schedule went on, it then appeared it would be September 1st. A more reasonable estimate now is the latter part of November and December. If we were allowed to go ahead immediately, we possibly would start diverting towards the end of November and December, possibly into the first week of January.

We did not hear anything from the State Department of Health. I spoke to them on the phone, particularly when someone called me on it from a newspaper to find out if they had

discussed it with anybody outside of their department. I was informed, no, except with the Attorney General's Office.

Incidentally, the day after our discussion I received a letter, May 27th, from the State Department of Health, saying no funds were available for engineering studies of any kind and I had been told on the phone that no funds were available for repair work of any kind. It was only at a much later date that I received a call that possibly Federal funds might be available if we made a tunnel bypass and the tunnel were left in place, that it might be considered, if they stretched a point, new construction and under those circumstances there may be Federal funds. But I was also told there would be a delay while applications were made, etc., and there was no guarantee.

Mr. Manganaro will go into detial as to all of the various alternates we discussed and why they were put off as either unfeasible ---

ASSEMBLYMAN WILSON: Mr. Lubetkin, let's recess now and we will come back after lunch.

SENATOR WALLWORK: Maybe we can finish and then we can go to lunch.

MR. LUBETKIN: No, I think I had better come back because I won't finish in five minutes.

ASSEMBLYMAN WILSON: We will recess until 12:50 and we are going to start promptly at 12:50.

[Recess for Lunch.]

Afternoon Session

SENATOR JAMES H. WALLWORK [Chairman, Senate Committee]: As we were half way through Mr. Lubetkin's testimony, Mr. Lubetkin, will you please continue.

Before you do, I do want to mention that Freeholder Mintz from the Essex County Board of Freeholders has been sitting in this morning and gave us a special tip as to the luncheon break and, Freeholder Mintz, we certainly appreciate your interest and your kindness.

MR. LUBETKIN: As I told you previously, when we had hired Woodward-Clyde to investigate the grouting method, they were originally going to take borings over the sewer in order to interpret what was there. However, they told us after assessing the situation that it would be too dangerous to take borings, that the borings themselves might precipitate a collapse. Subsequently they laid out a plan of borings which were located 100 feet from the sewer, but we terminated their services since the reason for their services originally had passed.

In reviewing their reports, I found there was no mention of this in their reports. I called them and got a letter which I will submit to the Committee, in which it was stated:

"The purpose of this letter is to describe why our partial investigation of the subject sewer tunnel did not include exploratory borings.

"In our proposal dated 9 September 1968, we proposed an investigation which included a field exploratory program consisting of borings located in the vicinity of the distressed portion of the tunnel. Prior to having the borings made, we examined the available data concerning the tunnel distress to hypothesize a failure mechanism. This hypothesis was necessary to design the details of the field exploration program.

"After studying the available data, we concluded that the tunnel is in a precarious state and that closeby exploratory borings could possibly affect the equilibrium of the tunnel and adjoining soil and accidentally trigger a collapse of the tunnel.

"Because of the serious consequences of a collapse, we chose to study the problem thoroughly before making the exploratory borings. We formed a board of consultants consisting of prominent experts in the tunneling field; the subject of the exploration program was discussed in detail with this board before the details of the program were agreed upon. On 30 October 1968, six weeks after our investigation began, in Progress Report No. 2, we made recommendations for a field exploration program. Most of the boring locations would have been 100 feet or more from the tunnel, a distance which we felt was sufficient so that the borings could not affect the tunnel.

"Shortly before the borings would have been started, our services were terminated."

I have also prepared a drawing showing the location of the subsidence over our sewer at the intersection of Gouverneur Street and Route 21.

Now the magnitude of this problem has not been appreciated by many because many times in discussions certain details may not come out, details which we have felt are so obvious we assume other people know. For example, at this point the top of the sewer is 40 feet below the surface. At this point the sewer was originally constructed as a compressed air tunnel. There are other utilities, sewers, waterlines, etc. over the sewer. At this point the sewer is 11 feet 3 inches in diameter with walls 15 inches thick of non-reinforced concrete. That means there is no steel in it whatsoever. Generally speaking, as I have said before, the sewer flows relatively three-quarters to full during peak hours.

All these things have to be considered when you consider possible alternates. For example, when you talk of the magnitude

of sewage of 100,000,000 gallons a day, if someone says, "Can you barge it around," well, the size and the number of barges preclude this type of thing. Even piping through the sewer, in laying the pipe you have to bypass while you get in there to lay pipe and the pipe interferes with any work in construction. Of all of the methods, and as I said before, many of them were considered that I am not even mentioning, it boiled down to generally speaking: Could it be done by open cut? This was discarded because of the depth, the problem of open cut on adjoining buildings, and even an open cut when you got down there to do the invert, you'd have to bypass.

Number two, the tunnel method. We have discussed this. You can make a compressed air tunnel. We would have to go under an existing building, but this could be done. But during the times the connections are made, there is bypassing. So in the connection to the old sewer - it is true it is a much shorter period - but it is not absolutely no bypassing.

One method which would give no bypassing is pumping the sewage around the area with pipes and pumps. This method was considered. Worthington Pump has pumps available of this size only because they are building them for the Washington, D. C. Sanitary Sewer Authority and they just happened to have them. But I understand they are shipping a couple of them today; only one is available. But there are problems with their pumps. Their pumps are 24-foot head pumps. We need 35 to 40 feet head. Those pumps cost approximately $200,000, each. This is without being put in place. We would need four of those pumps becaue with the head we are talking about the

capacity of those pumps drops down to approximately 40,000,000 gallons a day. This is without the pipe. This is without laying the pipe on the street and blocking off traffic. We would probably have to block off Clay Street, coming up Clay Street, at certain points. We could lay along the ground, but we have to go under a railroad. I don't say that they are impossible, gentlemen, but when you solve a problem, it has been my method to set up all the possible solutions, anticipate their difficulty, cost and time and then go to what I think is the best.

We have read in the papers that this is it - there are no other alternates. There are alternates. We have considered them, believe me. I read in the paper every day of a new proposal. Gentlemen, I have yet to see one we haven't considered. Now I respect all the engineers that are giving me these proposals. We have considered the chlorination. We have considered -- well, there were some things we didn't consider. Somebody said dam up the river and don't let it go upstream. We didn't consider that. In fact, we checked it later. The Corps of Engineers wouldn't let us dam the river because it is a navigable stream.

Now came the problem of bypassing. We don't talk of bypassing indiscriminately. We think of public health, number one. If someone would say to me, it is a public health hazard, someone with the knowledge and in authority that really knows what they are talking about, then, of course, we couldn't do it under any circumstances. But we have to be careful of that. When you say "hazard," there is no such thing as black and

white. When an airplane flies over the City of Newark, that is a hazard to the City of Newark. If you got an expert up here and ask, "Is that a hazard," is he going to say, no? Maybe he would. But then could you pin him to - "Could it never crash?" You and I know nobody can give a 100 per cent answer; we must deal in probabilities. Does that mean no airplanes can fly over any cities if you say there is not a probability but an outside possibility? I mean, if somebody were to go down to this river and scoop up this water and drink it over and over again, he could possibly get sick. I can't say nobody is going to do a thing like this. But if we talk about public health hazard, let's consider what we mean all around.

Number one, we are talking in November and December. Now, gentlemen, I don't know if you realize how much sewage goes into these waters during that period without disinfection. I don't know if you people realize that it is the Hudson River Enforcement Conference recommendation to chlorinate and disinfect between May 15th and October 15th, not during the winter months. I don't know if you realize that the sewage treatment plants along the shore disinfect during the summer months. I don't know if you realize that we have Kearny Sewage Treatment Plant - you can go around - all the City of New York's which treat over one billion gallons a day and they do not disinfect during those months. So if you are talking about bacteria and if there is such a thing as a health hazard, why are not we spending money for permanent disinfection of all these other treatment plants?

Now I am not talking about a possible nuisance. I

know there is a possible nuisance. I cannot testify there will be no nuisance. If you can tell me exactly how much rain I am going to have, if you can tell me exactly what temperatures are involved, I can tell you exactly what nuisance we will have. But these are only probabilities. We feel that during November and December the nuisance will have been minimal. We feel that during a normal flood, a normal spring rain, that the effect of the bypass which will have stopped will have been washed down. We feel that by summer you will know nothing about it.

Now I don't say that this is positive. But if for some reason weather is detrimental to us, we then have other ways of trying to handle it. We have possible sodium nitrate treatment to supply oxygen so that if our weather is adverse, I would rather spend the money on that than on chlorination, which to me is an absolute waste.

Now chlorination itself can be a danger. Chlorination without PH control can put into the waters material more toxic than anything we could put in. Chlorine combined with any cyanide at lower PH's will form cyagenics which are toxics. And the idea of disinfection at this time of the year, I don't think should be considered. There is no swimming, no drinking and there are other pollutants in the area, not only in the area, but I am talking all around the whole New York Harbor complex. When I say pollutants, unfortunately this is a very general term that has been used to cover everything from rubbish and trash to bacteria.

Now I did hear a valid suggestion coming from Lyndhurst,

a very valid one. "Gentlemen," he said, "why don't you screen, at least keep the floating material from going in." I think this is a very good point and I have recommended it to the Commissioners. If we bypass, I have recommended that at the three major points of bypass, the material be screened before allowing it to go into the river. I say "if," because as Mr. McMahon pointed out, we are really servants of the people. We recommend what is best to be done and what should be done. But if the mass of public opinion is against us, whether educated or not - if the mass of people want to spend $2 million more that might be better used for poverty programs or for more permanent installations, then I really have nothing to say about that, except to see that it is spent in the most efficient manner possible.

I want to point out also, when you talk about how to keep the river clean, we want to keep it clean, but we have problems with very old municipalities, Paterson and Newark. Now these are problems that they have inherited. It is nothing that the present administration has brought about in either of the municipalities. But both of these municipalities have very old combined sewer systems which means every time it rains, the sewers fill up and flood, which means every time it rains, it overflows into the Passaic River. Now when it overflows it doesn't take a path that the clean rain water goes here and the sanitary sewage goes into our sewer. They mix up and sewage does get into that Passaic River every time it rains. There is no combined system in the world made that can handle the entire storm waste. This includes bacteria. This includes

many forms of pollutant that we wouldn't like there. We just hope and expect that the river can absorb this material if it is kept clean during dry weather.

We have attempted to have Paterson and Newark make some renovations in their systems so as to have the combined systems separate and attempts have been made. I know the City of Paterson has constructed many storm sewers, hoping over a number of years when enough are in, they will be able to separate this system, but it is far from complete. I know the City of Newark has constructed some storm sewers. But although nobody seems to think money is important on this, that type of thing costs many hundreds of millions of dollars to accomplish. Why in the City of Newark there are storm sewers now in Roanoke Avenue, Blockwood Street, Blanchard Street, where industrial wastes are connected that every day flow into the Passaic River. We know this and they know this and these are problems. They are attempting to solve these problems. But the point I am getting at is, if some of the money that they are willing to put in to stop this temporary bypassing were funnelled to stopping those on a permanent basis, you will be much further ahead than on this matter.

If there is enough money to do both, swell - then do both.

I don't mean to wax poetical and I don't mean to imply that money is everything, although it is very important. The other, and to me the more important aspect, is time. Even in Mr. Sullivan's request, he used the words, "if feasible." What does "feasible" mean? I am not Nostradamus. Nobody in

my opinion can tell you when that sewer is going to collapse. No engineer that has seen it or discussed the matter can say any more than, "It is in failure. It will collapse, maybe tomorrow, maybe five years from now." Actually I became much more concerned on our last trip through because I found something I hadn't seen or noticed before. At one stop in pointing out a crack with Senator Wallwork, I felt with my boot a very large flow of fresh water coming in below the water level that couldn't be seen. But the flow was so great that my feet felt cold - my foot felt cold through the boot. I probed with my foot and I could feel the pressure. Now as I said, up till now all we had seen were drips and the only problem is, not the water coming in, but is it bringing in soil? If it is bringing in soil, is it bringing in the soil that is holding the sewer together? I was not overly concerned with the acceleration rate of the soil movement with the cracks I had seen. I am now, gentlemen, because the one I felt below the water was an opening, a very hard flow. I could not see what soils were brought in. I did not know of this particular opening before, but it is there and in my opinion it makes the situation timewise extremely critical.

I guess that pretty much covers my presentation on the matter. I would be glad to answer any questions. I do not mean to imply that I have covered all the alternates. I have left that for Mr. Manganaro who has a chart showing alternates, costs, time, etc. But I would be glad now to answer any other questions on this matter.

ASSEMBLYMAN WILSON: Mr. Lubetkin, you said the first

time you went down to the sewer and explored and so forth was November, 1967. Visual sighting, was it?

MR. LUBETKIN: Yes. Wait a minute - let me check whether it was '67 or '68. November 20, 1967.

ASSEMBLYMAN WILSON: Have you inspected the whole sewer line since then?

MR. LUBETKIN: No, sir.

ASSEMBLYMAN WILSON: How much of the sewer have you inspected? I mean, there may be other cracks in this same sewer line, would that be possible?

MR. LUBETKIN: Of course, it is possible, Assemblyman. But let me explain this. You went in there also and the particular area you saw was approximately 165 feet long. If you recall, the area leading up to it was as far as we could see perfect and the area beyond it was perfect. The particular point where the cracks occurred happen to be under a very high spot of soil. There was more load on the sewer at that point than at any other point. If you see a profile, you will see that is the apex of a hill.

You also know the difficulty of getting in as far as time is concerned and how much you can do in a night. As I pointed out, we were very lucky you had picked the 4th of July weekend and even this involved bypassing.

ASSEMBLYMAN WILSON: I didn't know we were lucky.

MR. LUBETKIN: Well, any other weekend requires a considerable more problem. Even this involved bypassing. Now maybe if the people knew we bypassed during that inspection, there would be a hue and cry over that. Why the heck did we go

in and look at the sewer and have to bypass sewage?

ASSEMBLYMAN WILSON: We got blamed for the rats; we might as well get blamed for that.

MR. LUBETKIN: I will say that is ridiculous too. I might as well go on record since that has come about and since we are blamed for everything and say, number one, our sewer has no ledges. Our sewer is a very large sewer. Rats have no place to run. Don't get me wrong, I know rats can swim and I know rats many times go down a manhole and then try to escape into another manhole for a swim. But rats are like humans as far as water is concerned. They have to hold their breath; they have to exert energy. They also have to be able to get out of a manhole. Although it may be easy to drop in from a pipe. Once they are in, they will perish. They can't get out. The local sewers do have rats. The sewers are small. Rats may be able to scamper through the sewer and, of course, you have catch basins.

Now we have made this inspection before, as you know, and there has been no effect of any rats. If rats were disturbed by noise, and I don't think we made that kind of noise - we made no explosions - they would scamper at the time, not 24 hours later. It appears that the association of rats to our inspection, I will just label as plain ridiculous.

ASSEMBLYMAN WILSON: So how much of the sewer have you inspected, just that area?

MR. LUBETKIN: No, no. We have inspected many other areas, but we haven't inspected all. Here is why. As I said before, we are limited as to time we inspect. Also we must

bypass to inspect the large sewers. We have inspected sewers whenever there is a reason for an inspection. For example, we have inspected whole sections in Belleville, Nutley, Clifton and Passaic where the State Highway was going to do construction work over the sewer and the purpose was to determine the condition of the sewer before the highway work and after to see if any damage was done to the sewer. Most of the places we have inspected, the sewer was in magnificent condition. In one place we found a single crack, but not a failure situation, and in which situation, before the highway was built, the Route 21 Freeway, we cooperated with the Highway Department and we proportionately paid for an overlay, a protective overlay, over the sewer. So even if the sewer should collapse in the future in that area, we have a sewer over a sewer, so to speak. But in every other spot where we have investigated, and we have investigated many, the sewer has been in perfect condition. But it would be physically impossible to inspect all the miles of sewer we have in the limited time that we could inspect without continuously putting sewage in the river and this is against our particular philosophy.

ASSEMBLYMAN WILSON: So your plans for the future would be just to inspect areas where there might be construction.

MR. LUBETKIN: Or anything that on the surface might indicate a problem.

ASSEMBLYMAN WILSON: Well, you know what I am driving at - if you could see a crack before it gets to a serious state like this, this is something ---

MR. LUBETKIN: Right. And incidentally, this is another

point: Let us assume we saw it. Let us assume we knew about this five years ago. It wouldn't change the situation as far as repair is concerned. We still would have to decide whether to repair from the inside tunnel or outside. We would still have to decide whether to bypass. We might feel we had a little more timewise, but my feeling on this was that when it cracked, the four cracks happened together. It didn't just spread, one and then another. As I said, they progressed. You may feel you have more time. But you would have the same problem in solving it.

ASSEMBLYMAN WILSON: All right. Your sewage receives primary treatment?

MR. LUBETKIN: Yes.

ASSEMBLYMAN WILSON: What is involved in that primary treatment? You remove the solids through screening.

MR. LUBETKIN: The primary treatment consists of, number one, grit removal. That is the very heavy sandy material that is removed in the first stage. Number two, screening and some scum removal. That is, the rags, etc. are removed by screens and some of the floating material like oil and grease is removed. It is then pumped to settling basins. In the settling basins we remove what is known as suspended solids and additional scum. The remaining material which we call effluent is discharged into New York Harbor through 150 nozzles spread over 3 1/2 acres under 60 feet of water. It contains a large amount of BOC and COD. It is not disinfected. But most of the settleable solids, screenings, oil and grease are removed. We are under orders from the State Department of

Health and it is the recommendation of the Hudson River Enforcement Conference to change our plant from primary to secondary because a primary plant cannot remove dissolved BOD and COD. Again I have to give you a little dissertation as to what I mean about it. This is the material - BOD and COD is the material that absorbs oxygen from the receiving waters. See, after you discharge a material into the water, there is a natural purification of this material in the water. And in order to purify itself it uses up oxygen much as when you burn wood with fire it consumes oxygen. You cannot burn wood without having oxygen. The oxygen is removed from the water and if more material is put into the water than oxygen is available, it depletes the oxygen to a certain extent.

Now as oxygen is being depleted from water, the water also reaerates itself; that is, it absorbs oxygen from the atmosphere. If the rate of removal is greater than the rate of the aeration, the amounts of oxygen in a given body of water goes down until it reaches zero. Now at certain points fish can't live. It has been determined, and it also depends on the species of fish, that approximately three parts per million becomes bad for fish and then below that they suffocate. This varies, incidentally with temperature, salinity and other things and species of fish. However, odor is not produced until theoretically zero. Actually you might have a part per million or a fraction of a part per million in one part and zero in another because the water is not homogenous. At zero dissolvedoxygen, a different type of stabilization occurs. We go from what we call aerobic to anaerobic.

Anaerobic gives off odors, hydrogen-sulfide and other items that become noxious to our senses, and it is at this point that the public usually starts yelling. If we have a zero dissolved oxygen or thereabout, there will be odors. The amount of odors will depend upon prevailing winds, it will depend upon volumes, and it will depend upon temperatures.

However, if you stop discharging your polluting material, the tendency of the stream is to go back. It will return to its original position. Pollution is not a permanent recession of a stream.

ASSEMBLYMAN WILSON: Let me ask you this question. I don't want to go into so much detail because of time. If you were to screen the effluent when you actually bypass while you are repairing the pipe and if you disinfected it, would you not in most cases be giving it a primary treatment?

MR. LUBETKIN: No, because we would not be settling the suspended solids. If suspended solids would reach the stream, they would cause what we call a benthal deposit. This benthal deposit will be washed down and in itself will absorb oxygen and also in itself will take some time to neutralize itself.

ASSEMBLYMAN WILSON: Let me ask you this then: What would be the difference in pollution between a screening and disinfecting as compared to primary treatment?

MR. LUBETKIN: The settling of the suspended solids.

ASSEMBLYMAN WILSON: How much pollutant would that add to, say, normal discharge as compared with your primary treatment? Is there a great difference between the two in your opinion?

MR. LUBETKIN: Sufficient that it is not comparable. We know that we are going to get some deposition of this material. But it will be fine material and will move with the receiving stream. Studies have been made in the Hudson River, in fact, and they put the equivalent of a shot of sewage in and have studied the effect of the tides as it moves up and down. In 50 tidal lengths, which is 25 days after the cessation, the major part of the pollution has moved approximately 25 miles, which is more than the distance we are talking about from our bypass points to the bay. This, of course, was a dye which did not degrade. Now our pollutant is going to stabilize itself as time goes on.

I am not trying to fool anyone as to a possible nuisance. We may have a nuisance for a period of time, but I am saying that I do not advocate the disinfection because it is disinfecting one while you are not disinfecting so many others and, therefore, the effect of the disinfectant is not proper. We will do it if everybody insists, but I think it is throwing money away. I do believe in the screening.

Now the effect of chlorine as far as stabilization, there is some effect, but not enough. I would rather work with sodium nitrate which is not a disinfectant but will supply some oxygen. But there are adverse effects to that. There are added sludge deposits. I would rather wait until spring and add sodium nitrate as effective benthal deposits are felt if they are felt.

The point I am getting at is this: We will attack this scientifically. We will take any help from the State Department

of Health, from the Federal government. We are not ignoring the people. But we do not feel that people who are not trained in the matter should arbitrarily take what they hear and advance a solution. Although if they do, we will consider it.

ASSEMBLYMAN FIORE: On this $2,500,000 for the construction of the bypass, would you say that is a good figure, a conservative figure, or a liberal figure?

MR. LUBETKIN: You will have to ask Mr. Manganaro that. The cost estimates were made by the firm of Manganaro, Martin and Lincoln. They are competent engineers and I assume he has made what he considers an average figure.

ASSEMBLYMAN FIORE: I didn't say they weren't competent. I wanted to know about the figure.

MR. LUBETKIN: You will have to ask him as to what liberalism he put into the figure.

ASSEMBLYMAN SCANCARELLA: Mr. Lubetkin, to crystalize and compare the two plans for the moment - I think we ought to be able to do this in brief answers - we refer ---

MR. LUBETKIN: May I interrupt. There are three plans really, three major plans: One, diversion to the river. There are ramifications to that, diversion raw, diversion with screenings, diversion with screenings and chlorination. Two, the by-passed tunnel method. Three, the pumping overland method.

ASSEMBLYMAN SCANCARELLA: Let's just take the first two, the basic first one and the second, just the basic plans. Now with the diversion or Plan (d), whatever you call it, without screening or any treatment, that is $500,000. Is that right?

MR. LUBETKIN: That is estimated at $500,000.

ASSEMBLYMAN SCANCARELLA: And the bypass is $2,500,000.

MR. LUBETKIN: Correct.

ASSEMBLYMAN SCANCARELLA: The basic Plan (d) would take an estimated six months; the bypass plan, an estimated eighteen months. Is that correct?

MR. LUBETKIN: Correct.

ASSEMBLYMAN SCANCARELLA: And the basic Plan (d) would take approximately six weeks or entail approximately six weeks of dumping of sewage?

MR. LUBETKIN: Forty-five days.

ASSEMBLYMAN SCANCARELLA: And the other one up to fifteen days or approximately fifteen days?

MR. LUBETKIN: Seven to fifteen days.

ASSEMBLYMAN SCANCARELLA: So now what we are talking about is a plan which would take the bypass plan ---

MR. LUBETKIN: I want to interrupt. The forty-five days will be the end of November or December. That fifteen days may be in the summertime with the scheduling.

ASSEMBLYMAN SCANCARELLA: For the bypass plan, it would cost $2 million more, it would take a year longer and what we would be saving is a difference between dumping for 15 days and approximately 45.

MR. LUBETKIN: Let's be optimistic. Even considering it is seven days - I will try to look at the other side of the coin --

ASSEMBLYMAN SCANCARELLA: What I am trying to say is, it will cost us $2 million more and take a year longer, just to

save perhaps a month of dumping. Is that right?

MR. LUBETKIN: Yes.

ASSEMBLYMAN SCANCARELLA: One further question, then you can go on : Now to save that approximate 30 days or four weeks, could we attempt to minimize that additional four weeks by some screening method or some treatment method?

MR. LUBETKIN: I am recommending a screening. I do not recommend chlorination. But if I am shown that I am wrong, then we will do the chlorination if everybody wants it.

ASSEMBLYMAN SCANCARELLA: Do you know what the cost would be?

MR. LUBETKIN: The cost of the screening has been estimated at $100,000 additional, the cost of the additional chlorination and screening, at $600,000, or a total of $1,100,000.

ASSEMBLYMAN SCANCARELLA: Just with the screening then - in other words, Plan (d), for $500,000 and 45 days of dumping with screening, in your opinion would that eliminate the health hazard?

MR. LUBETKIN: I don't think there is a health hazard. It will eliminate some of the nuisance.

ASSEMBLYMAN SCANCARELLA: You don't think there is a health hazard.

MR. LUBETKIN: I don't, but I am not a doctor, gentlemen. I understand there will be medical testimony later. But I did point out if there is a health hazard from this, why isn't there a health hazard from all the other plants that are dumping? Because, remember, their treatment does not disinfect.

ASSEMBLYMAN SCANCARELLA: And New York is in addition dumping 300 million?

MR. LUBETKIN: Over one billion during that period of time without disinfection because they chlorinate during the bathing season, May 15th to September 15th, which is what we want to do eventually and also this material which will go into the river will be that much less material that we will put into the New York Harbor area. So as far as the effect on beaches from our stuff, it would be even less; it has a further distance to go.

ASSEMBLYMAN SCANCARELLA: Up to here I tend to agree with you in your presentation. But one thing does trouble me. You stated in your presentation as an example or as a hypothetical if you had known about this five years ago - don't you think if the departments involved, the Health Department, the Highway Department or the Commission, were more vigilant and this were discovered several years ago as you said, that it would have made any difference?

MR. LUBETKIN: No, I do not. I believe the same problem would exist.

ASSEMBLYMAN SCANCARELLA: Thank you.

MR. LUBETKIN: Incidentally, in case there is a question about the 45 days - there is usually a tendency in contracts not to meet times - the Commissioners have put in their contract, their proposed contract, a penalty bonus arrangement for the contractor. During the time of bypassing if he goes beyond 45 days, he pays a penalty of $2,000 a day. If he beats the 45 days, he gets a bonus of $2,000 a day.

ASSEMBLYMAN FONTANELLA: How is this crack in the tunnel

going to be repaired? I don't think anybody has discussed this.

MR. LUBETKIN: There are several methods. The method we proposed was going to be discussed by Mr. Manganaro, but I can show it to you if we pull the drawing up.

Number one, we must dewater. This is the bottom drawing, gentlemen. Number two, steel which is brought down in plates will be placed in sections. As it is placed, grout will be poured between the old sewer and the steel liner plates. Then we will drill through both the sewer and the liner plate and have low pressure grouting first to attempt to seal off the outside waters and then we will drill through with high-pressure grouting to attempt to stabilize all the earth around it and fill any voids that might have been formed. This will reduce the sewer from 11 foot three to approximately -- What is it 10 foot even, Mr. Manganaro?

MR. MANGANARO: A little over 10 feet.

MR. LUBETKIN: A little over 10 foot. We will then grout over the steel to protect the steel. The head loss has been calculated for the length involved to be one-tenth of a foot and we feel we can afford that.

ASSEMBLYMAN FONTANELLA: That is what I wanted to get to. If there is going to be a diminution in the capacity of the sewer, then we are going to have another problem - you are going to have to build another sewer if we are going to have backup.

MR. LUBETKIN: No. We calculated the amount of backup as one-tenth of one foot and we feel we can afford the one-tenth of one foot.

ASSEMBLYMAN FONTANELLA: When you first began to speak,

Mr. Lubetkin, you indicated the plan that was ultimately chosen by the Commission was not liked by the Commission.

MR. LUBETKIN: That's right.

ASSEMBLYMAN FONTANELLA: These are the words you used if I am not mistaken.

MR. LUBETKIN: We didn't like the idea of by-passing. We just felt it was the best.

ASSEMBLYMAN FONTANELLA: I just wanted to make sure this was your position.

MR. LUBETKIN: Right.

ASSEMBLYMAN FONTANELLA: Commissioner McMahon who spoke first said there is going to be, in his own words, no health hazard. He said categorically there would be no health hazard and that this effluent would not affect the beaches of New Jersey. Well, if there is no health hazard and it is not going to affect anybody or anything, why don't you like the plan?

MR. LUBETKIN: Because although we say it will be no health hazard - and I use the word "no" as I say there is no hazard in the airplane going over the City of Newark, and I categorically say it will not affect the beaches without any qualification any more than it affects it going out New York Harbor - the reason we didn't like it was because it might be a nuisance for a period of time. We do not deny this, gentlemen. I am afraid there is a possibility of odor. We hope it is minimum and we may not have it if we have the proper weather, but we could have it for this period of time.

SENATOR WALLWORK: Any other questions?

ASSEMBLYMAN FONTANELLA: Just one further question: There is no doubt, and I don't think any member of the Committee here doubts that the problem exists and it has to be solved. The question is how to solve it. I think that is the issue.

MR. LUBETKIN: Absolutely.

ASSEMBLYMAN FONTANELLA: What public agencies did the Commission seek help from other than the private firms that it consulted in the solution of this problem or did it by itself try to remedy this problem which really affects thousands and thousands of people in the metropolitan area? What other public agencies were consulted?

MR. LUBETKIN: The Commissioners felt that they hired competent consulting engineers. The Commissioners felt that they knew the problem better than any other agency. The Commissioners did discuss the matter with the State Department of Health. When we hired Woodward-Clyde, we asked them to consult with any tunnel experts they wanted. They went to California and consulted with people and we paid the tab.

As to discussing it with others besides the Interstate Sanitation Commission and the State Department of Health, we didn't. We felt that within our own organization, within the consulting engineers we had hired, we had competent people.

Now is there another agency that has a better plan? I know that since this has come out, many, many have discussed this matter. Many have come up with other plans, but when they found out the details, they realized the other plans didn't apply. I have had calls as a result of people reading the newspapers from people who have had plans, but when they found

out the details involved here, they admit their plans do not apply.

ASSEMBLYMAN FONTANELLA: So the answer is that there were just two oral conversations with the Interstate Sanitation Commission and the State Department of Health. Other than that it was solely the Commission's decision without any professional expertise sought from any other body.

MR. LUBETKIN: Wait a minute. They had professional help, not from other bodies.

ASSEMBLYMAN FONTANELLA: Other public bodies I mean.

MR. LUBETKIN: That's correct.

MR. FONTANELLA:So the public wasn't aware until you ultimately made a decision and said, "This is what we are going to do," and it fell upon the public like a ton of bricks.

MR. LUBETKIN: There are many, many things that we do. We don't know that it falls upon the public like a ton of bricks. Our job is to abate pollution. Our job is to handle and treat the sewage in the area. Whenever a body pollutes and we go after them, we don't necessarily consult with every Federal agency. There are many, many pollutions we have abated. This is part of our work. This is what we are being paid for.

Incidentally, I would like to ask what agencies you feel might be available to us for free consultation. If we were to call up the Federal Water Pollution Control agency, for example, do they have available engineers that would come in and study this problem and give us advice?

SENATOR WALLWORK: We will cover that a little later because we have a representative from that agency here.

ASSEMBLYMAN RUSSO: Mr. Lubetkin, you seem to justify everything by talking about the fact that New York dumps 300 million gallons a day or whatever it is in New York Harbor.

MR. LUBETKIN: No, I don't justify everything with that.

ASSEMBLYMAN RUSSO: You made that statement that they do do it. Do you have facts on that? Can you prove that?

MR. LUBETKIN: Yes. You will find there are reports on it. They admit it.

ASSEMBLYMAN RUSSO: Who admits it?

MR. LUBETKIN: The City of New York.

ASSEMBLYMAN RUSSO: When did they admit it?

MR. LUBETKIN: At the Hudson River Enforcement Conference. I think Mr. Sullivan or even the Federal government will have figures on that if you ask them. I don't have documentation with me is what I am getting at.

ASSEMBLYMAN RUSSO: But you base everything on that 300 million gallons.

MR. LUBETKIN: No, no.

ASSEMBLYMAN RUSSO: Everything you said here is they did it and we should do it.

MR. LUBETKIN: No.

ASSEMBLYMAN RUSSO: Two wrongs don't make a right.

MR. LUBETKIN: I am afraid there is a misunderstanding when you say they did it and therefore we should do it.

ASSEMBLYMAN RUSSO: You have mentioned the fact they do

it; we didn't mention it.

MR. LUBETKIN: Mr. McMahon mentioned it first.

ASSEMBLYMAN RUSSO: Yes.

MR. LUBETKIN: I mentioned the fact that if, and this is the point I will make - let's get it clarified - if someone says that the dumping of this raw sewage is a public health hazard, then by the same token the dumping of all the sewage around the New York area is the same public health problem because New York dumps - I said 300 million raw sewage, but I wasn't even making a big deal of that. I am talking about the over a billion gallons of treated sewage that is not chlorinated. I am talking about the treatment plants such as Elizabeth and Kearny and a whole system which are not required to chlorinate except during the summer. Now I don't say that is a wrong. You see, therein is where we disagree. I agree that they shouldn't have to. But I point out that they don't because it is not a public health hazard. But if someone says ours is a public health hazard, I say, how is ours and not theirs? It is not that two wrongs make a right, but I say two rights do not make a wrong.

ASSEMBLYMAN RUSSO: We are discussing New Jersey and you keep bringing in New York, the fact 300 million gallons is dumped. It does not make it a right thing to do in New Jersey because they do it in New York and you are basing this dumping of 45 days an awful lot on this fact.

MR. LUBETKIN: No, I am not, Assemblyman. You misunderstood me. I thought I made it clear.

ASSEMBLYMAN RUSSO: I didn't misunderstand you.

MR. LUBETKIN: I will repeat it again because we seem to have a difference of opinion. I do not say two wrongs make a right. I do not say that the discharge of all this waste unchlorinated is wrong. I think it is right. I don't think it has to be chlorinated during those months. I am pointing out we are doing nothing different in not chlorinating. I say that theirs is not a health hazard and neither is ours. I am not saying because they are doing something we should be able to do it. But I will then say if someone says ours is a health hazard, why isn't theirs? I think that is a little different, Assemblyman.

ASSEMBLYMAN CAPUTO: I don't think anyone on this panel is an expert in dealing with issues such as this. I think because of our interest, there has been a meeting called to get your expertise opinion. The point is this: You are asking us to prove whether or not this is a public health hazard.

MR. LUBETKIN: No, I am not.

ASSEMBLYMAN CAPUTO: That is my interpretation of that which you have just presented to us. I want to emphasize for just one second that I think the fact we are not medical men does not mean that we don't know what is right and what is wrong and that we don't have a feeling about whether this raw sewage is a health hazard. To draw a parallel between an airplane going over the City of Newark, I think is a little out of line with the questioning we are trying to focus in today. We are not blaming you in particular for what is happening so there is no need for defense.

MR. LUBETKIN: No, there is nothing personal.

ASSEMBLYMAN CAPUTO: The point is this: We are not looking for a rationalization. We are trying to deal with a *problem that has alarmed citizens in this portion of the* State and as public representatives of not only this county but of other counties we are concerned because our constituents are very alarmed over the situation. And in their interpretation, which I think is most important, they do feel it is a health hazard and I think rightfully so. We are not looking for you to blame any other agency and what other agencies do as a standard for your Commission. We are interested in what goes on in your Commission and what we can do as legislators to help alleviate that problem.

So far I think there has been a poor public relations job performed by your agency because not only are many members of this panel asking direct questions because they have not been informed prior to this meeting, but the public is more alarmed because they have not been informed. I think when you are dealing with matters so delicate and so important as far as the safety of the people who live in these bordering areas is concerned, the public relations job of your Commission must be improved so that they cannot run off and feel they are going to be swamped by high tides of the Passaic River.

The point is, the plane that flies over the City of Newark is something than can be stopped or it is a one-spot thing if there is a crash and it can't be avoided. But once this thing gets out of line, it could become uncontrollable and you or no one else can guarantee that these people who live in this area are not going to be affected by it.

MR. LUBETKIN: I would like to respond to that, Senator, if I may.

SENATOR WALLWORK: We want to move along as quickly as possible.

MR. LUBETKIN: I would like to. But you see, statements were made. I agree with him on many points. I agree that our public relations might not have been what it should have been but not intentionally because, gentlemen, every meeting we have, we invite members of every municipality to attend. The minutes of every meeting are sent to each municipality. Yet our attendance, except on the last one when this subject matter has been the main topic, has been extremely poor. We seem to be the typical whipping boy that everybody likes to point to. When they have a problem with taxes, it is the Passaic Valley that has just raised their rates. Or if they have a problem with something else, it's Passaic Valley. Yet we do not get from these people attendance at our meetings and constructive criticism.

As far as my rationalizing, yes, I rationalized because I am a rational human being and when I compare these things, I am not comparing them from way out. In my opinion, the probability of something happening has to be considered. As I pointed out to you, when you say, is it a public health menace, or is it a public health problem, if you use the word "menace," I will say categorically no. If you say "problem," again I will say no. If you say, could sometime possibly -- then I have to talk of probabilities. Now you say you are not a medical man; I am not a medical man either but I have been trained in public health.

We know most of these things are possible no matter how improbable. So if you were to get a medical man up here, he might not be able to say it is impossible. You must then pin him down as to probabilities. I am trying to give you an anal to explain a situation. We know that there is a tremendous amount of emotionalism in this and I do not take it personally, believe me, I don't. I feel I have competently done my job. My job is not administrative. My job is engineering. It is my job to present plans and recommend them. It is then the Commissioners job to administratively adopt them or not. They usually accept my recommendations. I feel my recommendations are good. But I could understand them not doing it in view of public relations and in view of, and I will use this word, mass hysteria, although you may think it is an exaggeration. The thought of this material going into the river does excite many people and rightly so. I wish we had had this mass hysteria when we had the bond issue voting. I don't want pollution, neither do you. I know that. But I look at this and I look at the possible problem and I would not be doing my duty if I were to recommend other than what I did, although I can recognize the position of the State Department of Health. I can recognize the position of the Federal government. I do not object to their position because in their over-all context of this thing, they must disregard finances and go to a game. I am still waiting to hear from them as to whether in their opinion it is a public health menace and I imagine this will be asked.

SENATOR WALLWORK: I wonder if we can get back on the

subject because we have a lot of other people ---

ASSEMBLYMAN RUSSO: Just one question: These three pumps that Worthington Corporation has - they are available to be used, right?

MR. LUBETKIN: If we can borrow them from the Washington, D. C. Sanitary District. I assume we could.

ASSEMBLYMAN RUSSO: You said they may pump 40 million instead of 100 million; is that what you said?

MR. LUBETKIN: You see, pumps pump a certain capacity depending on the resistance. The word is "head," but I will use the word "resistance." In other words, the greater the resistance, the less they will pump. These pumps have been designed for a head of 24 feet. We need 35 to 40 feet. Now at 35 feet, these pumps will pump 50 million. If it turns out we have 40 feet, these pumps are going to be no good to us because they are going to be down so low.

ASSEMBLYMAN RUSSO: It would be an asset to use these pumps; is that right?

MR. LUBETKIN: If we used the pumping by-pass around, one of the alternates, we would attempt to get these.

ASSEMBLYMAN FIORE: Mr. Lubetkin, regarding what you said about New York, has the Passaic Valley Sewerage been in violation by dumping raw sewage into the Passaic River or any other river?

MR. LUBETKIN: What does the word violation mean, sir?

ASSEMBLYMAN FIORE: I mean, have you ever been warned by anybody about dumping raw sewage into any rivers without them knowing about it and the Passaic Valley Sewerage coming back and

saying, "This was only done because of emergency reasons"?

MR. LUBETKIN: I have no knowledge of any such warnings.

ASSEMBLYMAN FIORE: Have you ever been warned by the Army Corps of Engineers?

MR. LUBETKIN: I have no knowledge of any such warning.

ASSEMBLYMAN FIORE: All right.

SENATOR WALLWORK: Any other questions? (No response.) Mr. Lubetkin, I have one question. You referred to the various utilities over the sewer and the load over the sewer. Is there any speculation or has there been any determination as to what caused the crack?

MR. LUBETKIN: One of the things we asked Woodward-Clyde who were experts was to tell us in their opinion what caused it. They came back - I think it is in one of their reports - and said they cannot tell nor will it ever be known the exact reason for it. That crack may have been there for 15 years and just progressed very, very slowly.

SENATOR WALLWORK: One other question: Is there any possibility that if you make a by-pass and you were to use these large pumps and what not, that some of this equipment could be used in other facilities within the Commission's jurisdiction so that it would justify the cost of the equipment along those lines and presumably make that equipment available to be phased under Federal and State funding programs?

MR. LUBETKIN: At the present time, I would have to say no, although one of the alternates we are studying may be possible. You see, we are going to have to go to secondary treatment. Our present pumping station is perfectly adequate as a pumping station. We do not need pumps there. But in our

studies, we may find that it will pay us to split our treatment into two points. It may pay us to build a treatment plant up in Yanticaw - Clifton, in which case we would have to build a new pumping station,and treat all the waste from that point up and reserve the treatment plant at Newark Bay to treat all the waste from that point down. This will come out in our studies, etc. So as I say, presently I will say no, but I can't say it is not possible.

SENATOR WALLWORK: You talked about the overflow into the river. What other areas along the river are polluting the river? Do any municipalities along the river dump raw sewage into the Passaic River now?

MR. LUBETKIN: On occasions. They also have breaks, gentlemen. This isn't exclusive to us. This is the first major one we have had in the history of Passaic Valley. But there have been breaks in Wallington. There was a break in Lodi not very long ago that polluted the Saddle River.

SENATOR WALLWORK: How long was that pollution?

MR. LUBETKIN: That pollution lasted for about two weeks.

SENATOR WALLWORK: And to what degree?

MR. LUBETKIN: Not to the extent of ours because nobody handles the volumes we do.

SENATOR WALLWORK: Five thousand gallons?

MR. LUBETKIN: Incidentally, they moved ahead. This is not to castigate them. It is just that these things do happen. There have been breaks in Paterson. There have been breaks in Newark. You may recall the business of a pile being driven through a sewer on Seventh Avenue in Newark. This by-passed

sewage into Meadow Brook storm sewer into Second River for quite an extensive period before they got that straightened out. But it doesn't hit the newspapers because, number one, we usually go after them and where possible, we have them divert the sewage around. We recognize this as a temporary break and as long as they proceed as expediently as possible, it is repaired.

SENATOR WALLWORK: Does the Passaic River overflow now when we have a heavy rain into, say, North Arlington or Kearny or Lyndhurst or any of the municipalities?

MR. LUBETKIN: When you say heavy, there have been floods, but they are not regular occurrences.

SENATOR WALLWORK: How often would that occur in a year's time?

MR. LUBETKIN: I think the last big flood was a few years ago when we had that massive flood.

ASSEMBLYMAN RUSSO: It was last year.

SENATOR WALLWORK: That was one in 50 years.

MR. LUBETKIN: That was a 50-year flood.

SENATOR WALLWORK: In other words, normally speaking, even when we have a heavy rain,and we just had one a week ago, we don't have an overflow from the Passaic River backing up into the streets?

MR. LUBETKIN: No, they have the shallow banks you may have seen from low tide to high tide and I think this is their concern and I also would be concerned if I were an official of that town.

SENATOR WALLWORK: That's just along the river.

MR. LUBETKIN: Right, not into the streets.

SENATOR WALLWORK: Not into other streams in which it could flow one hundred or two hundred feet or yards into the municipalities?

MR. LUBETKIN: Well, there are streams,but again it wouldn't go into the street normally.

SENATOR WALLWORK: But it could back up into the small tributaries.

MR. LUBETKIN: Any tributary that is tidal, it could back up into.

SENATOR WALLWORK: How many tributaries would you estimate approximately? Would there be a hundred, would there be five hundred?

MR. LUBETKIN: No, no. You are talking in terms of maybe ten.

SENATOR WALLWORK: Does anybody have anything else? Assemblyman Kiehn.

ASSEMBLYMAN KIEHN: On the chart you showed us, you mentioned that the sewer, the 11 foot, 3 inch diameter sewer, was at peak hours either three-quarters full or filled to capacity. Now if you put this inner, you might say, framework in there, that reduces this to about nine feet.

MR. LUBETKIN: No, no. It will be 10 feet and it will run full.

ASSEMBLYMAN KIEHN: What do you mean by full capacity, the entire sewer?

MR. LUBETKIN: No. We define capacity of our sewers as running three-quarters full - it is actually a little more than three-quarters - about 80 per cent - because that is the

point where you get maximum gravity flow without surcharging. By surcharging I mean overflow where it goes up into the manholes. There have been storms where she has surcharged. Now this particular section of 165 feet will now run higher. But the over-all effect on the total sewer will be one-tenth of one foot at maximum flow and we feel we can absorb that.

ASSEMBLYMAN KIEHN: Will this 165 feet we are speaking of solve the entire problem along the line?

MR. LUBETKIN: It will solve the problem we know we have today. I don't know if a problem will occur a month from now, a year from now, ten years from now. I mean another problem. But incidentally ---

ASSEMBLYMAN KIEHN: That is all we are interested in right now.

MR. LUBETKIN: Right. But this will set a precedent if other problems occur in that if every time something has occurred, we have to start building tunnels around, we are going to run into quite a project. It will also set a precedent as to how we will deal with municipalities when they have breaks. In other words, if it is the consensus of the people of the areas that nothing shall go into the stream regardless, when any municipality has a break it will be necessary for us then to force them to build by-pass sewers while they are repairing them.

SENATOR WALLWORK: Do you have that authority now?

MR. LUBETKIN: We have the authority of halting pollution. We really can't say you will build a by-pass, but we can take them to court and we can say, you shall desist polluting and point

out to the judge there is an alternate method and, of course, the judge would have to decide.

SENATOR WALLWORK: Are there any other questions? [No response.]

We thank you for your exposition, Mr. Lubetkin. It was a good job.

MR. LUBETKIN: Thank you, Senator.

SENATOR WALLWORK: Did you want to have Mr. Manganaro explain anything?

MR. LUBETKIN: If there are any questions on all the alternates investigated, Mr. Manganaro can discuss them. If you feel they have been covered, then Mr. Manganaro need not discuss them. Or if there is any question on cost ---

ASSEMBLYMAN FIORE: The $2,500,000, Mr. Manganaro ---

SENATOR WALLWORK: All right. Let's have Mr. Manganaro come up. Will you state your full name and your position.

C H A R L E S M A N G A N A R O: My name is Charles Manganaro. I am a partner in the firm of Manganaro, Martin and Lincoln.

I have been in engineering for 30 years, the last 20 of which have been as a consultant engineer. I am presently engaged with the Passaic Valley Sewerage Commissioners to come up with a plan and supplement it.

SENATOR WALLWORK: Let me ask this: Have we discussed in prior testimony basically this morning and this afternoon all the various plans that you have considered?

MR. MANGANARO: Yes.

SENATOR WALLWORK: And we have gone through basically the

three programs. Are there any more than the three that you wanted to discuss?

MR. MANGANARO: No, they are the basic three and then the modification to the first one on internal repair.

SENATOR WALLWORK: And then the by-pass with the four-inch pipe, I believe. All right, let's open it up to questions.

MR. MANGANARO: I just wanted to mention one more thing that maybe didn't come up. In dealing with a method of repair, an engineer has to set himself some guidelines. In doing this, he then can evaluate the different methods of repair. Now the guidelines I set up as criteria - one of them, I said, should be a positive solution. The second should be minimum or no raw sewage by-passing. The third should be the shortest possible construction time. The fourth should be safeguard of the adjacent utilities and mainly the structures. The fifth is the least possible or no interference with traffic. And the last is full or near-full capacity.

I would like then to answer the questions based on these criteria.

ASSEMBLYMAN FIORE: One question regarding the cost of the by-pass, $2,500,000: Mr. Manganaro, do you consider that a conservative cost or a liberal cost. Do you think it is over - above - or do you feel you are playing it very close to the construction?

MR. MANGANARO: Well, I am playing very close to the construction in this regard: It is impossible to drive in that tunnel without some movement of the soil. In my computations and figuring my estimate, I made some allowance for the purchase

of the building under which we would directly be rooted. I made no allowance for possible movements of other buildings. So in this regard I believe it is a fair estimate based upon current construction costs in tunnels. But this presupposes no untoward damages because of subsidence in other buildings.

ASSEMBLYMAN FIORE: This will come under the title of new construction then. Could it come under the title of new construction?

MR. MANGANARO: It would be stretching a point.

ASSEMBLYMAN FIORE: It would be stretching the point. Then with the new construction theory, could you ask the Federal government for money?

MR. MANGANARO: Well, with our experience in this type of thing, they actually categorize the issuance of money into two categories. One is maintenance. And they sequestered this and we are not eligible for funds. The other part is new construction to either upgrade a plant or to provide a facility which will take raw sewage and bring it into a plant. I do not believe there is Federal money available for a by-pass tunnel.

ASSEMBLYMAN FIORE: Thank you.

ASSEMBLYMAN CAPUTO: To go on with Mr. Fiore's point, in other words, in your opinion, based on prior experience, the Passaic Valley Sewerage Commission is not entitled to Federal funds?

MR. MANGANARO: I would say that on this particular project.

ASSEMBLYMAN CAPUTO: Another question - How long has your firm been employed by the Commission?

MR. MANGANARO: For the last year and a half I would say.

ASSEMBLYMAN CAPUTO: And I would like from you, because I know we have had information from others, what was the reason for their employing you as -- what is it an engineering firm?

MR. MANGANARO: An engineering firm devoted solely to sanitary engineering.

ASSEMBLYMAN CAPUTO: What functions have you performed to date for the Commission?

MR. MANGANARO: We prepared several reports. One was a chlorination report on the chlorination of the effluent for Passaic Valley Sewerage. The second was the rerouting of various utilities around the Wallington Pumping Station.

ASSEMBLYMAN CAPUTO: What kind of work did this entail? I mean, how much work did this entail as far as your firm was concerned?

MR. MANGANARO: In the way of actual money that this would generate in construction costs about $10 million.

ASSEMBLYMAN CAPUTO: Has there been any work or any questionnaire from the Commission to you in the last month or so in relation to the opposition of the dumping of this raw sewage into the Passaic River?

MR. MANGANARO: They asked me to re-evaluate various alternatives, consider the present recommended scheme against the possible opposition, and this is what we have done. We prepared a report.

ASSEMBLYMAN CAPUTO: Mr. Manganaro, how long ago was that?

MR. MANGANARO: About a month and a half ago. But a report was prepared prior to that.

ASSEMBLYMAN CAPUTO: A report was prepared prior to that but until there was some opposition from the communities involved, there was no request from the Commission to you to offer any alternative plan?

MR. MANGANARO: Well, I have to say that initially when we were employed, it was my duty to go down into this tunnel to view firsthand its condition, to take the prior reports of Woodward-Clyde and come up with various evaluations. This is what we have done.

ASSEMBLYMAN CAPUTO: Another question - Can you tell me from being associated with the Commission, why your firm has more expertise than the engineers that are hired by the Commission?

MR. MANGANARO: Well, in engineering you have various consultants, those that specialize in soil alone and make recommendations for foundations, and you have other engineers who design buildings and they usually employ foundation engineers like Woodward-Clyde to determine size of footings, etc., and you have firms of engineers like ourselves whose practice is actually strictly limited to sanitary engineering.

ASSEMBLYMAN CAPUTO: Therefore, why would the Commission have to employ their own engineers?

MR. MANGANARO: The reason is that we can provide expertise in report-writing, in actually preparing contract drawings and specifications for construction work.

ASSEMBLYMAN CAPUTO: And does your firm work or associate

yourselves closely with the engineers that work for the Commission?

MR. MANGANARO: Well, we have to do this and this is mainly what a consultant engineer does.

ASSEMBLYMAN CAPUTO: How much contact do you have? In a year, how many times have you been in the tunnel?

MR. MANGANARO: In a year I have been in the tunnel twice. How much contact have I had with the engineers and the Commissioners? Perhaps maybe once a month. But there has been communication where we would develop a plan and then review this either by correspondence or by actual conference.

ASSEMBLYMAN CAPUTO: Thank you.

SENATOR WALLWORK: Are there any other questions? I think we have pretty well exhausted this.

MR. MANGANARO: I want to make one more statement, please.

SENATOR WALLWORK: All right.

MR. MANGANARO: In a problem such as this, we felt that it would be wise actually to confer with other engineers, which we have done. As soon as we were retained - this is prior to the second report - I conferred with the firm of Moran, Rutledge, Wentworth and Johnson, whom I consider to be eminent soil consultant engineers - they are on a par with Woodward-Clyde - to get abutting opinions. In addition to that, I also conferred with the Vice President of McLean - Lane Construction Company who are constructors of tunnels. It was the consensus of the people that I talked to in the first firm and also Norman Maebert that the interior repair actually offers the best and positive solution to this particular problem.

SENATOR WALLWORK: One question, Mr. Manganaro, I don't think we discussed in any great detail the idea of by-passing with pipes and would those pipes go parallel or into the Passaic River? What was that? Was that a plan which has been basically discarded?

MR. MANGANARO: No, that plan has not been discarded and actually it is one I have shown on this large chart. It is a plan whereby we would go into Dirk Street, if you are familiar with that area.

SENATOR WALLWORK: I don't think we have discussed that plan, have we?

MR. MANGANARO: Not thoroughly.

SENATOR WALLWORK: Let's just take a quick review because I think this is the crux of the problem today. There are so many plans and I want to make sure that everyone here, particularly those on the Committee, has had access to all the various plans and maybe you could just review quickly the plans.

MR. MANGANARO: [Referring to chart] In view of the multiplicity of plans, we thought it would be best actually to reduce these to one primary scheme with three alternates or three modifications and then the three other schemes below.

The first one actually is interior repairs and it gives time, cost and its disadvantages.

The next one is the one Mr. Lubetkin talked about. This is the same scheme as number one plus the screening at three locations, with an additional amount of $100,000, to give a total of $600,000.

The third is screening and chlorination at three locations. The total cost would be $1.1 million.

(C) is the same as the first scheme, except that we have this rather sophisticated pumping station on Dirk Street, which would take the sewage and pump it around via the west bank of the Passaic River and then coming up to Clay Street to be dumped into the sand catcher at Clay Street. This has several disadvantages. One of them actually is cost. The second is disruption of traffic because I think we would have to virtually close down McCarter Highway.

And then the last one is the diversion of storm flows because obviously we could not build a plant there the size which would take care of every bit of sewage that came down at this point.

SENATOR WALLWORK: Wait a minute. I don't quite understand. With than plan 1 (c) there wouldn't be any pollution going into the water at all theoretically except during times of storm?

MR. MANGANARO: That's right.

SENATOR WALLWORK: And that is what, the three 4-inch pipes?

MR. MANGANARO: Three 4-foot pipes.

SENATOR WALLWORK: Four-foot pipes rather.

MR. MANGANARO: And the pumps possibly that were talked about by Mr. Lubetkin.

SENATOR WALLWORK: And we know that the pumps might be able to be used elsewhere. What about the other materials on

the job? The pipe - probably no.

MR. MANGANARO: No, the pipe possibly could be sold if anyone should want a couple of miles of four-foot pipe and the pumps actually are available, but they are not really of the correct characteristics.

SENATOR WALLWORK: Would there be any untreated sewage going into the river at any time during Plan 1 (c)?

MR. MANGANARO: Only under this condition, under storm flows.

SENATOR WALLWORK: When you make the tunnel by-pass at the same cost, which takes longer as compared with this 1 (c), at the same price, you are going to have a 7- to 14-day pollution period. What then is the order of recommendations that you would have on the various programs because I think we are familiar with the other programs? What would you as a technical person recommend?

MR. MANGANARO: Well, I didn't get a feeling from the Department of Transportation on how they would feel about stoppage of traffic flow on McCarter Highway. But I would actually select 1, 2, and then this (indicating).

SENATOR WALLWORK: 1, 1 (a), 1 (c) in that order.

MR. MANGANARO: That's right.

SENATOR WALLWORK: Disregard the chlorination and --

MR. MANGANARO: And possibly the one with sodium nitrate should we have this problem of sludge deposits in the river.

SENATOR WALLWORK: Then I take it the tunnel by-pass would be your fourth recommendation.

MR. MANGANARO: The by-pass is my fourth recommendation

because of the possible jeopardy to the buildings.

SENATOR WALLWORK: What about 3 and 4?

MR. MANGANARO: Exterior grout - I concur with Woodward-Clyde that this is not a feasible solution in view of the fact we can't see what we are accomplishing and then if we stop all the leaks, if we get any subsequent cracking, we might start the piping phenomena once more.

SENATOR WALLWORK: The open cut is not feasible?

MR. MANGANARO: The open cut is not feasible. It is a positive solution, but it will do damage to those buildings and there will be the by-passing as well.

SENATOR WALLWORK: For 45 days.

MR. MANGANARO: This is the one that would be used if we can live with the 45 days of by-passing.

SENATOR WALLWORK: You couldn't as an engineer give a reason for the crack?

MR. MANGANARO: No. Actually,as was testified before, this is a plain concrete sewer. You wouldn't build it this way now-a-days. You would reinforce it so even if you got a crack, the crack would be held tightly and even if it would permit leakage, it would not permit the loss of soil. This is the dangerous part of what is happening now, the loss of the side supports so that we are getting this squashing action.

SENATOR WALLWORK: I mean, would there be anything with the mains up above or problems with the road - could that have caused the problem?

MR. MANGANARO: No. Generally speaking as design engineers, you put your most important utility at the lowest level because

if you get a washing out of the water main, it is going to wash the material upwards. I doubt very much whether any utilities above triggered the crack below. It might have been some weak concrete. You don't need much to start this because it is un-reinforced.

ASSEMBLYMAN FIORE: Mr. Manganaro, you said you were hired about 18 months ago and I believe Mr. Lubetkin said time is of the essence. We have possible solutions on the board and you were hired 18 months ago. As the days and the months go by, don't the construction costs spiral here and to make it up wouldn't these 31 towns be assessed a greater amount of money?

MR. MANGANARO: What you are saying is absolutely true. It has been our experience that construction costs go up about 1 per cent a month.

ASSEMBLYMAN FIORE: At this time, you couldn't give any date or any time when this could start?

MR. MC MAHON: May I interrupt?

ASSEMBLYMAN FIORE: Yes.

MR. MC MAHON: I think you have a misapprehension. Mr. Manganaro was not hired 18 months ago on this project. He was hired 18 months ago to produce a report upon the head facilities, which report has been submitted. He was only hired on this a few months back when we finally determined action had to be taken, which was the early part of this year.

ASSEMBLYMAN FIORE: When you say a few months ago, you mean when?

MR. MC MAHON: The early part of this year. I don't know

what the actual date was. The contract with him was only signed in May or thereabouts.

ASSEMBLYMAN FIORE: May of this year?

MR. MC MAHON: When the contract actually was signed, yes.

MR. MANGANARO: I thought that was understood.

MR. MC MAHON: I didn't want you to get that 18 months mixed up.

SENATOR WALLWORK: Are there any other questions? (No response.) All right, Mr. Manganaro, thank you very much.

At this point we are going to take a three-minute break.

[Short recess]

ASSEMBLYMAN WILSON: The hearing will now resume. We will call as our next witness the Director of Clean Air and Water for the State Department of Health, Mr. Sullivan. Mr. Sullivan, would you please before you start your testimony give your name and also your position.

R I C H A R D J. S U L L I V A N: Thank you, Mr. Wilson. My name is Richard J. Sullivan, Director of the Division of Clean Air and Water of the State Department of Health. Here with me to come to the stand if the members of the Committee would like to ask questions that I feel are beyond my own knowledge is Douglas Clark, sitting over here, who is our supervising engineer, and also Deputy Attorney General Schwartz who has represented us in all of the litigation concerning Passaic Valley.

Among our responsibilities is the enforcement of the provisions of Title 58 which deal with the pollution of the waters of New Jersey and that brings us into this discussion here.

The purpose of our being here, as is the case with every other witness, I guess, is to comment upon the plan that the Passaic Valley Sewerage Commissioners have offered to effect a repair in the failing trunk sewer line under McCarter Highway at Gouverneur Street in Newark. Mr. Lubetkin has recited, and I think he has recited accurately, the contact our two agencies have had in recent weeks concerning their proposals. We were made aware on the 26th of May that Passaic Valley needed to perform this repair and that this method that is being discussed most extensively today was at that time the method of choice.

Reports came back to us in the office of this meeting in the form of presenting facts and recommendations with no position taken by our engineering representatives in their encounters. We had hoped at the time of that meeting and of subsequent get-togethers to have before us the appraisal of the consulting engineer for Passaic Valley as to what the alternatives are to the preferred method of repair that would involve the diversion of about 115 million gallons a day of untreated sewage into the Passaic. That report wasn't received and as time raced on, it became apparent to us that Passaic Valley had made a decision as to how to proceed, that it would proceed with its preferred plan, and it was at this point that Health Commissioner Kandle, my superior, sent upon our recommendation a telegram asking Passaic Valley to withhold action until further inquiry could be made.

Passaic Valley asked us if it would be possible for us to present our position for their guidance no later than

a public meeting held by the Commissioners on the 9th of July 1969. Well, we still had not received the report of the consultant setting forth the alternatives and the feasibility or infeasibility of them. We honored that request and on the 9th of July presented to the Commissioners at their public meeting a letter which set forth our position and a letter that I would like to comment on a little further in my brief testimony.

Now the method of choice that has been advocated by Passaic Valley involves - and I will not enter into the details because it has been well discussed - performing the repair while the sewer is dry. This necessarily means removing from that length of sewer the 115 million gallons a day average dry-weather flow that would ordinarily course through it and diverting those wastes into the Passaic River. It is our understanding that this diversion would occur at three points. The northern one would be at about the Clifton-Nutley boundary where the estimated flow in dry weather is about 80 million gallons a day. This point is about five miles up the Passaic from the point of repair.

The second proposed diversion point is about two miles above the repair site at Mill Street near the Belleville-Newark boundary. The estimated dry-weather flow here is about 20 million gallons a day.

The third point of diversion would be located in Newark slightly less than two miles above the repair site where the dry-weather flow is about 15 million gallons a day.

Under this alternative then, a total of at least 115

million gallons of untreated waste would enter the Passaic River for at least six weeks.

Now in our judgment - and I have consulted with our professional staff in making these comments - fairly accurate mathematical studies can be made to determine what would happen to water quality if this amount of sewage, sanitary wastes and industrial wastes were put into the Passaic. We could predict, for example, if these elaborate studies were done what the effect would be upon the dissolved oxygen content through the length of this waterway. But very detailed information must be obtained, including chemical and biological background data, together with information such as water temperature, tidal and fresh water influences, bottom deposits and so forth, data which in short do not exist at any level of government to our knowledge. These data not being available, it is not possible for us to make a mathematical prognosis of what the water quality would be in terms of its biological and chemical conditions if Passaic Valley were to proceed with its preferred method of diversion.

In any event, however, the issue may revolve about other considerations. If we had such data, if we had accurate and conclusive data as to the existing water quality and we could present numbers to the Joint Committee or to other interested officials, I question whether this would give the full flavor of the proposal; that is, if dissolved oxygen is one part and this is going to cut it in half, I am not at all sure that this will give the impression upon those who have to make decisions as to what the impact would be.

We are talking here, for better or worse, about big-time pollution. This is not a trivial diversion that we are discussing. I am not going to trouble the Committee with how many lakes the size and shape of Central Park you can fill to how many Empire State Buildings deep. You have all heard those ad nauseam. But we are talking about diverting from this line into these three points in the Passaic wastes equivalent to that produced by the combined populations of the States of Delaware, Maine, New Hampshire and Vermont. That sounds sizable to me. To use the term "sewage" or "waste water" really is a euphemism in describing what we are talking about here. We are talking about the biological wastes of hundreds of thousands of people. We are talking about the wastes from hospitals, from slaughter houses, from food processing plants, from mortuaries, from all sorts of industires in a variety of forms, in alkalies and acids, in oily and greasy substances, etc.

Now to make matters worse, because this is the tidal reach of the river, our staff advises me that a goodly portion, an unknown portion, quantitatively unknown, but a substantial portion of these wastes will return to haunt the tidal reaches of the river,which is Dundee Dam down to Kearny, which is a length of about 16 miles,and that it won't be a matter of disposing of the wastes into a free-flowing stream and having them rush out to the Atlantic and head straight for Europe. They will remain with us having unpredictable effects, but unpredictable only as to degree. It is possible, especially if the flow were low, we would end up because of the tidal action in

having an oscillating cesspool for this 16-mile reach.

Much of the material that is highly putrescible and is also settleable would settle out in the Passaic River. It would serve as one of the primary treatment tanks of the process. The material that is now being barged out by Passaic Valley Sewerage Commissioners weekly on a 300-foot ocean-going barge is the material that would be deposited on the bottom of the Passaic River.

Now suggestion has been made by someone, and it has been repeated here today, that rather than divert the raw sewage into this river with its possible harmful effects, etc., suppose we screen and chlorinate it first. In the judgment of our people, the screening will take out the sticks and the stones, but will do really nothing in terms of pollutional effects and is not really designed to. I agree with the comment made by Mr. Lubetkin earlier, chlorination of these wastes would not make much difference in the effect upon the waterway. People in the field tell me that chlorination is the finishing touch one puts upon a high degree of treatment just to make sure there is no residual biological contamination. It is no substitute for treatment and it hardly would do much to help the situation here. It is better than nothing, but it surely won't have much impact in avoiding degradation of the stream.

Now when we wrote our earlier letter, it was our impression that the consultant had found at least one feasible alternative method. There may be more, seeing one for the first time today presented in chart form. If another method is feasible, other than the one we are discussing here, that is

nifty. We are not picking the method of repair. Our interest is in avoiding the pollution of the river. But based upon conversation at that time and reinforced by consultant's report since then, it appeared that by-passed tunnelling, which is item number 2 on that chart over there, is feasible. Furthermore, in discussion with a number of people, it appears possible, not only is it feasible to do this by-pass tunnel, but that the tunnel may very well be constructed without any by-pass, not the 7 or 15 days, within the Passaic River.

There are two disadvantages that we would present from our own point of view to this plan as opposed to dry repair - diversion into the river. The first one is cost. The cost obviously is more expensive - two and one-half million as opposed to a half million. We can't throw away two million dollars in taxpayers' money. But in my judgment cost cannot possibly within this range of figures be the issue that would govern the recommendations this Committee would make nor can it be the issue that will govern the recommendations that we make.

The State is now advocating a billion-dollar water clean-up program for the State of New Jersey. We think it is of the utmost importance to the welfare of the State that this program proceed. The Legislature to its credit has overwhelmingly supported this concept of a massive clean-up program by approving almost without dissent a bond issue in this session of the Legislature, an issue that will go to referendum in the fall. It hardly seems possible to me that either of us can temporize in considering the needs for this billion-dollar clean-up with

an issue that is separated by $2 million and temporize by saying, "Don't worry about it. It's only going to be six weeks," or "The Passaic River is already polluted anyway," which it is, "so it is not going to make any difference," or "It hasn't been demonstrated to us that this will increase the risk of hepatitis or typhoid fever or some other disease." That is strictly temporizing and in my judgment it would be totally inconsistent with our statutory purposes and with the advocacy which we think the public will accept of the statewide clean-up program.

The second disadvantage is the added length of time, and this is a real disadvantage because it does after all expose for a more prolonged period all of us to the risk that the sewer will collapse. If the sewer collapses, aside from whatever damage to the roadway, we are going to end up diverting all the wastes into the Passaic anyhow and maybe for longer than six weeks. We think it is possible, however, that if diligent engineering attention were given to this method, that means could be devised to provide temporary shoring of the failing sewer to prevent its collapse during the more prolonged period of repair. We don't think because of the direction the whole program has taken that that detailed engineering inquiry has yet been made.

So far as the State Health Department is concerned, we strongly and unequivocally oppose the repair method that would cause 115 million gallons a day to go into the Passaic. We think it is contrary to the public interest. We think it is contrary to existing State law. We think it is contrary to the

regulations and standards of our department. We think it is precisely the opposite of the direction in which we should attempt to go at all times.

It would be foolish of us to take this position if the only alternative was to sit back and wait for the crazy sewer to fall in. We think there is at least one other alternative and we think it should be pursued.

Now Mr. McMahon read into the record, and not knowing that he would do that, I brought copies here of a letter dated the 7th of July that set forth our position and I won't detail it again because it has adequately been covered. This is the letter to which I alluded earlier that was sent following the telegram asking Passaic Valley to withhold action until further inquiry could be made and in it we state our position, that we think Passaic Valley has been responsible in pursuing this question. We are not making allegations of that sort. We are not making allegations at all. But we think, everything considered, that the preferred method of choice by Passaic Valley is unacceptable to us and that an alternative should be adopted.

The issue finally in my own opinion gets to be a value judgment more than it is perhaps an engineering decision. The Passaic River is an unlovely river by anybody's standards right now. A little trip up in one of our dinghies will convince anybody who hasn't had a good look first-hand. It is an unlovely river whose physical appearance is such that one would think that it ought to be polluted, that it would be out of character

for it not to be polluted. We hope with various steps this can be corrected. But it runs right through the midst of our immediate environment. The question is: Can we exert all of our energies and all of our power and authority towards effecting correctives of it or will we by one means or another allow it to get worse than it presently is?

I have been asked by several people as to whether the Department would enter medical testimony into the record today as to the issue of whether there is a health hazard created by the dumping of these wastes, and my answer is no. If the Committee directed our Health Commissioner and Medical Representative to appear, I am sure that he would come. I discussed this issue with our Health Commissioner, Dr. Roscoe Kandle, as to whether he felt it would illuminate the question to have medical testimony of this kind presented. Without hesitation, he said, no, because the medical testimony is irrelevant to the decision that has to be made. Now if someone asks me, "Is it hazardous to public health," my answer is yes, for whatever credence you give that based upon qualifications. People in public health discovered more than a hundred years ago that it is hazardous to public health to put untreated sanitary wastes into our waterways. When we figured out ways to avoid this contamination, we took care of the problem of cholera and the problem of typhoid. We cannot, however, make any measurements at this time that will quantitate for the Committee the increased degree of risk of disease or other harm to people by x million gallons of waste going into a stream whose current water quality isn't known with exactness,

into a stream whose flow at that time will not exactly be known and so forth. We can't measure the degree of health risk. But as a general statement - I am making it as flat as I can - it is hazardous to public health for developed communities to dump untreated wastes into the waterways that travel through their neighborhoods, the more of the wastes, the more the hazard, and it is a matter of forming your own judgment on degree.

The question here is not whether we can demonstrate without contradiction that there is this increased risk, or someone used the word "menace," presumably an increased likelihood of the contraction of some disease, that if we can't prove it is an increased risk, we will go ahead with it, and if we c a n prove it, we will not. This question comes up both in air and water pollution work all the time. I wonder how many public hearings we have held on air pollution regulations when the gist of the testimony was, we should not adopt this regulation because it has not yet been demonstrated that sulfur dioxide causes emphysema and aggravates lung cancer. And our judgment is if the sulfur dioxide can be suppressed by feasible alternative methods, because it is not going to be good for people, we should take every step possible to suppress it. And I think there is an analogy to be drawn here. But in terms of speaking in officialdom, looking at the public health needs, looking at the likely water uses of the Passaic River, looking at the need to protect fish life and the need to improve the esthetic appearance of the river, the State has set down after public hearings, water quality standards for this waterway and

all other waterways in the State that for better or worse officially draw the line between what is polluted and what isn't. Those standards were developed without a great deal of controversy. They serve as the objectives of the State in its enforcement effort. To follow them up, there are treatment regulations imposed upon anyone who would put any liquid waste in any of these waterways. Without question, the entry into this stream of this quantity of material would violate both the treatment regulations and the water quality standards. It seems to me the issue of public health risk as opposed to cost can properly be set up when those guidelines are drawn. Now it is our responsibility to carry them out.

We are not looking for more litigation, but I promised Mr. McMahon earlier I would comment on whether or not the court has ruled on jurisdiction. The court ruled that we had jurisdiction to issue the order that we have issued against Passaic Valley requiring it to upgrade, a program which it has publicly said it intends to do. The courts have not decided on the other issue as to whether or not we have authority to control pollution of the lower Passaic or whether this remains the exclusive jurisdiction of the Commissioners. We think we do have the authority and if there are illegal entries of pollution into the lower Passaic, we will put into play the regular administrative processes and, if it comes to it, allow the court to rule on this question, upon which there has been no ruling in the past.

To conclude my brief comments, I have said the issue is a value judgment as to how far we are willing to go in effort and

in cost to avoid further contamination of this or any other stream. The kind of an issue that faces a court when it is asked to decide whether or not the water in a stream is dirty enough to warrant the prohibition against the issuing of more building permits is a value judgment. It is the question that must be answered when there is an action against a factory that employs hundreds of people as to whether that factory should close or cut its production in half and lay off half its work force because of the condition of the river. And I sense in recent years the feeling of the public probably reflected in the response to this proposal that their value judgments are moving towards the notion that we ought to attach more value to the physical environment around us and that we ought to do more than we were willing to do in the past in order to avoid these problems.

We think that the tunnelling method in this case or some other method, if it is found feasible, while more expensive, while more time consuming, should be employed with all the available safeguards and we hope that after your day of hearing, you will come to the same conclusion.

ASSEMBLYMAN WILSON: Mr. Sullivan, this figure of 115 million gallons a day - this is the first time I have heard 115 million - it was only 100 million. This is what Mr. Manganaro based his on, did you not, sir?

MR. MANGANARO: Yes.

ASSEMBLYMAN WILSON: Fifteen million gallons is quite a difference. I am surprised you came up with a different figure than the Passaic Valley Sewerage Commission did.

MR. SULLIVAN: These are the figures that our engineering representatives gave us after looking into the whole matter and unless there is some basis for contradiction of them, I would have to assume they are correct. There is a range obviously. But these are the numbers upon which our reports are based.

ASSEMBLYMAN WILSON: Mr. Lubetkin, could you comment on that difference of the 15 million gallons?

MR. LUBETKIN: Actually in detail, gentlemen, these are the figures obtained by his men from us. When it was rounded off, gentlemen, in the newspapers - it was about 110 million - it varied - and it was rounded off in the newspapers as approximately 100 million and this was the rounded-off figure. Mr. Clark and Mr. Hoffman, when they asked us on details of by-pass, we gave them the figures. They were not independently derived. I mean, that set of figures originated from us.

ASSEMBLYMAN WILSON: Fine, thank you.

Mr. Sullivan, you also made the statement that you don't think that the Passaic River could actually ever purge itself within a relatively short period of time if this effluent was to be deposited in the river.

MR. SULLIVAN: Not quite that, and again I am heavily influenced by the advice of people who know more about it than I. Our engineering people advise us because of the tidal action, whatever is deposited in the river does not run right out to the Atlantic, that at least a portion of it will come back with the next tide. So there is this oscillating effect through the

tidal reaches of the river. So it means that the wastes will come back and come back and be present for a longer period of time. If you asked me how long, I really have no basis upon which to offer an opinion.

ASSEMBLYMAN WILSON: I have some other questions, but I will let other members of the Commission ask some questions first.

SENATOR WALLWORK: I have a couple of questions. Do I understand you said in a very legal way that if the Passaic Valley Sewerage Commission were to make the determination that they were going to follow plan 1 and dump the untreated sewage into the Passaic River, the Department of Health would move through the courts to obtain an injunction to prevent that?

MR. SULLIVAN: Well, an affirmative answer to that sounds like a threat. I think and hope it will not come to that. I really attempted only to respond to the point Mr. McMahon raised as to jurisdiction for control. If we felt we had no responsibility for pollution of the Passaic, we would have respectfully declined your invitation to appear today. We think we do have responsibility and, if we don't, it will be in a court action of some kind or another where we will be so advised.

SENATOR WALLWORK: In other words, you don't have veto power by statute to preclude any actions, not only by the Passaic Valley Sewerage Commission but, say, any commission, such as Middlesex Sewerage Authority or what not throughout the State.

MR. SULLIVAN: There is a difference and the difference

is too complicated to get into here. In our judgment the proposal here is subject to review by the State. But because the Passaic Valley Sewerage Commissioners were set up by specific State law, they were given a collection of duties and responsibilities that make the organization different in many respects. We think that they are subject to the administrative orders of the State and we think that all those who line the Passaic River are subject to the anti-pollution requirements of State law.

SENATOR WALLWORK: All right. You say that there is a health problem, but we can't calculate it and you cannot give us really any information as to how long the wastes would remain in the Passaic River.

MR. SULLIVAN: No, I cannot.

SENATOR WALLWORK: And could you give an opinion on what long-range effect this would have in the downgrading of our clean water project that we are hopeful is going to get under way by voter approval this year?

MR. SULLIVAN: Well, as to the long-term effect, I really would hesitate to say. Our people have advised me that aside from the condition of the water itself because of the settling out on the bottom of settleable materials, which in turn will cause additional pollutional effects later on, it is more than dumping something into this stream here and turning it red and having it stay red until it gets to the ocean; it would have a much more lasting effect than this. How lasting, I don't think anyone really has the scientific information to be able to say.

Just to illustrate the point, the Delaware River estuary is in bad shape because it receives a lot of wastes, but also because it is subject to this tidal sloshing. In the Federal study, which was quite exhaustive, to find out what factors governed this, it took five years of data collection to really come to firm conclusions.

SENATOR WALLWORK: In other words, that is why the Passaic River is a little different, shall we say, than the Hudson River? How much is the Hudson River affected by tides?

MR. SULLIVAN: Well, these rivers are all tidal.

SENATOR WALLWORK: Yes, but the Hudson River being wider, doesn't it have a greater flow?

MR. SULLIVAN: It has a greater flow. But as to whether wastes deposited in the Hudson as opposed to the Passaic would stay a shorter or a longer time, I really haven't any idea.

ASSEMBLYMAN WILSON: Any other questions? Assemblyman Russo.

ASSEMBLYMAN RUSSO: Mr. Sullivan, at the beginning did the State Health Department give their oral O.K. to this whole problem here? Did they give the O.K. orally to the Passaic Valley Sewerage Commission?

MR. SULLIVAN: We have not given an O.K. I think the Passaic Valley, and they have mentioned this in earlier conversations, took our lack of objection to be acquiesence. In fact the report of the meeting our people held is right here. Our engineering representative met with Passaic Valley for the first time to discuss this and his conclusion is, "An

intolerable situation will result." This is his report to his office as to what should be done. The difficulty is, we found it difficult for ourselves to say you may not do it this way without really having the facts on what alternatives were available. It wasn't until there were later conversations and meetings with the consultant and with Passaic Valley that information was given to us in the form of a table, not unlike this one here, that indicated the tunnelling method was feasible, that we took the position we took on the 7th of July.

ASSEMBLYMAN RUSSO: Mr. Sullivan, this being such a real emergency and a real problem to the State of New Jersey, can you answer this question: Why did the State Health Department wait this long to come up here with your decision?

MR. SULLIVAN: For a month?

ASSEMBLYMAN RUSSO: With your decision.

MR. SULLIVAN: Well, I looked, Mr. Russo, at the engineering report which starts out by saying, "Street settlements have been observed in McCarter Highway at this location for a period of approximately 15 years." This matter has been before the State Health Department for consideration for about five weeks. We made our position known as soon as we felt we had the basic information upon which we could take a position and I don't see how we could have done it any more quickly.

ASSEMBLYMAN WILSON: Are you saying then the Department of Transportation should have notified you?

MR. SULLIVAN: I don't know if they should have notified us and I think there was communication.

ASSEMBLYMAN WILSON: Or notified the Passaic Valley

Sewerage Commission?

MR. SULLIVAN: I think that is how the whole matter came to their attention.

ASSEMBLYMAN WILSON: Not right away, did they?

MR. LUBETKIN: The first report we heard at all was in '63 and after a couple of letters and giving them information we didn't hear for four years and we assumed they had found the source of the subsidence. Let me clarify the point. We are down 40 feet. There are many storm sewers in that area and other sewers that might have been the cause of the subsidence and they were checking these first. When, after the 1963 communications we heard nothing more, we assumed they had found the source of the subsidence and we checked the hydraulics of our sewer because if something had caved in, we would notice it in the hydraulics and we found nothing, the reason being nothing had caved in. Actually the crack had developed but had not caved in.

The subsequent time was in '67 when they told us they hadn't found the source and now they would like to go inside the sewer - would we cooperate. We said we would cooperate and then the photographer was hired and you have the history from there on.

ASSEMBLYMAN WILSON: Thank you, Mr. Lubetkin. Assemblyman Russo, do you have any other questions?

ASSEMBLYMAN RUSSO: No.

ASSEMBLYMAN WILSON: I have one. Mr. Sullivan, you pointed out the fact that New York City is depositing into the Hudson River 300 million gallons a day of untreated sewage.

Is that correct?

MR. SULLIVAN: To my knowledge, it is correct, yes.

ASSEMBLYMAN WILSON: Has the State of New Jersey any plans of action where one state may sue the other to more or less get the City of New York to meet the high standards that we are trying to establish in New Jersey?

MR. SULLIVAN: Well, we are not reluctant to sue people if we think that will accomplish something. The mechanism that has been employed for the Hudson River has been the Hudson River Abatement Conference that several witnesses have referred to. It is called by the Federal government. It is a statutory conference and the purpose of it is to find out from the states the steps they are about to take, what the schedule will be, to cause the water quality standards to be met. The standards I referred to before that we have adopted for the Passaic have now been adopted by the Federal government and are Federal standards too. That is the mechanism. If I thought that the steps were being taken by New Jersey municipalities to provide upgrading of their facilities to provide adequate treatment and that New York was continuing to do nothing and planned to continue to put this 300 odd million gallons of raw sewage into the river every day, then I would certainly recommend we institute legal action against the City of New York.

Under the present circumstances, however, I don't think we would enter into this court case with clean hands. We provide treatment of our wastes over here to be sure, but New York City has presented at the Abatement Conference and would at any such litigation a detailed schedule for construction,

all of it starting before March of '72 under the pain of the loss of a half billion dollars of state aid. New Jersey has for the first time at this conference obtained from Passaic Valley a rough estimate of what its intentions are and in terms of the pollutional effect upon the Rudson River, the nature and strength of the wastes coming out of the Passaic Valley plants have a higher pollutional effect after treatment than the lesser amount coming out of New York City without treatment. I don't think we would have a very good case to make at this point in time. If we move ahead and New York doesn't, we wouldn't be at all bashful about calling this to anybody's attention in a court case.

ASSEMBLYMAN FIORE: Getting back to the New York problem and New Jersey problem, don't we have any agency like an interstate or a federal agency that can look into it and more or less prohibit New York doing what they are doing with the 300 million gallons of sewage a day?

MR. SULLIVAN: We do. We have two mechanisms. One is through the Interstate Sanitation Commission which covers these waterways and does have enforcement powers and has issued orders to New York, and the other one is this Federal Enforcement mechanism which you may want to ask Mr. Walker about when he is called as a witness shortly, which does have enforcement power. The point of it is, if there were a court action against New York now and the purpose of the action was to produce a court order as to a schedule of correction, they could take their schedule right off the wall and come into court with it and say, "Here it is; it is all done." We are not yet up to that point in

New Jersey.

ASSEMBLYMAN FIORE: When you say enforcement, does this include jurisdiction?

MR. SULLIVAN: The Interstate Sanitation Commission has enforcement jurisdiction over these interstate waters.

ASSEMBLYMAN WILSON: Any other questions?

SENATOR WALLWORK: But you don't have jurisdiction over this intra-state the way the Federal government does over interstate waters.

MR. SULLIVAN: Well, I think we do, but I don't understand what your question is aimed at.

SENATOR WALLWORK: The question is aimed at the possibility that legislation or some method might be needed at the State level to give your Department clear and definitive jurisdiction over all of the in-land waterways of the State, to make sure that there would be no legal question about your preventing pollution by a body in this area.

MR. SULLIVAN: If the existing law were changed to make it clear and certain that we have authority over all those who would make the lower Passaic dirty, it might very well avoid a court case. But our position is - and the law is not crystal clear - our position is that we do have that authority. We would welcome a revision of the statute to make the authority certain. The lower Passaic has been left untouched by the State for many, many years on a customary assumption that it was the exclusive jurisdiction of Passaic Valley. My own feeling as the responsible administrator here is - I can't find any place where it says this is true. And if it is my fault because the

lower Passaic is dirty, I want to know about it from the courts. That led to the administrative order and the court action.

ASSEMBLYMAN WILSON: That is what I tried to bring out this morning when I questioned Commissioner McMahon as to what control elected officials have over this semi-autonomous authority and it seems it is nothing else except going through court action with an injunction issued by the court or a court order, which I don't think should exist.

MR. SULLIVAN: We are not in agreement with that opinion. We think the State Health Department has authority to regulate the Passaic Valley Sewerage Commissioners and all potential polluters along the lower Passaic. If there is room for argument and the need arises, we will be glad to argue it at the proper place and the proper time.

ASSEMBLYMAN FIORE: But you still have no decision from the court that you have the authority; you are only assuming because you have authority in water pollution and air pollution you have the authority, but you don't have it legally.

MR. SULLIVAN: We have a decision from the court saying that it is lawful and proper for us to issue administrative orders to Passaic Valley to provide this massive upgrading of its treatment facilities;where the effluents in this vicinity go into New York Bay, outside of the district of the Commission, the court has not yet been faced with the issue of whether or not we have the authority that we believe we have to control pollution within the lower Passaic.

ASSEMBLYMAN WILSON: Thank you very much, Mr. Sullivan,

for testifying.

SENATOR WALLWORK: I would like to call Mr. Walker from the Federal government. Mr. Walker, we certainly appreciate your coming on rather short notice of an invitation of three or four days and I wish you would introduce yourself and make whatever statements you wish.

K E N N E T H H. W A L K E R: My name is Kenneth Walker. I am Director of the Hudson-Delaware Basins Office of the Federal Water Pollution Control Administration located at Edison, New Jersey. The Hudson-Delaware Basins Office covers an area for FWPCA which includes the district served by the Passaic Valley Sewerage Commissioners. We are interested in and concerned about any project which will have an effect on water quality.

We recognize that the repair of the McCarter Highway trunk sewer of the Passaic Valley Sewerage Commissioners is a project that must be carried out expeditiously to minimize the dangers that might develop if the sewer fails completely. We understand that this condition is not a recent or sudden development and that failure of the sewer has been indicated for many months by settling of the roadway. It is unfortunate that the repair of this cracked sewer was not undertaken some time ago so that the work could have been carried out on a more reasonable schedule without becoming a crisis. Despite the urgency of the problem, we do not feel that it is proper to sacrifice water quality to carry out the repair of the sewer. We agree that the repairs should be accomplished as quickly as possible and at the least cost, without compromising either

safety or water quality.

We understand that the engineering consultant to the Passaic Valley Sewerage Commissioners has proposed five alternative methods of repairing the damaged section of the trunk sewer. Since this report was not furnished to us, we are not familiar with the details of the various methods, and are not prepared to comment on them in detail.

We have read the letter dated 7 July 1969 sent to the Passaic Valley Sewerage Commissioners by Mr. Richard J. Sullivan, Director of the Division of Clean Air and Water of the New Jersey State Department of Health. In this letter Mr. Sullivan states, and I quote: "... it is our judgment that the bypass tunnel designated as repair method (a) on Table 2 of the material given to us should be the method of choice." Mr. Sullivan further states in this letter that "We would urge that to the extent possible construction techniques be employed which would prevent the temporary bypass of untreated wastes into the Passaic River." In a subsequent paragraph Mr. Sullivan says, "All things considered, however, in our opinion it would be inconsistent with the basic statutory responsibilities of this Department to sanction a repair method which would result in large quantities of untreated waste entering the Passaic River if, as appears to be the case, there is a feasible alternative."

The purpose of the Federal Water Pollution Control Act, as amended, is (and this is a partial quote), "... to enhance the quality and value of our water resources and to establish a national policy for the prevention, control, and abatement of

water pollution." It is also stated in the Act that it is "... the policy of Congress to recognize, preserve and protect the primary responsibilities of the States in preventing and controlling water pollution..."

In our opinion, the discharge of massive amounts of raw sewage to the Passaic River would be a potential health hazard.

The position of the Division of Clean Air and Water as stated in Mr. Sullivan's letter is consistent with Federal policy as expressed in the Federal Water Pollution Control Act, as amended. Therefore, we wish to endorse and support the state's position in this matter. We are also prepared to provide the Division of Clean Air and Water with any technical assistance within our capabilities which the Division may feel would be helpful to prevent further degradation of the Passaic River as a byproduct of the sewer repair.

SENATOR WALLWORK: Do you have anything that you want to add to your prepared comments based on what has been discussed this morning and this afternoon, Mr. Walker?

MR. WALKER: I think I would just as soon have questions if you care to throw them out.

SENATOR WALLWORK: Well, I would like to ask one question: What help can the Federal government bring to bear so far as the Department of Health is concerned and more particularly the Passaic Valley Sewerage Commissioners because I think the record has been clear throughout that they have sought and are open to suggestions and help and do want to solve this problem in the best way possible?

MR. WALKER: Well, we are not a construction agency as

such and are not primarily in the business of doing consulting engineering work. Our capabilities lie more in the ability to provide technical assistance and guidance in water pollution control problems. We do have our construction grants section, which is involved in providing these moneys for sewage treatment plant construction and we have certain capabilities in terms of construction activities of this type. So we can provide, given time, many answers to these questions that have been raised here today in terms of what effect would this discharge have on the river, what the tidal excursion would be and this type of thing.

SENATOR WALLWORK: When you say "given time," how soon could you give a rather technical presentation as to the problems of the pollution in the river?

MR. WALKER: Not fast enough to do any good on this problem, I am afraid.

SENATOR WALLWORK: What would be the time frame?

MR. WALKER: To really come up with a positive answer on this whole thing - you are talking extensive sampling - well, Mr. Sullivan outlined many of these things - I think six months to a year to really give that evidence. You are talking tidal excursion studies,which are not too bad in terms of running them, but data analysis is a long drawn-out thing.

SENATOR WALLWORK: What resources could the Federal government - I mean, we have the Corps of Engineers and we have other departments, perhaps in the Department of Health, Education and Welfare or what not - what other sources are there that could be brought to bear to help in this problem?

MR. WALKER: Well, you have two questions here and I would like to know what you are thinking. One is in terms of coming up with a solution to the problem.

SENATOR WALLWORK: Right.

MR. WALKER: Of course, the other is to come up possibly with some answers as to what actual effect, say, the bypass would have or the lack of a bypass of the sewage would have.

SENATOR WALLWORK: You said in your testimony that it would be a health hazard.

MR. WALKER: That's right.

SENATOR WALLWORK: A potential health hazard.

MR. WALKER: That's our opinion.

SENATOR WALLWORK: What do you base that on?

MR. WALKER: Again I think Mr. Sullivan who is a tough act to follow has very adequately stated this. Considering the volume of sewage that is involved and the fact that it is raw sewage and you have this diversity of contributors to the system, in our opinion it has to be a health hazard in the water. Following that, if you accept the fact it is a health hazard, then you can argue from now to next week on the probability of how many people are going to get sick and die. But in our opinion that is not the question. There is a health hazard that exists.

ASSEMBLYMAN WILSON: Mr. Walker, the Federal government in the Federal Water Pollution Control Act, established a fund to more or less help states combat water pollution, did they not?

MR. WALKER: This is true.

ASSEMBLYMAN WILSON: How much did they appropriate in this fiscal year for the whole United States?

MR. WALKER: Well, there are two different grants here. One is grants that actually go to water pollution control agencies to help them develop and carry our their programs.

ASSEMBLYMAN WILSON: To upgrade sewage facilities.

MR. WALKER: The other is the construction grant program where money is made available to municipalities to help them build sewage treatment plants and I assume this is the one you are talking to.

ASSEMBLYMAN WILSON: Yes.

MR. WALKER: $214 million is the budget request for this year.

ASSEMBLYMAN WILSON: $214 million for all 50 states.

MR. WALKER: This is correct.

ASSEMBLYMAN WILSON: I am referring to a statement by Congressman Rodino who said that we might be able, that is, Passaic Valley Sewerage Commission, might be able to get a certain percentage of this funding if they were to build new pumping stations or something like this which might be interpreted as part of the repair of this particular defunct sewer pipe, which I don't think really amounts to much as a statement because when you only have $214 million for the United States, New Jersey is lucky if they get $20 million of this $214 million. I don't think this is actually feasible, is it?

MR. WALKER: There are reimbursement provisions in the act so that a project is reviewed and processed as if the money were available and decisions are made on what the grant would be

so that when and if Congress appropriates funds to support the program, these can be reimbursed to the community.

ASSEMBLYMAN WILSON: Mr. Walker, as a State legislator and as Chairman of Air, Water Pollution and Public Health Committee, and I think Senator Wallwork feels somewhat the same way, inasmuch as we fought I would say a rather difficult battle sometimes to get the water pollution bond issue passed because we realized the problems in the State - yet today where we have a man going to the moon, and I don't want to discredit that, but here, a simple thing like pollution where for the whole United States we have only provided $214 million, I think the Federal government has been extremely lax. It is nothing personal as far as you are concerned. You have to represent the agency. It is just like when people get mad at the State, they get mad at us as legislators.

I think now the Federal government has to start carrying their fair share and help the states with this particular problem. I am sure Mr. Sullivan would echo those remarks.

MR. WALKER: I might point out that in the act the amount of money authorized for this year is one billion dollars. The appropriation is a little short, I agree.

ASSEMBLYMAN FIORE: Mr. Walker, you have a statement here which reads: "It is unfortunate that the repair of this cracked sewer was not undertaken some time ago so that the work could have been carried out on a more reasonable schedule without becoming a crisis." I am assuming you are saying that because of laxity that what could have been a reasonable schedule for this repair has now become a crisis to these towns because

of the time element.

MR. WALKER: As was brought out here, the first indication of this was back maybe 15 years. Certainly within the last year and a half this has been identified more. The sewer still is standing so if the problem were identified previously, you might have had five years to do some work on it.

SENATOR WALLWORK: Assemblyman Fiore, so we have the record straight, I think the testimony as I understand it has been that the crack might have occurred ten or fifteen years ago or from my discussions I understand it might have been a fault in the concrete at the time of construction. But it really wasn't discovered specifically until November of '67. I think this should be brought out in all fairness to the people that have been dealing with it. There was speculation.

MR. WALKER: That's when the problem was identified.

SENATOR WALLWORK: Right. They were not able to identify the crack until that time and I think it is only in the past year or so that it has been identified as a major break and only the last few months this talk about a rupture of some kind. Would it be termed a rupture as a technical term now?

MR. MANGANARO: I would say so.

MR. WALKER: I think that has been developed well in the testimony.

MR. MC MAHON: I think that is a gratuitous statement and it is made without any validity and I thank you, Senator, for correcting the record.

SENATOR WALLWORK: Assemblyman Fiore, did you have any other questions?

ASSEMBLYMAN FIORE: No, just the question on the statement.

ASSEMBLYMAN KIEHN: The only problem I see so far is the conflicting statements between the Passaic Valley Sewerage Commission and Mr. Sullivan and Mr. Walker pertaining to the health hazard of the Passaic River and the communities that are on the border of the Passaic River, itself.

ASSEMBLYMAN CAPUTO: Mr. Walker, has there been any request from the Commission or from the State department, Mr. Sullivan's department, for your assistance prior to your own willingness to come here and testify today? Has there been any contact between their agencies and yours as far as their position which will probably lead to the hazardous condition of that river?

MR. WALKER: No, last Thursday, I think it was, Senator Wallwork called to ask if we would appear today. About that time we had some discussions with Mr. Sullivan and Mr. Segesser on the over-all problem, discussing some of the things that have been brought up today.

ASSEMBLYMAN CAPUTO: In other words, there has been no coordination in planning alternatives between either one of your agencies?

MR. WALKER: Well, we haven't sat down and talked about it, no. That's right.

ASSEMBLYMAN CAPUTO: I might interject here - how would you feel personally if you lived in this area about this situation, being a person somewhat expertise in this field? How would you feel about your own health and safety if you were a resident of

Nutley or Belleville or Newark or sections of Bergen or Passaic? How dangerous would that be to you personally?

MR. WALKER: I wouldn't want my children to swim in the Passaic River.

SENATOR WALLWORK: They don't swim there anyway.

ASSEMBLYMAN CAPUTO: This $214 million - how is this money spent?

MR. WALKER: This is spent in direct grants to a municipality to help defray the cost of building of treatment plants.

ASSEMBLYMAN CAPUTO: And in your opinion could the Commission apply for the topic under discussion to you for any funds?

MR. WALKER: I can't give you a direct yes or no on that because there are many factors involved and we don't even know what project we are talking about here. I would certainly encourage them that there are certain conditions under which part of this might be eligible and when a plan is decided upon, I would encourage the Passaic Valley and its engineers to come with our construction grants people with the State and discuss this.

ASSEMBLYMAN CAPUTO: Can I suggest that your department, the State department and the Commission coordinate some activities. Even if there is just a slim hope of Federal funds entering into the picture, I submit to you that there should be some kind of coordination between these three agencies and I leave it to your discretion. But I emphasize it most strongly because the situation is very, very tragic and unless something

is changed, I think the emotion that we talked about will lead to a tremendous lack of faith in the people that are responsible for these particular projects. So I submit to you that I hope and I insist - I even go so far as demanding that there be some kind of coordination between these three agencies.

SENATOR WALLWORK: I think that there have been contacts from time to time between the Passaic Valley Sewerage Commission and various Federal agencies. I am sure that that will be fostered in the future.

MR. WALKER: There is no real problem on this because I think all of the agencies in this field, us included, have good cooperation.

ASSEMBLYMAN CAPUTO: They have good cooperation, but this is a very, very urgent situation and I think under this type of urgency we should seek cooperation quickly not just offering proposals or whether we favor one or the other; I think we have to come up with some kind of solution.

SENATOR WALLWORK: I think you are right. Let me ask one question to set the record straight perhaps. Mr. Walker, we are all concerned about the health and from your testimony and from Mr. Sullivan's testimony, I think that the health problem has been raised much more so to our body this afternoon than I think it has at any previous time. How much of a health hazard, if we want to draw an analogy, is there in the problem of the Passaic Valley Sewerage Commission dumping sewage into the Passaic River and the added 100 million gallons a day as contrasted to what the health hazard is today in the Hudson River?

MR. WALKER: Well, we have a health hazard that exists

there and we have many bathing beaches on Staten Island and the Brooklyn area that are closed because of pollution and health hazard. We have shell fish beds in Raritan Bay and lower New York Bay that are closed from the same pollution. So there is a health hazard that exists. Again we have 300 million gallons a day - I think that figure is actually a little low probably - going in from New York City of raw sewage.

SENATOR WALLWORK: In other words, my question is this - I don't want the citizens in the area to become overly alarmed, shall we say. I think we should have all the facts we possibly can. In other words, we have a whole health hazard as such in the whole bay area and it is going to require Federal, state and local municipalities in cooperation to overcome this problem.

MR. WALKER: That is true. I might amplify a little bit if I could. There have been several questions raised about the interstate problem here and mention was made of the Federal Enforcement Conference. This has been in effect since September, 1965, and it was called by the Secretary of the Interior because of interstate pollution. It involves New Jersey and New York State. Because of the Enforcement Conference and due to the water quality standards program which has been established, there are time tables set up for correcting all of these discharges. Admittedly they are no good. They need correction. The raw discharges need treatment. A lot of the primary plants need upgrading to secondary treatment and chlorination and the whole bit. So there is an active program

that is effectively carrying out this type of thing. One of the problems is money, of course, in accomplishing this.

SENATOR WALLWORK: Right. I was quite concerned frankly to read, I believe, in one of the local papers on Sunday that a Congressman from the southern part of the country had blocked a proposal that was being prepared by the administration for submission on a clean water program and I am hopeful that all of us can push to get more Federal funds because unless we can get the proper Federal funding, our bond issue isn't going to nearly touch the job as you well know.

MR. WALKER: This is true. Incidentally I was a party to the Hudson River Conference and the Interstate Sanitation Commission. I neglected to mention that.

No, this question of money is extremely important and without it, the program is slowed down.

ASSEMBLYMAN WILSON: I would like to clarify a point. I was just talking to Mr. Sullivan and out of the $214 million, New Jersey is not eligible for $20 million; we are only eligible for $6 million. And it is really disturbing. For the whole state and we are eighth in population, we are only eligible for $6 million. I hope that our Congressmen and all Congressmen spend their time trying to fund this fully because we need this money to improve the problems that do exist in our State.

SENATOR WALLWORK: Unless there are some other questions, we want to ---

MR. MC MAHON: Senator, will you ask Mr. Walker in his judgment how many of these dates and programs he speaks about are going to consumated at the established date of 1972?

SENATOR WALLWORK: Well, I think that --

MR. MC MAHON: Not a single one.

SENATOR WALLWORK: Of course, the Federal programs and even the State programs, I guess, Mr. Walker, are quite a bit behind schedule, are they not, because of lack of funding from not only the Federal government but from state governments too? I don't think we can escape any responsibility on that part.

MR. WALKER: That's right. But I think it is important that we now at least have some dates scheduled so we have some handle on how far we are slipping and we have a talking point. In the past this has not been true. Everybody wants to do something about it, but we haven't had the time table and the details that we do now. But it is going to slip because of lack of funds. There is no question about it.

SENATOR WALLWORK: And we are slipping how much? How much would you say, two or three years?

MR. WALKER: Well, we started off originally with 1970. Then it got to '72. And I think practically we are talking '74 probably now before some of these plants will be built.

SENATOR WALLWORK: We want to thank you.

MR. LUBETKIN: There is one important question I would like to ask with your permission concerning the grants. I am not going to argue or anything. I think Mr. Walker may have left an impression that if we applied for money, it may be available to us. I was over in New York at the Hudson River Enforcement Conference and they had two regulations at that time concerning the money available which made Passaic Valley ineligible. I would like to ask Mr. Walker, if we presented - I am saying now

a specific plan - 2 - with the tunnel diversion, would you approve that plan as eligible for Federal funds? Remember your Washington setup has made a ruling that no funds will be eligible to those people who do not digest sludge and we do not digest sludge nor at this time do we have a positive program with a complete time schedule on our secondary treatment. Are you in a position to say those two rulings will be overlooked and we could be eligible for funds under this? Because we will make application and I want everybody here to know whether we will be eligible or not.

SENATOR WALLWORK: Let me intersperse. I don't know that Mr. Walker is prepared and I don't know if he wants to answer the question.

MR. WALKER: These are two serious problems that have existed in the past with Passaic Valley. And, no, I am not prepared to say that these would be waived in this case in giving grants. These provisions are laid out in the law and in activated policies.

What I said was that certain portions of this could be eligible and we would be glad to consider them in the light of the present situation.

SENATOR WALLWORK: Could we do this then because we do have some more testimony and I want to move along as rapidly as possible -- I appreciate your coming today, Mr. Walker. I will be in touch and so will Assemblyman Wilson and the rest of the members with Mr. Sullivan and I hope that Mr. Sullivan can form through the State Department of Health the necessary bridge between the Federal government and the resources that you

have not only in technical information and advice and maybe some financial support too to help the Passaic Valley Sewerage Commission resolve this problem. You will be hearing from us, I am sure, in the near future.

MR. WALKER: We are available.

ASSEMBLYMAN CAPUTO: Mr. Walker, just one second. I don't mean to change the train of thought, but I want to focus our attention on the problem. I think we cannot afford any longer delay. I think that our Chief Engineer here, whether he has applied or not, has a good intent now to apply for some Federal funds whether there may be a chance or not. I say that we should set it up immediately and that we should proceed within hours if we can.

MR. LUBETKIN: We need plans and specifications.

ASSEMBLYMAN CAPUTO: Well, you have plans.

MR. LUBETKIN: Not on the diversion. If the Commissioners so direct, Mr. Manganaro will start with his plans and specifications Mr. Manganaro has informed us this is where the 18 months comes in. Mr. Manganaro has informed us plans and specifications will require six months and then the construction is one year. You need plans and specifications to apply for Federal funds. We would then apply, but I did want to point out although Mr. Walker's statement was correct, they would consider it, according to present regulations we are not eligible, period.

ASSEMBLYMAN CAPUTO: I don't think that is up to your determination or solely Mr. Walker's. I think that you should proceed and leave that to the discretion of those people that make that decision.

MR. LUBETKIN: Well, we would proceed, sir.

ASSEMBLYMAN CAPUTO: Our position here is of such nature that we have to even overlook, and I think the Federal Government has to overlook, certain specifications, in a sense. Well, that's not for our determination. I think that you should proceed. That's part of your responsibility to move ahead.

SENATOR WALLWORK: All right, fine. I think that that will be done and we certainly appreciate, Mr. Walker, your help today.

MR. WALKER: Thank you very much.

ASSEMBLYMAN WILSON: Freeholder Cooper, Bergen County. Will you state your name and position for the record, please.

F R A N K L I N H. C O O P E R: I am Freeholder Franklin H. Cooper, Bergen County. I would like to also acknowledge the presence of Mr. Fred DePhillips our Director of Public Works and Mr. Leonard Hilson, Director of the Health Department of Bergen County.

Mr. Chairman and members of the Committee, I would like to say, first, that the Bergen County Board of Freeholders is unalterably opposed to the initial plan set forth by the Passaic Valley Sewer Commission. We feel that in this day and age, when all eschelons of government are allocating billions of dollars for pollution abatement, this is uncongruous to propose a plan that would dump raw sewage into the Passaic River and make a sewer out of a river.

If I may, I would like to make a comment and I would like to qualify any comments further that they are meant in a constructive fashion.

On June 27 the Freeholder Director of Bergen County made a comment to this effect: "The Board of Freeholders is distressed that it has not heard a single word from the Passaic Valley Sewer Commission about a program which would pollute the parks of Lyndhurst, North Arlington, and other South Bergen communities. They have not contacted us about the program, nor has the State. Not one official word has been received on this matter of such vital concern to Bergen County. This could affect the Passaic River and the towns along its banks for years to come, setting the fight against water pollution back many years in this area."

On June 30, after this statement appeared in the Press, Bergen County was invited by the Passaic Valley Sewer Commission to attend a luncheon meeting on July 3 to discuss the proposal and at that time our Executive Administrator, Mr. Nelson, and Public Works Director, Mr. DePhillips was there, and out of the discussions came the proposal, if I'm not mistaken, of the screening and the chlorination which heretofore, as we understand it, had not been a consideration.

The question of health hazard. It has been stated here earlier that the State Department of Health had not made a comment and yet on July 2 Commissioner Kandle, in requesting a delay, said that he wanted to insure that

the health, safety and comfort of the residents of the affected communities would be protected. So, obviously, there was some concern.

At the present time, and for the past week, and it is still going on, the Department of Health of Bergen County has had some of our sanitarians in the waters along the shores of the South Bergen communities, and I have a report of the first one which was made on the Passaic River in the Lyndhurst area, together with pictures which are keyed and the times on them noted. I will not go into this but it does show boat docking facilities, it does show children who are wading, playing in the water, fishing; it does show the relationship of debris and direction of the movement of the water, which is a question which was posed earlier, in relation to a fixed object, some of the debris, where it was and where it was a minute and a half or two minutes later and its approximate movement.

We would request that, upon conclusion of the hearing, we could get the pictures back and we will make copies. In the future the other reports that will be forthcoming will be duplicate sets of pictures.

I would also like to answer a question which has been posed three or four times this afternoon, about what the federal government can do, and I really have not heard anything immediate, yet a week ago, in a chemical trade journal the following feature article appeared and I would like to quote from many parts of it because I think it has a bearing on your hearings:

"Pollution control is beefed up by the formation of a task force set to act on a moment's notice. Secretary of the Interior, Walter J. Hickel, moved last week to beef up his departments and the Government's pollution control program by setting up a task force on pollution enforcement ready to move on a moment's notice into critical trouble spots around the nation to combat water pollution. The ten-man squad team of technical specialists is similar to special police and fire department squads, the Secretary explains, which are created to cope with major disasters and disorders. 'I am setting up this task force to strengthen our enforcement program by giving us the capability of moving with greater speed and flexibility in taking action to clean up the country's waterways,' Secretary Hickle says. The enforcement team's personnel will be drawn from the Interior Department's Federal Water Pollution Control Administration, and the team consists of -- Technical specialists on this team will consist of a sanitary engineer, a biologist, a chemist, a microbiologist, an industrial waste specialist, a statistician, mathematician, an oceanographer, phenologist, and a economist."

I would like to suggest to the Passaic Valley Sewer Commission, to Mr. Sullivan, to this Committee, that Secretary Hickel be contacted. I would also comment that the Bergen County Board of Freeholders, within the last ten days, has wired Secretary Hickel, called his office, and another wire went out either yesterday or today

informing him of the situation as it exists and asking for this help. But I do think that if we had additional requests that it would be acted upon even faster.

I would conclude by saying that the Bergen County Freeholders realize that this is a grave problem and it is a serious problem and that there are many financial ramifications, but we would respectfully hope that there be additional investigation to the alternative, other than dumping directly into the river.

ASSEMBLYMAN WILSON: Any questions?

Thank you very much, Freeholder.

MR. WALKER: May I comment?

SENATOR WALLWORK: I know that certain people particularly could ask various questions but if we got involved in trying to ask questions back and forth - we have been a little liberal today - it would make it a lot more difficult. So I think, if at the end of the hearing Mr. McMahon or Mr. Lubetkin, or anyone else, or Mr. Walker has a comment to make, we would reintroduce them to make any summations and give everybody a second crack at that level.

Thank you very much, Freeholder Cooper.

ASSEMBLYMAN WILSON: Mayor Chenoweth of Nutley.

H A R R Y W. C H E N O W E T H: Gentlemen, I am Mayor Chenoweth of Nutley, New Jersey, in Essex County. We abut the Passaic River and are vitally affected by this particular plan.

We agree - I've attended three or four meetings now

that have gone on over the last two or three weeks with the Passaic Valley Sewage Commission and a lot of you men have been there too and received the testimony, as I have, and of course today has been very interesting and very enlightening.

I think we all agree that repairs must be made but we in Nutley insist that the repairs and the project must be undertaken without dumping of this hundred million gallons of raw sewage into the river.

We are caught between two outlets. They talk about the Yanicaw Pumping Station, which is at our northern boundary separating us from Clifton in Passaic County and immediately below us, at the Second River, which is only a few miles below us, Belleville and Nutley are caught between, on the Essex side, these two particular outlets. And, incidentally, Acting Mayor McGreedy from Belleville and Commissioner Sanitore, who were here this morning, join with me in our position that this would be an intolerable situation insofar as our area is concerned.

But talking about the practical side now. We have been talking about the in-aid programs, some of the health programs and things like that. But before the Passaic Valley Sewerage was opened, in the twenties, our communities were inundated and actually virtually a no-man's land insofar as development was concerned.

The River is a sluggish river, as I've testified before; it's one that does not move away quickly, and, in fact, history will probably confirm the fact that until actual dredging was done to deepen the channel in the Passaic River

as far as Passaic, in the early part of 1930, did we actually get the good results that had been promised to us by the introduction of the Passaic Valley Sewerage contracts.

Now there are acid-like fumes that come from this effluent. The so-called chlorination, and so forth, the engineers have indicated would not affect or help the situation. Actually, paint peeled from our homes, our valuation has deteriorated, our population did not start to grow as our neighbors' did until this actual 1930 period. And the health hazard question has been presented at each and every hearing that I have attended. There has been no one who will say that there is not a health hazard and even up until today this is the first time that I heard that the Health Department felt that the introduction of this hundred million gallons would create a particular health hazard.

Now the cost of this project and the various alternatives have been explained to us very, very clearly, and they run from $500,000, as sort of a bargain figure, on up to around $2,500,000 on the various alternatives that have been suggested.

We take the view that we do not want any raw sewage in our River. We recommend that Plan No. 1-C, which is delineated on the platform there where you would bypass the particular affluent in pipes and pump it on down to the Clay Street area, be considered favorably by this particular Committee.

Now as far as the hearing that we are at today, it is most important, not only to the communities and the choice that the Commission has, which is what can the State Legislators do to assist. I think that's what you're here for and that's what you want to know.

Unfortunately, the legislation that had been proposed, not only by the Passaic Valley Sewerage Commission but by many, many of its members, - I think Nutley was one of the first to memoralize the State Legislators of the necessity of lifting the ceiling, the borrowing power of this Passaic Valley concept so that they could undertake not only this project but the one that the State has imposed upon us and any other emergent project in the same manner of procedure that a county or a municipality or the State itself would do, in a proper, official, legal, bonding method. And I think if you go home from this particular hearing that is one thing you can consider that would be helpful to them and helpful to the members in spreading out this cost in a reasonable and equitable way and one which we could digest over the years.

SENATOR WALLWORK: Thank you very much, Mayor Chenoweth.

Just one second, there might be a question.

I appreciate your comments on the bonding capacity bill that Commissioner McMahon referred to earlier. That bill has passed the Senate and I will talk with Assemblyman Wilson - he and I have already discussed this at a prior meeting and he, along with the rest of the Assemblymen, I

hope, will push at our special session in August, on August 5th, at least in addition to any other emergencies that might be undertaken that we do pass this bill and then seek the Governor's signature so that the Passaic Valley Sewerage Commission isn't held up until November to move forward on some of these emergent problems.

Are there any questions of the Mayor?

ASSEMBLYMAN CAPUTO: I would just like to say, Mayor, that as your representative I support, and I know Assemblyman Fiori will support anything that will alleviate this problem and we will do everything we can on August 5th to try to move this bill.

Thank you.

SENATOR WALLWORK: Thank you very much.

We have one more Mayor here, and I am trying to give the Mayors the courtesy, and then I would like to call Mr.Biunno representing the Mayor of Newark.

Is Mayor Lapinsky here from North Arlington or did he have to leave?

MR. KIENTZ: Senator, he isn't, but I am here to speak for him.

SENATOR WALLWORK: All right. Well, then I will call on, if you don't mind, Mr. Biunno because he has a meeting back in City Hall and then we will get to you later on.

Thank you very much.

Mr. Biunno.

F E R D I N A N D J. B I U N N O: I am Ferdinand J. Biunno, Business Administrator of the City of Newark.

May I say, firstly, that I have conferred on this subject with Mayor Addonizzio and I am authorized, on his behalf, to say to you and the members of your Committee that he is unalterably opposed to the dumping of raw sewage into the Passaic River, in spite of the fact that this would impose an additional cost upon the City of Newark. But it would appear to us to be a most undesirable situation as well as, from what we can gather here, something that would be inimicable to the health and the welfare of the people of the City of Newark.

Now, if it so be that this be the only feasible plan that would give the utmost in safety and health protection to the residents of the community, then this cost must be an additional burden that must be borne by the City.

And, of course, as I said to you earlier, Senator, we will be back looking to Trenton to give us some of that additional assistance which we so urgently need. And I am not making a plea for it at the moment but we will add this to the many other burdens that we have to assume and which must be assumed and can in no way be pushed under a rug in any respect because we have to undertake to do that which is best for our people.

Now there are one or two points, however, that I would like to make with respect to the same subject that primarily may have been lost in the shuffle here. One was

brought out by Mr. McMahon with respect to the construction of this and I would like to emphasize it at this time because he did mention that at the time that this was built the City of Newark contributed sixty percent, am I correct?, toward the cost of it and yet only gets thirty-five percent of the usage.

This is just another example of the fact that during the years the City of Newark has been in the forefront in doing those things which were necessary for the benefit of the people, not only of Newark but of the surrounding areas and adjacent areas.

We find ourselves now in the position where when we seek assistance and guidance and help from the State level - and I would think that properly even at that time this type of a function was something which should have been the undertaking and obligation of the State. Newark undertook it as the leader of it and now we find ourselves with the position reversed and continuing to meet that ancient and archaic opposition which should be definitely removed from the picture so that the problem of Newark and the other large cities, just as this problem confronting all cities, be attended to so that we come up with the best possible solution for all people concerned and that we then seek and secure from the State the necessary assistance because while it may impose a greater financial problem upon us, in terms of what we're talking about, in dollars, still to the other communities it imposes an additional unexpected and probably unmet burden in any

respect. so far as I have been able to ascertain in their current budgets. And each and every community involved is going to have to appropriate emergency funds to undertake this.

But in listening to the plans that have been projected here, my concern has been with respect to one which I didn't hear discussed too much. We're talking in terms of a program that's going to take at least six months to get your plans ready and you are going to have a situation of at least a year of construction, and I would venture to say that if we go by past experience you can figure at least two years from today before this work is done. In the interim we have the situation of a sewer - and I was going to ask Mr. Lubetkin for some more informational data with respect to the deteriorating condition of this sewer, and has there been a study made, and do we have any information as to the condition of this sewer when first it was examined in '67 and then, subsequently, in '68 and now in '69, and are we safe in assuming that there may be a continuation of this sewer usage for a period of two years sufficiently to get this job done, or are we going to be confronted with what was mentioned by Mr. Sullivan, perhaps with a collapse of this sewer, while this is going on and then we will all have sewage up to our ears and over our heads.

There wasn't much said with respect to this. Now I say this preliminarily only because of the fact that there was one alternative plan - and, of course, from that

distance and with my poor eyesight, I couldn't read what was on that chart and I am certain that that informational data has not been disseminated to everybody concerned but I seem to remember that there was a pipeline situation that was talked of which would give you no diversion of any pollution into the Passaic River whatsoever. This would be done by pumping, as I understood Mr. Lubetkin's explanation, and that could probably be done within a ten month period.

MR. LUBETKIN: That is predicated on pumps which we are told are available now which when we investigate further may not be. I spoke to Worthington this very morning and they have three pumps but they said they do not belong to Worthington, they are owned by the Washington, D. C. Sanitary District. Two of them are being shipped out today. If we move fast, possibly we can borrow these and pay the cost of renovating and everything else but I have no guarantee when the contract with Sanitary District -- they may say, no, we need those pumps.

MR. BIUNNO: Well, that may be.

MR. LUBETKIN: I mean, the ten months is based on getting those pumps immediately.

ASSEMBLYMAN WILSON: Also there was reference made today, I think, from various sides that there is no engineering data, and I don't think there could be, on exactly how long the tunnel would be able to survive, the sewer be able to last. Not only that, they even have

outlawed test borings because of the type of soil conditions. This was all in testimony that was given this morning.

MR. BIUNNO: Yes, I have been sitting through it, Assemblyman, and I am well aware of it. And the only concern, as I say, that we have with respect to it is the fact that there seems to be, on the basis of opinion an assumption that it will hold up for at least another two year period or a minimum of 18 months. Now in dealing with it on this basis, such an assumption --

MR. McMAHON: I recommend that the street be closed immediately because of the report of the engineer that a precarious condition exists. Another engineer will come along and tell us it's going to collapse tomorrow and some will say maybe tomorrow, maybe five months, maybe five years. And this is the situation we have.

MR. BIUNNO: So what I am saying is that we are dealing with a situation of immediacy because of the fact of the unknown quantity or the hesitancy of all of the expert engineers to in any way venture their best opinion, and it could only be their best opinion based upon such factual data that we have. And we would advocate immediate action, just as mentioned by Mr. McMahon, to close off the street because undoubtedly all of us who are familiar with this traffic on McCarter Highway and Route 21 know that there is a constant pounding by the heavy vehicles and they could be rerouted without too much difficulty to bypass this and eliminate that particular danger.

SENATOR WALLWORK: Well I think we have to really go

to the engineers for those calculations.

MR. BIUNNO: Well, I'll tell you this, that there are parallel streets that would take that traffic. Now how far up east or west you may want to go is a matter for them to decide but I would think that it would be an immediacy situation. In any event, insofar as that is concerned, Newark stands prepared to cooperate with whatever assistance is required whether it be for traffic or any other purpose.

Now some mention was made here with respect to Newark's problems and, of course, these are just some of the multiple problems that we have on hand.

May I say that so far as we are concerned we have been made aware of the problems with respect to Newark's dumping of sewage as they presently exist. We have, within the limits of our ability and the requirements for the purpose of getting the work done, appropriated the required sum for the purpose of repairing a defective sluice gate which is - and I would like this for the record so that we indicate that we acted when the matter was brought to our attention and this gate is deficient and defective, requires repairs, money was appropriated for that purpose, the matter was advertised and, unfortunately, we found ourselves in the position of not having a single bidder interested in doing the work. And, for the record, we have even requested that the Passaic Valley Sewerage Commission do the work and we would compensate them for it but we are informed that they are not in a position to

undertake and correct this. Such actions as this, whenever they are brought to our attention we certainly will move in order to remove any violations that occur.

In conjunction with the mention that was made regarding Blanchard Street and other streets, action has been taken by us in the past. This is not pollution, as Mr. McMahon put into your record, by the City itself but rather by the manufacturers, and it is a manufacturing concern or others who are dumping items into the sewer system and it becomes a necessity to determine who the violators are and then to proceed against them in that respect. It is not a municipal failure in that respect except in failure to locate. And, as was mentioned, when you have all of these miles of sewers and manufacturers, it becomes quite a problem.

For the record I would like to say that we have authorized tests and work to be done during the year 1968 and during the year 1969 and to date we haven't been successful in ascertaining who the violators are so that we could take effective action against them.

I think that would conclude my remarks as far as the City is concerned, except that I have a statement which I have been requested to read by Councilman Louis M. Turco who, as you know, was here, and with your permission I would like to read that into the record.

SENATOR WALLWORK: I wonder if we could file that for the record. I have, Mr. Biunno, about six or eight statements here and it was our intention to give

them to the Legislative Research people here to have put in the record as part of the public document rather than try to read them because we do have other people to hear from.

MR. BIUNNO: Fine. In conjunction with the statement may I say that a resolution was formally adopted by the Municipal Council at its last meeting and a copy of that resolution was forwarded to the Passaic Valley Sewerage Commission expressing its opposition to the --

MR. McMAHON: We received it yesterday.

MR. BIUNNO: -- dumping plan of the Commission, that is the dumping of raw sewage into the River.

This statement by Mr. Turco is joined in by Councilman Milillo, who is also present and who represents the North Ward, and Rev. Sharper, Councilman from the South Ward and represents that particular area.

SENATOR WALLWORK: All right, thank you.

Assemblyman Wilson and I did have a chance to talk with Councilman Milillo and Councilman Sharper and Councilman Turco and while they attended the morning and part of the afternoon session we are sorry but we realize they did have to leave.

MR. BIUNNO: I am assuming if there are other hearings that will be held that we will be given notice of them.

SENATOR WALLWORK: Yes, sir.

MR. BIUNNO: Thank you.

SENATOR WALLWORK: We will take a five minute break

at this time.

(Recess)

SENATOR WALLWORK: May we please come to order. We do appreciate everybody's forbearance.

Commissioner Janowski, Township of Lyndhurst.

W. S. J A N O W S K I: I only hope that Freeholder Cooper left pictures of the tidewater when it recedes. The banks are exposed from ten to twenty feet.

We also presented a petition to Assemblyman Wilson, signed by residents of Lyndhurst, consisting of approximately 250 signatures of residents objecting to the dumping of the raw sewage into the Passaic River.

All the Commissioners of Lyndhurst strenuously object to the dumping of raw sewage into the Passaic River because of the fact that the incoming tidewater will float this raw sewage up the river and on a receding tide will float the sewage down the river trapping a good portion of this raw sewage leaving it exposed on the banks for from ten to twenty feet, thus creating an odor and a health hazard.

Unless the State and Federal Health Department can make a public statement to the contrary, our position will be to object to the dumping of this raw sewage into the Passaic River. The cost is secondary to the health of our people.

That's all.

SENATOR WALLWORK: All right. Does anyone have any questions? Thank you very much.

Mr. Gruen, representing the Mayor of Wallington.

R O B E R T D. G R U E N: I am Robert D. Gruen, Borough Attorney, Wallington.

Gentlemen, the Mayor sends his apologies. He had an uncancelled medical appointment this afternoon, although he was here this morning. He asked me to tell the Committee that the Borough is unalterably opposed to the pollution of the Passaic River and inasmuch as perhaps one-third of the population of the State of New Jersey is affected by this pollution that he would hope that the State and/or the Federal Government would find the funds to avoid this type of pollution. However, the Borough is prepared to pay its fair share of the cost, as was the City of Newark.

Thank you.

SENATOR WALLWORK: Thank you very much.

Mr. Kientz. Will you please identify yourself, Mr. Kientz.

C H A R L E S A. K I E N T Z: My name is Charles Kientz. I am the Health Officer of North Arlington.

Mayor Theodore A. Lapinsky of North Arlington had planned to be here. Unfortunately, he's attending another hearing and he asked, if he did not arrive on time, to record for him and for the Borough of North Arlington opposition to the proposed plan of bypassing directly into the River.

In support of that position, Mayor Lapinsky has asked that I present to you this petition by the Women's Club of North Arlington, containing some 300 names.

There are further communications that the Mayor has received which, if necessary, he would be glad to have photocopied and submit as a matter of record.

For myself, I feel that we have to give credit where credit is due and I don't think anyone in this room had any thought of deprecating and certainly not the remotest thought of reflection upon the sincerity of purpose and devotion to duty of the Passaic Valley Sewerage Commission. They certainly over the years have demonstrated not only their desire but have proven to the people in the area that given the support that they need a lot can be done for this part of the State.

Now there may be entered into the hearing this afternoon the feeling that nothing or no one, not many people, have raised an objection to this proposed plan or the pollution of the River prior to just a few days ago and I would like to point out that this has been a continuing action by many people. And we, I think the older ones of us, back to 1932 or 1935 will recall a meeting that had been called by the Commissioners of Clifton and Passaic and held right here in Newark in the Robert Treat Hotel, and I think a lot of good came of that.

Now we learn today that a little bit more than the hundred million gallons per day will be discharged into the River, at least that was the proposal, and this means a lot of material that's going into a channel in the area, particularly affecting Clifton, Nutley, Lyndhurst, North Arlington, Kearny, Harrison and East Newark.

We hear of several plans proposed for how to clean up the mess that might be left. Certainly I agree that chlorination is not the answer. How to keep that Ph to where it belongs to properly decompose the solids is a question the engineers will have to cope with.

I did say, however, the other day that all of this was, in effect, a socio-economic problem. And it certainly is socio because the problem that Passaic Valley has and that you gentlemen have now to try to come up with some helpful aid for them is that this material, about which we speak, is just as complex - and it is a complex problem -- it's just as complex as the society from which this product originates.

Now it certainly isn't easily degradable, that is the solids that will be deposited, the repository being in the area I just related to you. We certainly can't get the radio commentator to send us a lot of this enzyme action material - I'm not being funny about this, this has been suggested in some of the Press; somebody else has come up with the suggestion for amber like glass beads, or rather amber like beads, small amber like beads. Well, I'm sure that you fellows, and so have we all, have been using these, not just little ones but big ones as well to try to come up with the answer, so it just isn't easy.

However, I will address myself in brief to what I feel is the socio aspect of this in the area and that whether we use the rule of thumb 5% solids or 8% solids that would settle out, this is going to be a lot of

material that will settle out of what we now have learned to be in excess of instead 4.5 billion, in excess of 5 billion gallons of effluent. That's a lot of material. Now, it's all right to say this is going to be done during the winter months when the menace or hazard, whatever you want to call it, would be reduced, still maybe some of you read what I did the other day about the cold climate. Those of you who have been up through the Rockies - I'm sure many of you have - last summer I was through there and went through a real snow storm -- some of our diplomatic force, eight of them, as a matter of fact, out of this group going across the northwest part of the country just here -- well, it was in the paper yesterday - all suffered an attack of typhoid fever. Maybe it was brook trout they ate up there but you can just guess whatever you want. It's present in cold weather -- the potential is present in cold weather as it is in warm weather. And I would like to point out that this material will not, particularly will not decompose in the way we perhaps would like to have the public feel that this is not a problem during the winter months. We know that to get proper decomposing action on the sewage of waste and solids, you have to have heat. And this will bring us then into next summer. And along with the problem of failure or inability to decompose in the winter months as quickly as it might be guessed it would, we are going to have the heat working on this solid material, we are going to get hydrogen sulfide, we are going to get the discoloration of paint again from which we have been freed,

thanks again to Passaic Valley which has given us this relief over the years.

What are we going to do about these boys that we're encouraging to get off the street and engage in some clean sports? I'm not being funny about using the word "clean". Here we have boating going on. Kearny, Belleville, Nutley, North Arlington, and I think Lyndhurst also, are encouraging their boys to take to the shells. It's a nice site to see these young fellows up there going up and down the River. What's going to happen to this sport that we've been trying to build up?

Then someone mentioned, I think Freeholder Cooper, about the parks in Bergen County. Now these parks are not used by Bergen County alone, they are used by organizations in Essex County, by organizations in Hudson County, and they are used extensively as you gentlemen who take a ride through there on weekends know. And we have spring drainage ditches that flow through there, and the children, as the Freeholder mentioned, play in these little streams and on incoming tides there is a rise of anywhere from 18 to 22 inches. Now, just imagine, if you will, raw, untreated, unscreened, - and I use that word now purposely - personal waste, what these children are going to be playing with in these streams.

Now I am not being dramatic. I think I am being realistic about this. This is there. Now what are we going to do about it? I think someone said here, we send men to the moon, I'm sure they will be there, but when

we are groping around like this, I don't know.

However, getting to the economic part of it, I think Senator Wallwork sounded a note on that very early when he said we are not perhaps planning for today but we're planning for the future. And I would like to have the Passaic Valley Sewerage Commission particularly feel that this is not the end but it is but the beginning of what will be some real help in what is the total problem and not just the problem that we're concerned with today.

Thank you very much.

SENATOR WALLWORK: Thank you. Are there any questions?

Thank you very much, Mr. Kientz.

ASSEMBLYMAN WILSON: I would like to call Francis P. McCormick, Essex County Engineer.

F R A N C I S P. Mc C O R M I C K: Senators and Assemblyman, I am very glad to make a statement. I am Francis P. McCormick, Essex County Engineer, representing the Essex County Board of Freeholders.

The Essex County Board of Freeholders is as concerned as anyone else about the dumping of raw sewage into the Passaic River. They asked me in June, about the 27th of June, to investigate and make a preliminary report to them, which I did, and at their July 9th meeting they adopted a resolution opposing the discharge of raw sewage into the Passaic River.

At that time I made a report in which I presented the problem with the two main solutions that were apparent

at that time. I was unalterably opposed to the diversion tunnel. I felt it was too risky a piece of engineering. In view of the fact that you couldn't even drive a test hole any distance from this sewer, the driving of a tunnel, which of necessity would be with compressed air, and with the length of time of a year and a half was a risk that could not be assumed by anyone because if this sewer ever collapsed and broke we would have a really bad condition, not only in the City of Newark but all lines contributing to it, all of these lines would be backed up and overflowing.

This morning, for the first time, I understood it was just proposed yesterday, I heard of the piping along the banks of the Passaic River by the use of pumps. I think this is a very feasible solution. It doesn't pose any diversion of sewage except at peak storm flows, which it does now anyhow, into the Passaic River. This would be the only one of the plans that I've heard of that doesn't require some diversion of sewage, even the plan proposed for the bypass tunnel with a shoring up of the present structure which would still require a diversion of sewage while the tunnel was being shored up. They can't shore it up with sewage flowing through it. And that alone would add some days to the 7 to 15 days that was presented for this diversion tunnel.

We felt that the least - if it were necessary under the two alternatives plan to bypass this sewage into the Passaic River it should at least be chlorinated and

screened. We know this is not a perfect solution but it is better than no treatment at all.

At this time and after listening to all of the discussion, on behalf of the Freeholders I would urge that the Passaic Valley pursue the plan of pumping the sewage in pipes along the Passaic River from Third Avenue to Clay Street. I think this is an excellent solution and they should make every effort to get these pumps as soon as possible. Time is of the essence. There is no doubt about this sewer, in my opinion, being on the point of failure. And to delay a year and a half, I think is courting disaster.

ASSEMBLYMAN WILSON: Any questions?

Thank you very much Frank.

SENATOR WALLWORK: Is Mr. Nicol, the Health Officer of Kearny, here?

MEMBER OF AUDIENCE: Mr. Nicol filed a report with the Commission.

SENATOR WALLWORK: Mr. Holstor, City Manager of Clifton?

MEMBER OF AUDIENCE: He said he had to leave and he will write a letter.

ASSEMBLYMAN WILSON: John O'Neill, Legal Assistant, Town of Harrison?

MEMBER OF AUDIENCE: He left.

SENATOR WALLWORK: Is there anyone else here who hasn't been called but would like to be called?

I am just wondering, Mr. McMahon, whether you or

any member of your staff had any additional testimony that you would like to bring to our attention.

MR. McMAHON: I don't have any but the Chief Engineer may.

MR. LUBETKIN: I think everything has been adequately covered. The only thing I would like to request, I know the Commission has promised that they will do nothing until your report is forthcoming, in view of the urgency of the situation we would appreciate any rush you can on the report and particularly if you think you may go along with the pumps.

As I told you, the time of that is predicated on getting pumps that are already built for somebody else, which may or may not be available. If the Washington, D. C., Sanitary District won't release them - they are now on the train going there. If they start installing them, we won't be able to get them,and if they won't release them, we won't be able to get them.

MR. McMAHON: How long would it take if you had the manufacturer start at the beginning?

MR. LUBETKIN: This would put it at a year and a half longer.

ASSEMBLYMAN WILSON: We are directed by the Legislature to report back by August 11th so we expect to report back a great deal sooner than that. We realize the urgency of the matter and we are going to report back.

I would like to ask a question about S-719. If we were to pass that at our special session in August, and

we are going back, - it's in the Assembly - and the Governor were to sign it, how long would it take actually for the Passaic Valley Sewerage Commission to sell their bonds, and so forth, the amount of bonds they would need?

MR. McMAHON: Well it would all depend on which project. We have a report from the engineer which will require an expenditure of $7 million, or something. If this additional expense is added, it will add approximately $2 million from what had already been anticipated in our budget. But I think we can handle this as long as we knew we had the authority to go and bond next year.

ASSEMBLYMAN WILSON: If we could pass that on August 5th and you could sell the bonds, there wouldn't be any added cost as far as the municipalities that are members of the Passaic Valley Sewerage Commission.

MR. LUBETKIN: Only the bond debt service.

ASSEMBLYMAN WILSON: Only the bond debt service.

All right, well, I am going to wire Majority Leader Dickey if we could consider that bill when we go back on August 5.

SENATOR WALLWORK: I think that the record should show that Assemblyman Wilson is going to do that and I think all the Assemblymen have indicated - Assemblyman Russo and Assemblyman Caputo, Assemblyman Fiori and Assemblyman Kiehn, and all the ones that are here that this will have affirmative action, and I see no reason why the Assembly couldn't take that affirmative action on August 5th.

(Discussion off the record)

SENATOR WALLWORK: Commissioner McMahon, Assemblyman Wilson and I have discussed this informally, and the other members here, and I think that we can pretty much indicate to you that our report would indicate that because of the health hazard problems that have been raised by the Federal Government and by the State Government, of which you are certainly knowledgeable about and have been very cooperative, our report would, in the main, recommend Plan 1 C as being, right now, the most feasible of the plans recommended. And I would say that the Committee report would preclude the recommendation of Plan 1, the diversion of the raw sewage into the River without treatment and using the alternative proposals, 1 A and 1 B. But I think, in order to expedite things, and time is important, we can go on the assumption that the Committee report when it is rendered will recommend the higher expenditure from the standpoint of time and the health problems here. And if any member wants to correct me on that - I think that would be a safe assumption, if that gives you sufficient guidelines so far as what our interpretation of the testimony and recommendations will be.

MR. MC MAHON: You have a majority of the Committee here, don't you?

MR. LUBETKIN: You mean you are going to make it alternate 1 C or 2, depending on availability of pumps.

SENATOR WALLWORK: No, I think that 1C would

seem to be the best proposal because, number 1, it's only ten months long; number 2, --

MR. LUBETKIN: That's if we can get the pumps. But what if we can't get the pumps.

SENATOR WALLWORK: Then we would have to see.

MR. LUBETKIN: That's what I want to know, whether you will have an alternate, if the pumps are not available, recommending Plan 2.

SENATOR WALLWORK: Well, if you can't get the pumps, Worthington can't even manufacture the pumps, - the first alternative is to borrow them from Washington, if you can. Plan 1C seems to be the best. If that plan isn't feasible, maybe you can let us know in a day or two, and it would almost seem that some method other than the dumping of the raw sewage would be recommended by the Committee.

MR. McMAHON: Then your decision is predicated upon the availability of the pumps. That would be your first preference?

SENATOR WALLWORK: Yes.

MR. McMAHON: The second preference would be the $2.5 million job.

SENATOR WALLWORK: Well 1C is $2.5 million, also. The second I think of necessity, from the concensus of testimony --

MR. McMAHON: 1C is your recommendation.

SENATOR WALLWORK: Right.

MR. McMAHON: That hasn't anything to do with the pumps.

ASSEMBLYMAN WILSON: Not only that, isn't there a possibility, as we mentioned to Mr. Lubetkin, of your exploring the fact that if you purchase these pumps you could use them at your new sewerage operation?

MR. LUBETKIN: That's so extreme, sir, that I don't think it should be considered. As I said, we are talking of a possibility, if we get to that point, if we build a completely new treatment plant in Clifton. Then the possibility of the pump used here being the same design would be an extreme coincidence. I don't think we should consider that. I think we have to consider the merits of this problem on its own.

SENATOR WALLWORK: Well perhaps the Federal Government could help and we could ask Mr. Walker to see what he could do through his office and through the District in Washington - what help he could give us in borrowing a pump.

MR. LUBETKIN: I am going to call Worthington Corporation tomorrow and see if I can work through them to contact Washington, D. C., to see if they can -- I'm saying I'm going to do this, remember I'm an employee of the Commission and I'm assuming they will authorize me -- to put a hold on and see what kind of arrangements we can make to get the pump. And I would appreciate any help from the Federal Government with the Sanitary District in Washington, D. C. And at this point I would appreciate

any help they can give me in any design work.

SENATOR WALLWORK: Well, I think if you would let Assemblyman Wilson and me know tomorrow what the status is, I am sure the Administration in Trenton and through our offices we will do everything we can to assist the Commission.

ASSEMBLYMAN WILSON: I would like first, before we continue, that we adjourn the hearing because I don't think there is going to be any more testimony to come forth,so we will adjourn until a later date.

SENATOR WALLWORK: Well before we adjourn, Assemblyman, let's let the record show - I think I said it once but I want to say it again for added emphasis, we certainly appreciate the cooperation from Mr. McMahon and his fellow Commissioners, Mr. Lubetkin, the Engineer from the Passaic Valley Sewerage Commission. I want it clearly understood that the Commission has operated and acted in the best interest of the public throughout the whole time frame here, and I certainly do appreciate their fine cooperation here today. And Mr. Alito, and your staff, we appreciate the long day that you have spent with us.

Thank you.

(Hearing concluded)

This letter was submitted by Assemblyman Norman A. Doyle, Jr.

GERHARDT A. JOA

Professional Engineer & Land Surveyor

11 SPRUCE STREET, KEARNY, N. J. 07032

TOWN ENGINEER
KEARNY, N. J.

TEL. 991-3178

BOROUGH ENGINEER
NORTH ARLINGTON, N. J.
EAST NEWARK, N. J.

July 15, 1969

State of New Jersey,
Legislative Committee Hearing,
Essex County Hall of Records,
Newark, New Jersey.

RE: Passaic Valley Sewerage Commissioners proposed repairs to intercepter line.

Gentlemen:

Concerning repairs to the above intercepter line various plans were presented to the municipal officials at a meeting held July 14, 1969 at the Passaic Valley Sewerage Commissioners office.

Some of the plans were:

1. By-passing the sewage directly into the Passaic River, at the Second River, at the rate of 100 million gallons per day for 45 days while the intercepter line is being repaired.

   Estimated cost $ 550,000.00

2. Construction of a tunnel around the critical area of the intercept line. Repair the damaged line and then leave both the line and the tunnel in operation.

   Estimated cost $ 2,500,000.00

3. Construct a closed pipe, or pipes, sewer line for an approximate distance of 3500. lineal feet along the bank of the Passaic River to carry the

sewage around the damaged area of the interceptor line. Sewage would be pumped into the proposed sewer line and eliminate by-passing of sewage into the Passaic River.

Estimated cost $ 2,100,000.00

The Honorable Joseph M. Healey, Mayor of the Town of Kearny, and the Town Council strongly oppose the by-passing of the sewage into the Passaic River. It is their sincere feeling that the addition of 4.5 billion gallons of raw sewage dumped into the river will create a serious health hazzard and a obnoxious nuisance to the municipalities bordering the banks of this tidal waterway.

The New Jersey State Board of Health, to the best of our knowledge, has not designated the diversion of sewage into the Passaic River as safe to the health and welfare of the areas abutting the waterway. The Passaic River is used throughout its tidal length for boating and sculling. Small streams flowing into the river are effected by tidal flows and some of these streams, being in park areas, are played in by younger children.

The Mayor and Council of the Town of Kearny are well aware of the financial problems besetting local governments but strongly feel that the protection of the health and welfare of its citizens must always be given first consideration. Therefore the governing body urgently requests that repairs be made to the Passaic Valley sewer by using the closed pipe plan (3) or the tunnel plan (2) to divert the sewage in the transmission line.

Respectfully submitted,

Gerhardt A. Joa

Town Engineer
Kearny

WOODWARD-CLYDE & ASSOCIATES
CONSULTING ENGINEERS AND SCIENTISTS
790 BROAD STREET NEWARK, NEW JERSEY PHONE 201 [illegible]

27 September 1968
68-258

Mr. S. A. Lubetkin, Chief Engineer
Passaic Valley Sewerage Commissioners
790 Broad Street
Newark, New Jersey 07102

Re: Progress Report No. 1
Passaic Valley Trunk Sewer Investigation
McCarter Highway and Gouvernor Street
Newark, New Jersey

Dear Mr. Lubetkin:

The following progress report describes our progress and presents our present thoughts concerning the distress of the subject sewer tunnel.

Our activities to date have consisted of (1) visiting and examining the site, (2) studying the boring logs on the tunnel contract drawings as well as the soil data shown on the "as-built" plans and (3) noting the groundwater data available to date which consist of water levels measured in August 1912 and noted on the contract plans. We have reviewed photographs of the inside of the tunnel taken by the PVSC in April 1968 and have studied the dimensions of the tunnel both as designed and as built. We have inspected an excavation adjacent to McCarter Highway at a point 1.3 miles south of Gouvernor Street. In this excavation, soil was excavated from el +120 (PVSC datum) to el +102.5.

It is of considerable importance to us that we obtain more information about the tunneling methods and construction techniques used as well as more design detail if possible. We intend to research newspapers and contractors and engineering journals which were being published at the time the tunnel was being built. We request your assistance in determining the name of the tunnel contractor for Sections 7 and 8 as well as the

suppliers of any detailed shop drawings. In addition, we request that a complete search be made of your records to determine if there is any possibility that your files have any additional information regarding the design and construction of the tunnel. Finally, we have studied the information given to us by you concerning the history of the surface subsidence, the history of the tunnel distress and the present condition of the tunnel.

In order to bring as much experience and judgment to bear on this problem as we can, we have engaged as consultants to our firm Messrs J. Barry Cooke and James L. Sherard. We are considering expanding the board and formalizing its actions. The first meeting of the consultants and Messrs Jackson and Moorhouse was held in our office on the evening of 24 September 1968. At this meeting, Messrs Jackson and Moorhouse presented the information obtained to date and asked the consultants' view of two problems: (1) the mechanism of the failure and (2) the probable safety of the existing condition.

It is the opinion of our consultants and ourselves that the most probable mechanism explaining the present condition of the tunnel is that of piping. The piping mechanism consists of groundwater flow eroding and transporting soil particles through the cracks in the lining. As this process continues, the side support of the lining is reduced, allowing it to be forced outward by the weight of the overburden soils pressing on the crown of the tunnel. This results in lowering of the crown, spreading of the sides, and localized crushing and cracking of the concrete lining. We see this mechanism as a continuing one.

It appears at this time that the situation is dangerous. The formation of a small localized opening in the lining (such as caused by a lining failure due to stress concentrations, local weakness of concrete etc.) could lead to rapid inflow of surrounding soil resulting in settlement of the street by as much as 40 ft. It is also possible to imagine that this inflow would affect adjacent buildings, and possibly result in ultimate collapse of the tunnel itself. Such a localized opening may have almost formed in the roof at Sta 1+60, and be the cause of the street settlement at that point.

68-258

We are presently studying means of providing an immediate increase in safety against collapse of the tunnel. The most promising method appears at this time to consist of lowering the groundwater in a localized area around the effected portion of the tunnel. The installation of such a dewatering system, however, may involve some risk because of changing the environment and groundwater flow and thereby increasing the risk of collapse. We are studying this situation. In addition, our concern about the possible instability of the tunnel at the present time will necessarily influence our exploration program; we are also studying this facet of the problem at the present time.

In our meeting of 16 September, it was decided that an emergency operating plan would be promptly developed by your staff. We would like to obtain this plan as soon as possible since it may have a bearing on the nature and extent of our investigation program as well as our recommendation for either temporary or permenant remedial measures.

We are continuing our studies as described above and will keep you informed of our progress.

Very truly yours,

Walter T. Jackson

Walter T. Jackson, P.E.

Douglas C. Moorhouse

Douglas C. Moorhouse, P.E.

WTJ/DCM:sd

WOODWARD-CLYDE & ASSOCIATES
CONSULTING ENGINEERS AND GEOLOGISTS
1425 BROAD STREET CLIFTON, NEW JERSEY 07012 PHONE (201) 471-2000

Douglas C. Moorhouse
Gerald L. Baker
Yves Lacroix
Arnold Clift
Herbert L. Lobdell
Noel M. Reyneberg

30 October 1968
68-258

Mr. S. A. Lubetkin, Chief Engineer
Passaic Valley Sewerage Commissioners
790 Broad Street
Newark, New Jersey 07102

Re: Progress Report No. 2
Passaic Valley Trunk Sewer Investigation,
McCarter Highway and Gouverneur Street,
Newark, New Jersey

Dear Mr. Lubetkin:

The following progress report describes our progress since Progress Report No. 1, and presents our recent thoughts concerning remedial measures for the subject distressed sewer tunnel.

Since preparing Progress Report No. 1, we have researched newspapers, as well as contracting and engineering journals, without learning much concerning sewer construction methods in Sections 7 and 8. Mr. Lawrence of PVSC has indicated that he has obtained field data books describing tunnel construction in Sections 6 and 9, but that no such data is available for Sections 7 and 8.

We have discussed with various contractors and equipment suppliers methods of constructing a new tunnel inside or outside of the existing tunnel (Intrusion Prepakt, A. J. Pegno Construction Corp, and Commercial Shearing and Stamping); of pumping sewage out of the tunnel during repair work (Fairbanks-Morse, Gorman-Rupp, Flygt,

Pumping Services, Inc., Sea-land Dredging, Webb and Knapp Marine, Gibson and Cushman of New York, American Dredging, Gahagan Dredging, and Foundation Equipment Corp), and of dewatering the ground outside the existing tunnel (Moretrench and Foundation Equipment Corp). Methods of grouting the cracks in the existing tunnel walls and the soil outside the tunnel have been discussed with grouting contractors and manufacturers of chemical grout (Intrusion Prepakt, Atlantic Drilling Company, Raymond International, and Rayonier).

The various means of in-tunnel construction examined include the use of ribs rolled from carbon steel H-beams and from stainless steel pipe, and of liner materials such as fiberglass, shotcrete, and Fabriform. Also investigated were means of external support of the existing walls by soldier piles drilled on either side of and touching the existing tunnel walls, and of support of the existing roof by tendons supported on a frame of drilled piles.

We have reviewed the PVSC emergency operating plan. This plan indicates that in the event of a full block in the sewer at Gouverneur Street, bypassing can be effected by (1) gravity bypassing of sewage into the Passaic River at Yantakaw Bypass, and (2) pumping approx 17,000 gpm (peak wet weather flow) of sewage into the Passaic River from the sand catcher at Second River. The plan assumes a full block in the sewer at Gouverneur Street. We learned from Mr. Lubetkin that with gravity bypassing at Yantakaw, overflowing of sewage into the

streets of Passaic would result when more than one inch of rainfall occurs over a period of two hours.

The consulting board was expanded to include Mr. S. D. Wilson; the second meeting with our consultants, Messrs. J. B. Cook, J. L. Sherard, and S. D. Wilson, was held in our San Francisco office on 14 October 1968. At this meeting, Messrs. Jackson and Moorhouse presented additional information obtained to date and asked the consultants' view of: (1) the mechanism of the distress, (2) exploration techniques, and (3) approach to the repair of the tunnel distress.

It is the opinion of our consultants and ourselves that the general mechanism for our explaining the present condition of the tunnel is that of piping, as discussed in Progress Report No. 1. As a guide to the speed at which a massive piping failure can occur below the water table, it was learned that a 60-ft deep, 200-ft wide crater formed in about six hours at the Ravenna Street sewer collapse in Seattle in 1957; at this location there was approx 140 ft of previous sand and gravel overlying the tunnel.

A field exploration plan was developed after the meeting with the consultants; a copy of that plan is enclosed. We request your assistance in obtaining permission to drill borings B6 and B7, in obtaining plan and elevation survey data in the area of the exploration program, and in determining whether or not the water main under McCarter Highway is leaking or broken. As a supplement to the subsurface exploration program, we request your assistance in obtaining

entry to adjacent buildings on the northwest and southeast corners of Gouverneur Street and McCarter Highway for inspecting the column lay-out, and for estimating floor loads and elevations.

We have developed several preliminary plans for relief of tunnel distress. They are briefly described herein.

I. TUNNEL A NEW BYPASS

This solution would entail tunneling a bypass around the distressed portion of the existing tunnel. There would be no disruption of existing sewage flow during construction (except when the connections are made at either end). The buildings being tunneled under would probably need to be underpinned. The cost of this solution has been previously estimated at more than $1,000,000 by Mr. Moller of your staff.

II. EXCAVATION OVER DISTRESSED TUNNEL

In this solution, a deep braced excavation would be made over the distressed portion of the existing tunnel. The excavation would be decked over at street level to permit the free passage of traffic on McCarter Highway. The top half of the existing tunnel would be removed while sewage is still flowing, and sections of precase concrete liner would be lowered through the flowing sewage onto the existing tunnel invert; the bottom of the precast liner would match the deformed shape of the existing tunnel. Backfill would then be placed up to the street level and the street repaved. With this solution, there would be little dirsuption of sewage flow during construction;

there would also be little loss of sewer capacity (liner thickness presently estimated to be about 5 in.). Underpinning of the building on the northwest corner of Gouverneur Street and McCarter Highway would be required, as well as the services of a very experienced sheeting, bracing and underpinning contractor. The cost on this type of repair is estimated to be one-third to one-half the cost of a tunneled bypass.

III. LINING THE EXISTING SEWER FROM THE INSIDE

A. Shotcreted Liner

Details of this repair method are outlined in Appendix A, which consists of notes of our 14 October 1968 meeting with our consultants. With this method, repairs could be made quickly, and there would be little disruption of traffic on McCarter Highway. However, the tunnel would have to be completely emptied in the area to be repaired, and full-face bulkheads would be necessary upstream and downstream from the section being repaired. The bulkheads would have to be removable on sudden notice due to impending heavy sewage flow, in order to prevent overflow of sewage into the streets of Passaic. The sewage would have to be bypassed into the Passaic River, with the attendant pollution problems. The cost of this repair method is estimated to be about one-third the cost of tunneling a bypass.

B. Liner Installed From Within Existing Sewer During Brief Periods While Sewage Flow is Low

To date we have not been able to completely develop a system of lining the sewer from within while some sewage is flowing in the

tunnel, and which can be placed during working periods of five to six hours per night. Some pollution of the Passaic River would result from this method. If this method can be developed, it is likely that the cost would be less than any of the methods discussed above.

Very truly yours,

Walter T. Jackson, P. E.

Douglas C. Moorhouse, P. E.

WJ:maf

APPENDIX A

NOTES OF 14 OCTOBER 1968 MEETING WITH CONSULTANTS

MEMO TO JOB FILE: 68-258

SUBJECT: Meeting of DCM, WJ, and Consultants, J. Barry Cooke, James L. Sherard, and Stanley D. Wilson, 14 October 1968, 11: am to 4:30 pm, in WCA's San Francisco office.

I REVIEW OF PROBLEM, PRESENTATION OF NEW DATA

A. New Data

1. WJ presented the PVSC's preliminary plans for emergency diversion procedures that could be employed in case of a tunnel collapse. These plans indicate that wet weather peak flows can be bypassed into the Passaic River by gravity diversion and pumping (would require six 12 in. pumps). Therefore the potential for damage to property owners due to the result of flow being stopped by a tunnel collapse is less than we previously understood it to be. DCM stated that WCA's attorney has told us that the owner holds no insurance on the tunnel.

2. Mr. S. Lubetkin, PVSC's Chief Engineer, has told WJ that the tunnel does not often flow full. WJ presented depth of flow records from a typical week; at one time during that week the tunnel was flowing completely full at the Second River venturi meter, located about 1.5 miles upstream of the distressed section of the tunnel. It was the impression of all at the meeting that if a full tunnel flow could occur during a typical week, that a full tunnel backed up considerably into the manholes could occur during rain storms. It was agreed that we should obtain additional records of how high the flow rises into the manholes. WJ indicated that the tunnel carries 180 mgd, or 270 sec-ft of fluid when flowing full; the cross-sectional area is 95 sq ft, so the average velocity must be 3 ft/sec. The slope of the tunnel in the area of the distressed portion of the tunnel is 0.00024.

3. WJ indicated that the roadway surface depressions had been located and plotted with respect to the distressed portion of the tunnel, and that the plots indicate that the surface depression occurs above the distressed portion of the tunnel. Collapsing utilities have been routed around the surface depression.

4. DCM indicated that Mr. S. Lubetkin had said that he could accept a 6-in.-thick lining on the walls, but that a 12 in.-thick lining on the walls would be unacceptable. JLS suggested that we scrutinize these criteria very carefully; while it would be desirable to try to satisfy the criteria given to us, there may be savings involved by reducing the tunnel diameter more than these criteria allow in a short length of the tunnel.

II MECHANISM

JLS indicated that flexing of the roof may be taking place due to internal fluid pressures (when sewerage backs up into nearby manholes) and due to only a little weight on the tunnel roof (because of arching of soil over the tunnel). SDW indicated that he cannot envision flexing of the tunnel roof, since the internal pressures involved are so small. All agreed that piping of soil from around the tunnel is the general mechanism, but that we may never really know the exact details of the piping. SDW pointed out that an average lateral soil loss of 7 in. (3.5 in. from each side of the tunnel) would result in volumetric loss of 20 cu yds; this is much less than what has been put into the sinkhole in the street above; we must therefore conclude that some of the material from up above has either come through the top of the tunnel, through the sides, or into the tunnel invert through little circumferential pipes formed in the soil outside the tunnel. JLS indicated that he felt that the exact details of the piping might be unimportant, depending upon the solution to the problem.

Concerning the speed at which a large volume of soil can flow through a local collapse in the tunnel wall, SDW indicated that the 60 ft-deep, 200 ft-wide crater at the Ravenna Street sewer collapse in Seattle formed in about 6 hours (tunnel 140 ft deep, pervious sand and gravel over the tunnel).

Concerning possible reasons whereby dewatering could cause collapse of the tunnel, WJ indicated that collapse could be envisioned caused by a migration of fines away from the tunnel walls toward the dewatering system, causing additional spreading of the tunnel walls. JLS indicated that it is possible that external water pressure may be tending to hold the tunnel together, and that should the tunnel be full and the external water pressure be removed, the sides might spread considerably. Everyone agreed that dewatering to a point below the invert would involve a remote risk of inducing a collapse.

III EXPLORATION

JLS suggested that we need a series of borings parallel to the tunnel and another series at right angles to the tunnel (near the distressed portion) in order to get a broad picture of the subsoil profile; this subsoil data would be indispensable for design of a dewatering system. Concerning how close the borings could be made to the tunnel, JLS feels that it is inconceivable that a boring made 50 ft away from the tunnel could in any way induce tunnel distress.

IV APPROACH TO RELIEF OF TUNNEL DISTRESS

DCM introduced three basic approaches to the solution of the problem: (a) treatment inside the existing tunnel; (b) cut and cover excavation, either on top of the existing tunnel or a bypass around it; and (c) tunneling a new bypass. JBC indicated that he felt it would be considerably more economical to achieve some sort of treatment inside the existing tunnel.

DCM indicated that we had two basic solutions for building a new lining inside the old tunnel: (a) erecting and concreting an inflatable form inside the

tunnel (Fabriform by Intrusion Prepakt); and (b) the JLS solution consisting of assembling steel ribs in the tunnel and shotcreting them. JLS presented detailed solutions for installation of steel ribs that could be applicable if it is impossible to pump down the bottom 3 ft of sewerage inside the tunnel. With the new data that it is possible to empty the tunnel completely, it was concluded that some modifications and simplifications to the JLS design could be made. JBC and SDW suggested leaving out the ribs and merely shotcreting the walls of the existing tunnel; the details of the scheme and necessary investigations are as follows:

Shotcrete Liner Inside Existing Tunnel

1. Make a series of deep borings, one row should be made parallel to the tunnel and another perpendicular to the tunnel near the distressed section.

2. Verify the ability to completely empty all the sewerage out of the tunnel (by gravity bypass and pumping). WJ suggested a full-scale trial of this ability to completely empty the tunnel before any dewatering is begun. JBC suggested that any pumping and bypass arrangement very carefully examined and made to be foolproof, i.e., pull fuses and valves which might close gates and shut off the gravity bypass and pumps, eliminate automatic controls, etc.

3. Advise PVSC that there is a remote risk involved by installation of piezometers (soil samples could be obtained simultaneously with piezometer installation), by installation of a dewatering system, and by operation of that dewatering system. However, it was concluded that the benefits of increased safety and increased quality outweighed the small risk and the work should be done.

4. Install the piezometers near the tunnel and take soil samples in the piezometer holes.

5. Design and install the dewatering system, draw the water table down below the invert; empty the inside of the tunnel simultaneously as the water table outside the tunnel is drawn down.

6. Install a sandbag dam in the tunnel just upstream from the first manhole upstream of the tunnel section in distress. JBC brought up the possible need for a full-face bulkhead in the tunnel to protect the workmen inside the tunnel; it was discussed and agreed that we could do without a full-face bulkhead.

7. Clean the walls of the existing tunnel and roughen the concrete with bush hammers (waffle tool).

8. Apply 6 to 8 in. of shotcrete (with no mesh) against the wall of the existing tunnel; insert short small diameter pipes in all visible cracks for subsequent cement grouting of the cracks. WJ suggested debugging the shotcreting operation on the surface. SDW suggested that this surface debugging be followed by trial shotcreting of tunnel walls on either side of the section in distress; only after the shotcreting operation is perfected would production shotcreting in the distressed portion of the tunnel be initiated. JBC feels an excellent shotcrete gun operator is required. SDW and JLS feel that inspection during shotcreting will be extremely important.

9. Cement-grout all large cracks in the existing tunnel wall behind the shotcrete liner through the pipes which were installed in the cracks before shotcreting.

10. Drill through the shotcrete and the old lining, grout a skin of cement around the existing lining; maybe no voids will be encountered, but at least any loose pockets of sand around the existing lining would tend to be densified.

11. Possibly grout a soft skin of chemicals outside the cement-grout skin as a second line of defense to prevent leaking of the shotcrete lining due to flexing and cracking caused by readjustment of external stresses. JBC feels that new shotcrete is a bit flexible, and that this step may not be necessary, SDW also feels this step may not be necessary.

The following general comments were made concerning this shotcrete lining system:

The safety of the existing tunnel should be improved before workmen are sent into it for installing the shotcrete liner; to do this, a dewatering system could be installed. Once the ground outside the tunnel has been dewatered, everyone agrees that there can be no rapid inflow of soil which could bury a man, even if a local portion of the tunnel wall fails. A beneficial byproduct of the dewatering would be that the shotcrete applied against the existing tunnel lining would be of higher quality. JBC and JLS suggested that it would be difficult to precisely control the elevation of the drawn-down groundwater. Rather than partially dewater down to the crown of the tunnel, make measurements of tunnel deformations, followed by dewatering to below the invert, JBC suggested dewatering in one step to below the tunnel invert. All concerned felt that the dewatering is somewhat of a risk. Regarding the detrimental effect of groundwater inflow on quality of shotcreting, WJ suggested low pressure grouting (possibly with chemicals) before shotcreting. JBC felt that grouting would not cut down enough on the inflow of groundwater.

JBC argued against putting any mesh in shotcrete as the potential reaction between the acidic contents of the tunnel and the steel could cause expansion of the steel and spalling of the cover of shotcrete over the steel. JBC suggested that it was also difficult to achieve quality shotcrete and prevent voids underneath the bars or the mesh. JBC indicated that he felt if the shotcrete was high enough in quality, that mesh in the shotcrete was unnecessary and undesirable.

JLS suggested a bonus incentive to the contractor to finish the job fast; SDW indicated that the contractor would probably have to go to a three-shift basis to minimize the public outcry due to pollution of the Passaic River. DCM and SDW estimated that it would take approximately one month

to do the job; WJ estimates three weeks if the contractor goes to a 24-hr workday once bypassing of the sewerage into the river is initiated.

Details of the shotcreting are included as Appendix A to this memorandum.

V GENERAL

SDW feels that Progress Report II should reiterate our position that the condition of the tunnel is dangerous, and under no circumstances should the client do nothing; this is not the kind of situation that can be walked away from. There was general agreement on this point.

cc: Mr. J. Barry Cooke
Mr. James L. Sherard
Mr. Stanley D. Wilson
Mr. Seymour A. Lubetkin

APPENDIX A

SHOTCRETING DETAILS

JBC supplied the following details concerning shotcreting:

A. Strength

An initial set can be obtained in one minute, with a strength of 300 to 400 psi in one hour, 2000 to 3000 psi in 24 hr, and 5000 to 6000 psi ultimate strength.

B. Costs

A shotcrete gun costs $12,000 to purchase and $1500 per month to lease (approx). Typical costs are $80 to $100 per cu yd of shotcrete on a production basis (the cost will be much more in the tunnel because of the very small quantities involved, 85 cu yd for 8 in. of concrete over a 100 ft length of tunnel).

C. Technical

Three-quarter inch aggregate can be used with a shotcrete gun; there is a peening action of the aggregate against the old concrete, and this improves the bond. Shotcrete bonds very well to old concrete, especially if the surface of the old concrete is dry and roughened; as an example, after crushing of shotcreted rock, the shotcrete still adheres to chunks of the rock. The shotcrete sets so fast that it has a built-in pre-compression, and there is no shrinkage cracking. One of the important details of the shotcrete mix is a fast setting chemical additive called Sigonite (produced by Sika) which sells for $0.35/lb; the quantity of sigonite used is typically 4 lb per sack of cement when the shotcrete is applied against a dry surface; 6 lb per sack of cement for quick set against a dry surface; and 8 lb per sack of cement against a wet running surface. The best quality shotcrete results if there is no mesh or steel to bond to, since it is hard to get the shotcrete underneath steel bars or mesh; also, steel is expansive with exposure to acid, and this results in spalling of the cover of shotcrete over the steel. Typical production rates are 3 to 6 cu yd per hr. A shotcreting unit can be lowered into the tunnel (unit is approx 20 in. sq) and the sand and gravel to be mixed in the shotcreting unit can be blown down into the tunnel through hoses from the surface (as opposed to being brought in in bulk form).

D. Contractors

Two contractors experienced in shotcreting are Monorock (Arcadia or Pasadena, Cal.) and Magna (Denver, Colo). Magna is a firm experienced with gunite, they have purchased shotcreting equipment, and are new to shotcreting.

E. General

JBC will send information from his shotcrete files to WCA. ACI defines shotcrete as pneumatically applied mortar or concrete, and does not make a distinction between shotcrete and gunite.

JAMES L SHERARD
CONSULTING ENGINEER
70 HILLCREST ROAD
BERKELEY, CALIFORNIA 94705
PHONE (415) 655-3755

November 20, 1968

Woodward-Clyde & Associates
1425 Broad Street
Clifton, New Jersey 07012

Attention: Messrs. W. T. Jackson and D. C. Moorhouse

Subject: Passaic Valley Trunk Sewer, Newark, New Jersey

Gentlemen:

In your letter of October 29, 1968, you described the three fundamentally different approaches to which you were giving consideration for repairing the tunnel without emptying the sewer; that is:

1. Shotcreting a liner, in spite of the great difficulty of completely emptying the sewer;

2. Lining the inside of the sewer during brief periods at night when the sewage can be partially bypassed and is flowing three feet deep; or

3. Making a cut and cover excavation over the portion of the tunnel under distress and repairing it from above while the sewer is flowing.

In the last days I have found myself studying the possibility of a fourth basic category of approach which would be described more or less as

4. Reinforce and grout the soil above and on the sides of the tunnel using details such that it will not be necessary to seal the cracks in the tunnel lining and so that the existing tunnel lining can be continued in service without any internal repairs.

I haven't thought about this enough to have formed a definite opinion as to whether I would propose it to you as the method to use, or even as a serious method for consideration; however, the idea seems to me to have sufficient merit so that I thought it would be a good idea to put it on paper for us all to look at.

As you will see in the attached sketch, SK-1, I would put down a series of approximately five vertical reinforcing elements or piles using a technique such as the method of the Intrusion Prepakt people for putting in their tie-back anchors in soil for bulkheads with main details as follows:

1. Screw the helical flight auger into the ground rapidly without removing the soil to the depth desired; that is, we don't make any hole in the normal sense of excavating material but simply screw the auger into the ground like a wood screw.

2. The auger has a hollow stem and a steel bar and is carried into the ground with the auger. The steel bar is attached to the cutting head on the auger.

3. After the cutting head has gone to the depth desired the auger is screwed back out or pulled out of the ground and the space left behind is filled simultaneously with a good sand-cement grout which cements the steel bar in place and provides a concrete column with a steel bar in the center.

I see the installation of these concrete encased steel reinforcing bars as having two main beneficial functions. The first is a subsidiary function which occurs during the installation as shown on the attached sketch, SK-2. During the construction of the reinforcing column or pile, the fluid pressure in the grout at the tip of the helical auger as it is being raised in the vicinity of the tunnel will be approximately the weight of a column of fluid to the surface or roughly 40 or 50 feet of fluid grout. This fluid, sketch SK-2, will then have a very high gradient tending to cause it to flow into cavities or loose zones of sand existing outside the tunnel and even to enter the cracks in the tunnel. The beauty of this technique is that these cavities will be filled in a controlled method. As shown in sketch SK-2 the amount of grout which will be pumped in will be limited. Therefore, if there is a very large cavity at one place and the grout breaks into it as shown in sketch SK-2, because of the limited amount of grout which we are placing into the hole there will be no large, rapidly exerted unbalanced hydrostatic pressures placed on the concrete lining. If one or several adjacent of the steel bars being installed seem to take a very large quantity of grout for cavity filling, we will simply stop the operation in this area temporarily and allow the grout placed to set up before going ahead.

Because of the action as shown in SK-2 it seems to me that by the time we have installed all the tension rods as I have shown in sketch SK-1, we can be quite confident that all the loose zones and cavities in the soil outside the tunnel lining will be filled with hardened grout and probably most of the cracks in the tunnel lining would have been made watertight.

Also, once we have the tension rods in place there will be no possibility that we could damage the tunnel lining with high-pressure grouting of the soil outside.

Therefore, after the maze of concrete encased steel bars is completed and in place we can grout the soil very thoroughly under pressure around the periphery of the tunnel.

My rough estimate of cost makes this scheme appear particularly desirable. This is roughly as follows:

1. In each of the "bents" shown in SK-1 there is a total of approximately 350 lineal feet of reinforcing.

2. If we spaced these bents at four feet on center along the longitudinal axis of the tunnel as shown in Figure SK-1, for a length of about 150 feet, we will have a total of a little less than 15,000 lineal feet of reinforcing.

3. It seems to me we should be able to get these concrete encased steel bars in place in this quantity for the order of magnitude of $6 to $8 per lineal foot as a maximum which would give us a total cost for the "reinforcing" of something like $100,000.

4. Then we could spend another hundred thousand dollars carefully grouting for a total of $200,000.

Well, fellows, I have dictated this rapidly, as much to put my own ideas on paper to look at as to send to you. It seems to me at this writing that the scheme mentioned herein has a lot to recommend it, and it should at least be considered strongly. I see as one potential major drawback the possibility that we do not grout off all the leaks which come into the tunnel and that over the years piping continues. My answer to this potential problem is twofold:

1. In all likelihood we will be able to see all the leaks and end up with all the cracks in the tunnel lining being sealed with grout filling.

2. Certainly by visual observations inside the tunnel we can determine pretty well whether or not there is any leakage coming in.

3. Finally, if some leakage does come into the tunnel unobserved by us and causes a little piping over the years, this will certainly

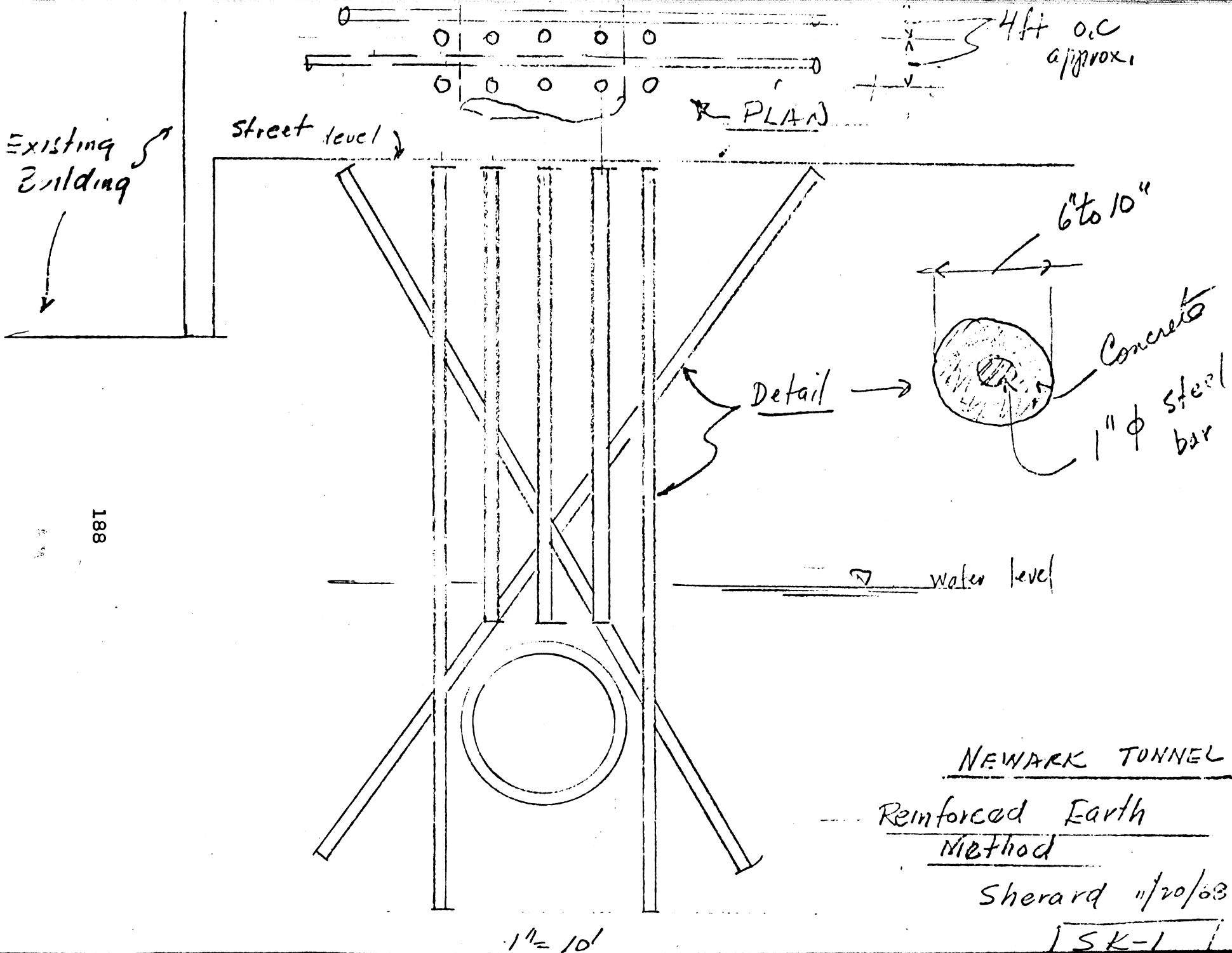
be very slow and with all the reinforcing in the sand above the tunnel, it is impossible that there would be anymore trouble with the street settling or that there could be any possible future risk of a major failure of the kind which occurred in Seattle and we discussed at our last meeting.

Very truly yours,

James L. Sherard

cc: Messrs. J. B. Cooke, S. D. Wilson

Enclosures: Sketches SK-1, SK-2

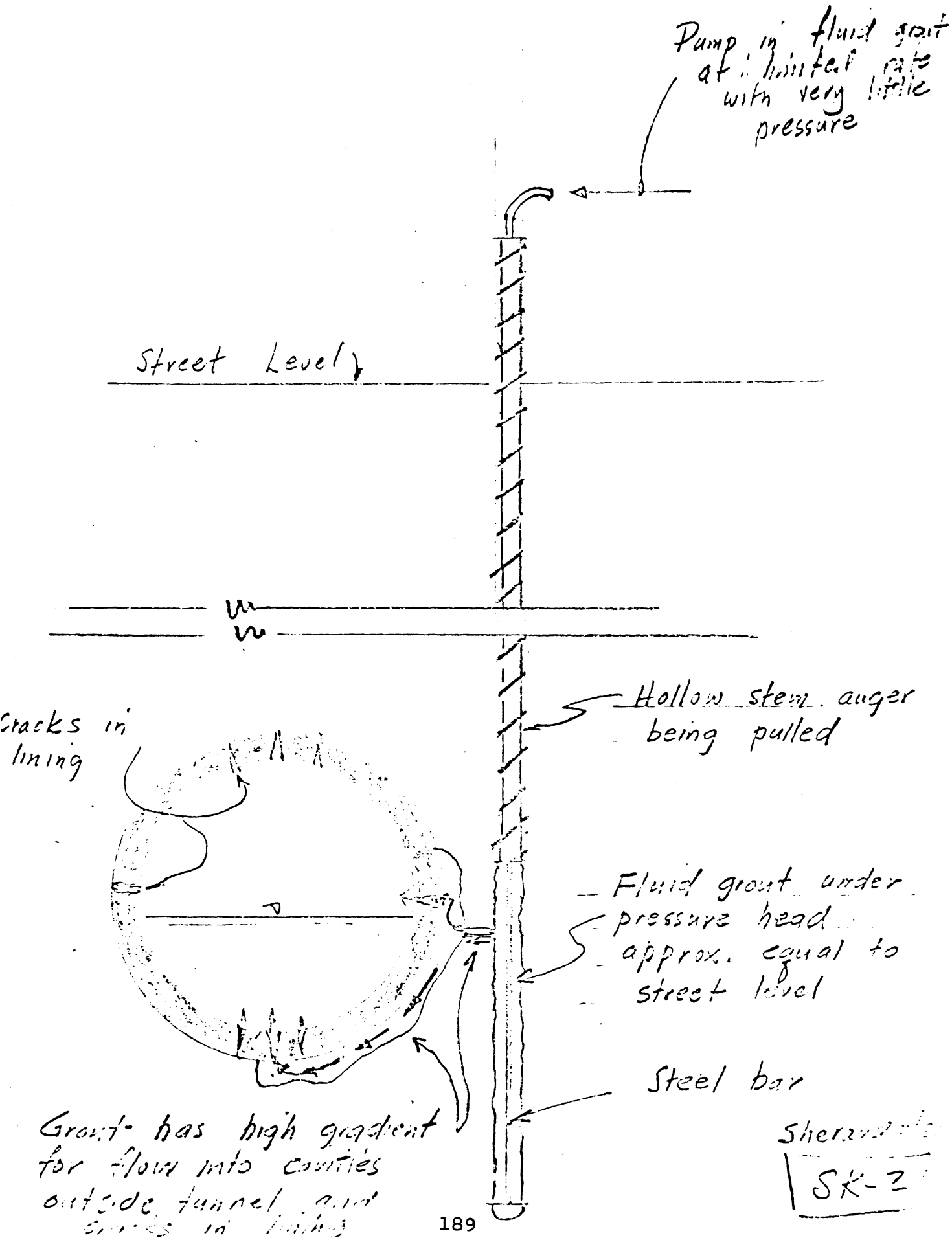


NEWARK TUNNEL

Reinforced Earth Method

Sherard 11/20/63

SK-1


Pump in fluid grout at a limited rate with very little pressure
Street Level
Hollow stem auger being pulled
Cracks in lining
Fluid grout under pressure head approx. equal to street level
Steel bar
Grout has high gradient for flow into cavities outside tunnel and cracks in lining
Sherwood
SK-2

JAMES L. SHERARD
CONSULTING ENGINEER
70 HILLCREST ROAD
BERKELEY, CALIFORNIA 94705
PHONE (415) 655-3755

December 1, 1968

Mr. Douglas C. Moorhouse
Woodward-Clyde & Associates, Inc.
1425 Broad Street
Clifton, New Jersey 07012

Dear Doug:

Subject: Passaic Valley Trunk Sewer, Newark, N. J.

After more sleeping on it, I still have the idea that the scheme I gave you in my letter of November 20, 1968, is a perfectly satisfactory solution to the problem. I believe that it is better than anything that can be done short of digging up the tunnel and replacing it and it will be much cheaper than doing that.

In my mind I don't see the concrete columns with the steel bar in the center as being piling. I see them as closely spaced reinforcing elements or "pins" which are sufficiently close together so that the soil between them is "immobilized". In fact the whole mass of sand to the side and above the tunnel is "reinforced" in such a way that it must act as a single reinforced body. The sand between the pins cannot move independently as the bond between the sand and the concrete is ample to assure that the cylindrical column of sand surrounding each of the pins will move only as the pin moves.

I feel now that I've reflected enough on this to conclude that if it were my tunnel and if I didn't have money to burn, I would repair it more or less as I described to you in my last letter.

All the best!

Cordially yours,

James L. Sherard

JLS/e

WOODWARD-CLYDE & ASSOCIATES
CONSULTING ENGINEERS AND GEOLOGISTS
1425 BROAD STREET CLIFTON, NEW JERSEY 07012 PHONE 201 471 2000

Douglas C. Moorhouse
Gerald L. Baker
Yves Lacroix
Arnold Clift
Herbert L. Lobdell
Noel M. Reyneberg

26 December 1968

Mr. S. A. Lubetkin, Chief Engineer
Passaic Valley Sewerage Commissioners
790 Broad Street
Newark, New Jersey 07102

Dear Sy:

As we discussed on the telephone, Dr. Sherard has been giving the tunnel problem some additional thought and has written me two letters describing his most recent thoughts. I have enclosed these letters as you requested for your review. As I mentioned on the telephone, if you are interested in pursuing this idea, you might contact Dr. Sherard directly.

Very truly yours,

Douglas C. Moorhouse

Douglas C. Moorhouse

February 26, 1969

State of New Jersey
Department of Transportation
Maintenance Building
Junction of U.S. 1, 9 & 22
Newark, New Jersey 07114

Re: Route 21 Settlement
McCarter Highway at
Gouverneur Street,
Newark, New Jersey

Attention: M.S. Creitzer
District Supt.

Gentlemen:

This will confirm the telephone conversation held on February 25, 1969 with the Commissioners' Deputy Engineer, Edward J. Moller, and will summarize the items discussed.

The Commissioners are still concerned about the continuing road settlement at the Gouverneur Street intersection and as to how the same may adversely affect the Commissioners' sewer. As we know from past experiences with continuous settlement, there is a possibility that large voids exist below the road which should be filled to prevent a sudden collapse of the surface. We suggest that small diameter drill holes (or borings) be made at this time to determine this possibility. The Commissioners are willing to cooperate with the transportation Department in making these test holes.

To avoid the formation of new or additional voids, we also suggest as a temporary solution, that the area be sealed off from the washing action of surface waters entering the intersection. The Commissioners are conducting investigations regarding the condition of the local sewers, drains and water lines present at the intersection, with the intention of informing the proper authorities and requesting that they seal off any leakages.

As soon as weather conditions permit and asphalt becomes available, you have agreed that the low area will be filled by the Transportation Department. This will eliminate the depression which is collecting rainwater. This filling will further assure the maintenance of our sewer.

Please contact this office regarding your plans on the above items so we may work together on their accomplishments. You will hear from us regarding the condition of the drainlines in the intersection.

Very truly yours,

PASSAIC VALLEY SEWERAGE COMMISSIONERS

S. A. Lubetkin
Chief Engineer

SAL/mn
cc: Edward J. Moller
Thomas E. Durkin, Jr.

District Office
Jct. Rts. 1, 9, 21 & 22
Newark, New Jersey

IN REPLY PLEASE REFER TO

Route 21, Newark
Pavement Settlement
Gouverneur Street

State of New Jersey
DEPARTMENT OF TRANSPORTATION
DAVID J. GOLDBERG, COMMISSIONER
TRENTON 08625

March 11, 1969

Mr. S. A. Lubetkin, Chief Engineer
Passaic Valley Sewerage Commissioners
790 Broad Street
Newark, New Jersey

Dear Mr. Lubetkin:

Thank you for your letter of February 26, 1969, regarding the pavement settlement at the intersection of Route 21 and Gouverneur Street.

As you are aware, the Department of Transportation has been concerned about this problem for several years. In 1967, with your cooperation, the Department of Transportation at its expense, engaged Laval Underground Surveys to photograph your sewer. You have viewed the three dimensional color photos that were taken and are familiar with the conditions they depict.

The pavement at Gouverneur Street seems stable at this time. There is a minor depression in the roadway which we plan to fill as soon as weather conditions permit and hot-mixed asphalt is available. The Department of Transportation at this time does not plan to drill any holes or conduct any test borings at the site.

Very truly yours,

M. S. Greitzer

M. S. Greitzer
District Superintendent
Maintenance and Equipment

MSG:dm

WOODWARD-CLYDE & ASSOCIATES
CONSULTING ENGINEERS AND GEOLOGISTS
1425 BROAD STREET CLIFTON, NEW JERSEY 07012 PHONE 201 471 2000

11 March 1969
68-258

Mr. Seymour A. Lubetkin
Chief Engineer
Passaic Valley Sewerage
Commissioners
790 Broad Street
Newark, New Jersey 07102

Re: Progress Report No. 3
Passaic Valley Trunk Sewer Interceptor
McCarter Highway and Gouverneur Street
Newark, New Jersey

Dear Mr. Lubetkin,

This letter discusses the effectiveness of grouting as a remedial measure for the subject distressed sewer tunnel.

In our 9 September 1968 proposal, we indicated that we anticipated the remedial work would consist of a grouting program. We further indicated that if it develops that grouting is not feasible, the report will present a discussion of other possible remedial measures.

In September 1968, we studied photographs of the inside of the tunnel; this study indicated that the lining was severely cracked, both longitudinally and transversely, and that a block failure might be imminent. On 19 September, you gave us construction records which indicate that near Gouverneur Street the tunnel was advanced through fine sand. On 25 September, we inspected a deep excavation located on McCarter Highway 1.3 miles south of Gouverneur Street. The soil in this excavation consists of a layered lenticular deposit of red-brown silt, fine sand, and clean medium sand containing 1/4 inch gravel; we believe that this soil is of the same geologic formation and is similar to the soil surrounding the tunnel at Gouverneur Street. The nature of the soil around the tunnel was not confirmed by borings due to termination of our services. Based on these data, we reached the conclusion in early October 1968, that grouting was not a feasible remedial measure because grout pumping

pressures could possibly induce tunnel collapse, and because the soil around the tunnel appeared to be too fine-grained for grout to penetrate. Incomplete grouting is unacceptable because continuous leaking through ungrouted cracks in the tunnel lining could cause more loss of ground and require additional future remedial work.

At a 14 October 1968 meeting with our consultants, Messrs. J. B. Cooke, J. L. Sherard, and S. D. Wilson, grouting around the tunnel was briefly discussed as a possible remedial solution. For the reasons given in the preceding paragraph, it was our and the consultants' conclusion that grouting was not feasible. Through an oversight on our part, this discussion was not recorded in the minutes of the meeting which were transmitted to you with Progress Report No. 2.

On 15 November 1968, we were advised that our services were terminated and that we should make no further studies concerning the tunnel. Shortly thereafter, our consultant, Dr. J. L. Sherard, sent to us two letters, dated 20 November and 1 December 1968; these letters described a method of reinforcing the soil with closely-spaced, drilled-in rods, followed by grouting the cracks in the tunnel lining. Copies of these letters were forwarded to you on 26 December for your information.

The method presented in Dr. Sherard's letters has not changed our previous opinion concerning the unfeasibility of grouting. Although the drilled-in rods might lessen the possibility of collapsing the tunnel due to grout pumping pressures, we still feel that not all leaks could be grouted and made watertight. We believe that recurring tunnel distress would be experienced in the future due to continued formation of voids around the tunnel. We recommend against grouting as a remedial measure, with or without the soil reinforcing rods described by Dr. Sherard.

Very truly yours,

Douglas C Moorhouse /wf

Douglas C. Moorhouse, P.E.

DCM/gm

7 July 1969

Passaic Valley Sewerage Commissioners
790 Broad Street
Newark, New Jersey 07102

Gentlemen:

This letter confirms the telephone conversations I had yesterday with Chairman McMahon and Chief Engineer Lubetkin concerning the plans of the Commissioners to repair the McCarter Highway trunk line. In conference here with our engineering staff and in meetings among your representatives, your consulting engineer and staff of the Water Pollution Control Program, we have considered the advantages and disadvantages of the five alternative methods of repair set forth by your consultant.

Based upon this review, it is our judgment that the bypass tunnel designated as repair method (a) on Table 2 of the material given to us should be the method of choice. Our engineers have not yet received the full report of your consultants on the study of alternative methods but through conferences we understand that the bypass tunnel method is considered feasible.

We would urge that to the extent possible construction techniques be employed which would prevent the temporary bypass of untreated wastes into the Passaic River. We would also urge that you direct your consulting engineers to examine carefully all possible methods of protecting the existing structure from collapse during the period of construction of the tunnel, including the detouring of traffic to eliminate avoidable stress on the fractured part of the interceptor. We have notified the chief engineer of the State Department of Transportation that further failure of the sewer structure might endanger the roadway.

Passaic Valley Sewerage
Commissioners

7 July 1969

In expressing our preference as to the method of choice, we are fully mindful of your legitimate concern with the costs to be assessed upon municipal participants in the Commissioners' system. We are aware that based upon preliminary estimates the tunnel method is five to six times as expensive as plan (d) which calls for interior repair with the temporary bypassing of wastes into the river. We also appreciate your interest in gaining the principal advantage of plan (d) which is to repair the damaged sewer line in the shortest time possible.

All things considered, however, in our opinion it would be inconsistent with the basic statutory responsibilities of this Department to sanction a repair method which would result in large quantities of untreated waste entering the Passaic River if, as appears to be the case, there is a feasible alternative.

It is my intention to be present at the public meeting of the Commissioners to be held at your offices on 9 July 1969. I will be glad at that time or at another meeting thereafter to discuss the subject more fully with you and your representatives.

Very truly yours,

Richard J. Sullivan

Richard J. Sullivan, Director
Division of Clean Air and Water

RJS:mb

WOODWARD-CLYDE & ASSOCIATES, INC.

...GEOLOGISTS

...JERSEY 07102 ...

11 July 1969
c8-258

Mr. Seymour A. Lubetkin, Chief Engineer
Passaic Valley Sewerage Commissioners
790 Broad Street
Newark, New Jersey 07102

Re: Passaic Valley Trunk Sewer Interceptor
McCarter Highway and Gouverneur Street
Newark, New Jersey

Dear Mr. Lubetkin:

The purpose of this letter is to describe why our partial investigation of the subject sewer tunnel did not include exploratory borings.

In our proposal dated 9 September 1968, we proposed an investigation which included a field exploratory program consisting of borings located in the vicinity of the distressed portion of the tunnel. Prior to having the borings made, we examined the available data concerning the tunnel distress to hypothesize a failure mechanism. This hypothesis was necessary to design the details of the field exploration program.

After studying the available data, we concluded that the tunnel is in a precarious state and that closeby exploratory borings could possibly affect the equilibrium of the tunnel and adjoining soil and accidentally trigger a collapse of the tunnel.

Because of the serious consequences of a collapse, we chose to study the problem thoroughly before making the exploratory borings. We formed a board of consultants consisting of prominent experts in the tunneling field; the subject of the exploration program was discussed in detail with this board before the details of the program were agreed upon. On 30 October 1968, six weeks after our investigation began, in Progress Report No. 2, we made recommendations for a field exploration program. Most of the boring locations would have been 100 ft or more from the tunnel, a distance which we felt was sufficient so that the borings could not affect the tunnel.

11 July 1969
68-258

Shortly before the borings would have been started, our services were terminated.

Very truly yours,

Douglas C. Moorhouse

DCM:sd

Breakdown of $ 500,[illegible] and $ 2,[illegible] [illegible] costs [illegible] assessment to each municipality. Based on 1968 flows.

PASSAIC VALLEY SEWERAGE COMMISSIONERS

TABLE V

FLOW OF MUNICIPALITIES

Week of..

MUNICIPALITY	FLOW — MGD			
	$	$		
Paterson	75,028	375,141		
Haledon	2,700	13,500		
Prospect Park	473	2,364		
Hawthorne	6,074	30,369		
Glen Rock	2,173	10,865		
Fair Lawn Ind.	498	2,490		
Fair Lawn	6,670	33,348		
East Paterson	4,722	23,611		
Marcalus	5,677	28,384		
Clifton	35,112	175,561		
Passaic	24,020	120,099		
Garden State	(16,901)	(84,507)		
Garfield	27,497	137,487		
Saddle Brook	2,873	14,366		
Lodi	8,035	40,177		
Wallington	1,342	6,712		
East Rutherford	1,990	9,948		
Rutherford	1,494	7,472		
Lyndhurst	5,505	27,525		
Nutley	13,476	67,382		
Belleville	11,780	58,900		
Bloomfield	12,446	62,225		
Glen Ridge	[illegible]	9,805		
Montclair	10,610	53,052		
Orange	12,877	64,387		
Little Falls	88	438		
North Arlington	1,832	9,158		
Kearny	12,836	64,178		
East Newark	1,202	6,009		
Harrison	12,475	62,374		
Newark	196,534	982,668		
TOTAL	500,000	2,500,000		

Advance Deposit Reminder

SHERATON MOTOR INN

Your confirmation for the SHERATON MOTOR INN is enclosed. Please note – a deposit covering one night's room charge is required if arrival time is after 5 P.M. Please mail your deposit immediately to the Sheraton Motor Inn, Lloyd Center, Portland, Oregon, indicating on the check your date of arrival. The hotel may cancel your reservation if they do not receive your deposit. Refunds will be made on reservations with deposits that are cancelled by noon of the arrival day. There is a $2.00 service charge on all refunds. A warm welcome awaits you at the Sheraton Motor Inn.

B&T 56

SHERATON Hotels & Motor Inns

RESERVATRON II CONFIRMATION

Celia M. Berkman
Hall of Records, Essex County
Nark, N.J. 07012

DATE	RATE
7 7	$19.00

REMARKS

Op-5 NACO

It is a pleasure to confirm your reservation at:

HOTEL Portland, Oregon — CFM'D BY PH PICB

NAME	ARRIVAL DATE	ARR. TIME	NO. NIGHTS	S	D	TW	SU
CLARK, WM. H.	7 27	5PM	3	X			

7/3/69

PR. CONVENTION NACO ARRIVE July 27, 1969

Reserved for DEPART July 30, 1969

NAME AND COMPANY William H. Clark, Freeholder, Essex County

TYPE OF ACCOMMODATION 1 Single Room - 1 Person

RATE REQUESTED $ 18.00 TO $ (SEE REVERSE)

HOTEL Sheraton Motor Inn, 1000 NE Multnomah

CONFIRMED BY Sheraton Motor Inn (PH) DATE 7-2

MAIL TO

Celia M. Berkman, Secretary
Hall of Records, Essex County
Nark, N. J. 07012

CONFIRMATION OF HOTEL RESERVATION
PORTLAND, OREGON

PLEASE READ "SPECIAL NOTICE" ON REVERSE SIDE

GUEST COPY

State of New Jersey

PASSAIC VALLEY SEWERAGE COMMISSIONERS

790 Broad Street Newark, N. J.

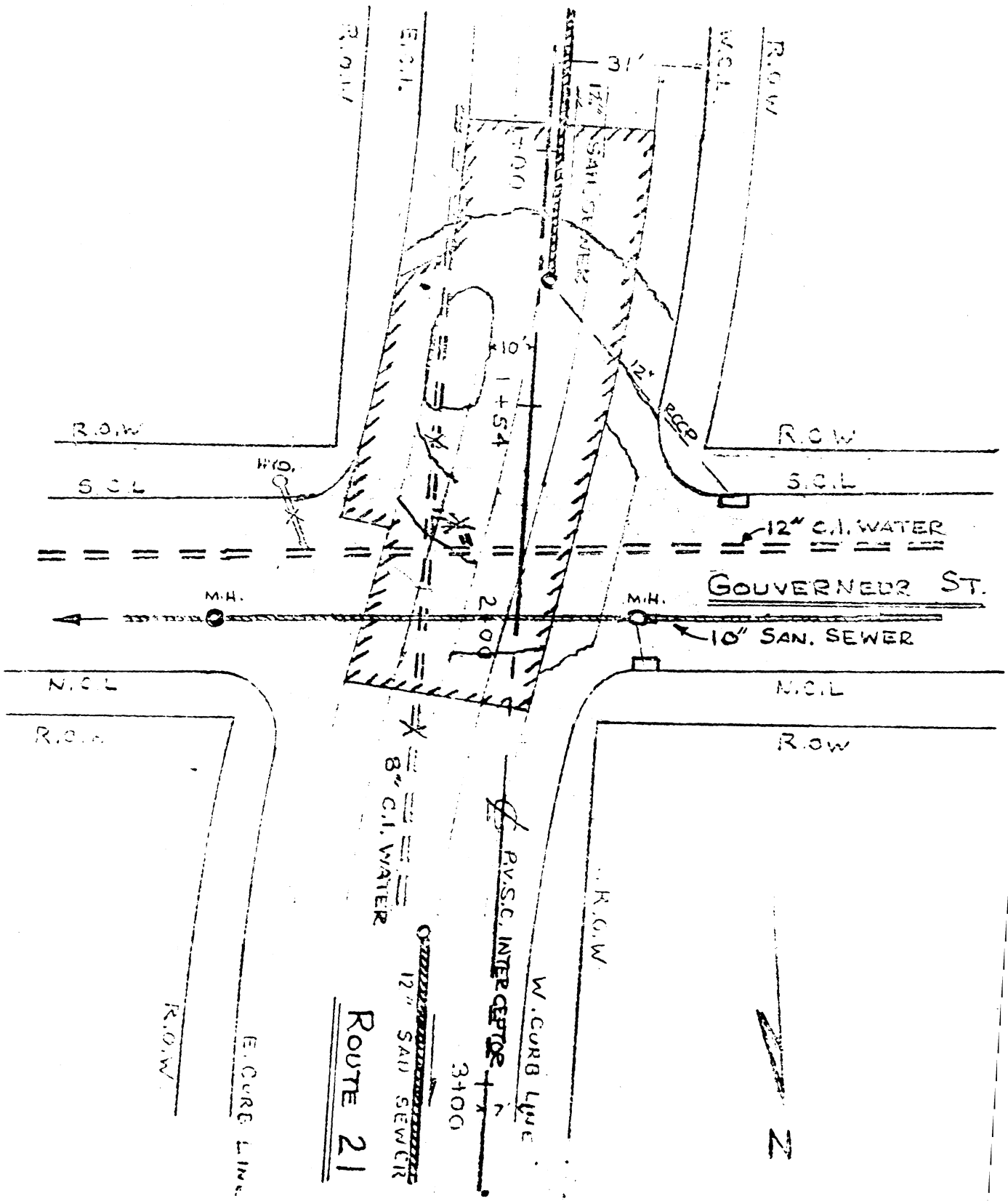
BY J. LAWRENCE DATE 3/24/62

CHKD. BY DATE

SUBJECT UTILITIES LOCATIONS - GOUVERNEUR ST. & RT. 21, NEWARK

SHEET NO. 2 OF

JOB NO.



Statement submitted by Walter J. Nicol:

I am Health Officer of Kearny and have been a resident of that town for 53 years.

I remember the Passaic River in the late 20's and early 30's when the bubbles of H_2S generated by the rotting of raw sewage on the bottom of the river used to break on the surface of the river. I remember hot summer days when the odors of H_2S dominated the town of Kearny and in effect when this contaminated air washed against houses painted with white lead the houses turned black with the chemical reaction $PbO + H_2S \longrightarrow PbS + H_2O$.

The Passaic Valley Sewage Commission has done a commendable job thus far and any slip at this time when these solids could be built up for even one summer could set us back to those old Hydrogen Sulfide smelly summers.

This entire problem has been discussed with the Kearny Board of Health and the attached letter bears out the Board's thinking.

Mr. Joa, our Town Engineer, has submitted a proposal which we endorse. This proposal has already been read into the record.

I am sorry I cannot stay for this afternoon's session. Please accept my apologies.

Respectfully,

Walter J. Nicol
Health Officer
Town of Kearny

Kearny
Department of Public Health

BOARD MEETS
THIRD TUESDAY OF EACH MONTH
AT HEALTH CENTER
645 KEARNY AVENUE
KEARNY, N. J. 07032
991-2700

SAMUEL SHAW, PRES.
S. LEWIS KOOK, M.D., VICE PRES.
DONALD J. CARLIN
EDWIN J. CAMPBELL, JR.
WILLIAM A. KEEGAN, JR
EDWARD T. REID
GEORGE H. ASHLEY

WALTER J. NICOL,
HEALTH OFFICER & SECRETARY

July 2, 1969

Mr. Seymour Lubetkin, Chief Engineer
Passaic Valley Sewage Commission
2149 McCarter Highway
Newark, N. J.

Dear Sir:

This letter is a follow-up of our telephone conversation of June 27 when I inquired about the dumping of 100 million gallons of sewage a day into the Passaic River.

I have taken this up with the President of the Kearny Board of Health who has instructed me to voice the Kearny Board of Health's objection to this dumping of raw sewage into the Passaic River.

With technical advances in construction, our Board feels that some by-pass could possibly be used to accomplish this task without creating a public health nuisance.

Very truly yours,

Walter J. Nicol
Health Officer
KEARNY BOARD OF HEALTH

WJN:sd
cc: Mr. Chris Hoffman
Chief Engineer, Water Pollution
New Jersey State Department of Health
Trenton, N. J.

Statement submitted by Louis M. Turco:

I am the East Ward Councilman of the City of Newark. I have my law offices and residence at 237 Adams Street, Newark.

As the elected representative of some 80,000 people, I am slightly appalled at the decision of the Passaic Valley Sewage Commission to dump 4-5 million gallons of raw, untreated sewage into the Passaic Valley commencing September 1, for 45 days.

It is difficult for me to understand how government can be so advanced in some areas to enable us to send men to the moon, yet show such a degree of insensitivity to the health and welfare of our citizens to consider dumping this thick, foul smelling substance into our rivers.

I am not a health expert and cannot testify as to the effect on an individual's health that this pollution will cause. I do know, however, that the odor which will emanate from the Passaic River will make living conditions unbearable for thousands of residents of the East Ward. Furthermore, as this substance flows the entire length of the river into Newark Bay, thousands of employees at Port Newark will find it impossible to work.

The feeling of the people in the area I represent has been unanimous in opposition to the plan.

Gentlemen, we are all conscious of the high costs involved. However, we must primarily be concerned with the health and comfort of the people. With this in mind, at the last meeting of the Newark Municipal Council, a resolution was introduced and unanimously passed directing that a letter be forwarded to the Passaic Valley Sewage Commission expressing the strong displeasure of the City Council to the original proposal and urging a suitable alternative to be adopted. Furthermore, the City Corporation Counsel of the City of Newark was directed to institute legal action to seek an order enjoining the commission with proceeding with their plan if it is not amended.

My position today is a twofold one.

First-

The Passaic Valley Sewage Commission must adopt the method which will provide the residents of the respective communities with the least amount of discomfort, and with no health hazard, regardless of cost.

Second-

I strongly urge the members of the State Legislature to immediately introduce a bill which would reimburse the communities for any expense involved in repairing the pipeline.

This is an emergency which properly requires State aid, just as the emergency flood conditions in some parts of our State 1 or 2 years ago.

It would be unjust to tax the residents of Newark with this expense. They already are shouldering a tax rate of $8.30 which is confiscatory, and face a substantial increase in the coming year unless further State aid is forthcoming.

The City of Newark will have to come to the State time and again to meet increased expenses because we are being greatly shortchanged by the State in the ratio between the amount of revenue received by the State, and the rate of return to the citizens of Newark.

Gentlemen, we must adopt the most efficient proposal and this cost should be borne by the State.

Statement submitted by R. Edward Morrow, Councilman, Town of Kearny:

Please let the record show that Councilman Morrow of Kearny was present and in writing is placing his objection to the pollution of the Passaic River by the P.V.S.C.

Contrary to Commissioner McCann's testimony, "No agency has advised his office that dumping raw sewerage into the Passaic would pose a health hazzard," I wish at this time to remind the Commission and advise the hearing committee of the 'Edlebock Case.'

The Edlebock's, residing in a houseboat on the Passaic River, Kearny were recently brought to court by the P.V.S.C. to stop polluting the Passaic River. The Edlebocks were emiting approximately 10 gal. per day of effluent into the River and as the P.V.S.C. accused them -- this created pollution and is a health hazard.

Now, if 10 gal. per day is unhealthy, how can the P.V.S.C. represented by Mr. McCann's testimony, feel no agency would not state dumping 115 million gal. per day is not.

I appeal to the Commission to favor the $2.5 million dollar plan as opposed to the 'Economical and Time Saving Proposal' which would pollute our River.

The State has already spent millions to de-pollute the Passaic. How much more will be necessary to spend to correct this new pollution?

I stand in objection for the people of my community in any proposal which would unnecessarily pollute the Passaic River. I remain

Respectfully yours,

R. Edward Morrow
Councilman, Town of Kearny

Statement by John M. o'Neill, Legal Assistant, Town of Harrison; Joseph Conduri, Town Engineer, and Charles A. Farley, Town Clerk, also being present.

The governing body of Harrison wishes to be recorded as completely opposed to any dumping of sewage into the Passaic River as a method of allowing repairs to, or alteration of, the existing broken sewer pipe in Newark. We know our citizens cannot believe that the flow of 100,000,000 gallons of sewage in one day does not constitute a health hazard. It seems more sensible to adopt the normal view, held by most authorities, that the flow of untreated sewage must be tolerated, if it is in any way avoidable. Harrison, therefore, recommends any alternative solution other than the two which will expose us and our neighbors to distasteful, and possibly worse, surroundings.

Our town engineer is familiar with a success story in upper New York state, involving an exterior grouting process in an allied situation, not sewers. He has suggested to me that the grouting method, as mentioned at this hearing by Mr. Seymour Lubetkin, might very well work, avoiding the main thrust of our

problem. I shall recommend to our Engineer that he relate his experience to Mr. Lubetkin by letter.

John M. O'Neill
Legal Assistant
Town of Harrison

STATEMENT SUBMITTED BY JOHN A. MC LAUGHLIN

Mr. Chairman:

My name is John A. McLaughlin. I am a former member of the New Jersey Assembly. I reside at 315 Elm Street, Kearny, New Jersey. I am not a technical expert, and I rely on the expert testimony previously given concerning the technical difficulties involved in this matter. However, I am familar with the public policy of the State of New Jersey as expressed in N.J.S.A. 26:2E-1, et seq. and in the State's Water Pollution Control Program. Simply stated, the pollution of our waterways is contrary to this public policy.

As a resident of the Town of Kearny, I also know the feeling and concern of the people who live in the community and who will be affected if raw sewage is dumped into the River. They are vigorously and unalterably opposed to such dumping. It is imperative that the Passaic Valley Sewerage Commission be prevented from dumping raw sewage into the Passaic River and alternate means be used to dispose of the sewage regardless of the cost. The strong public policy of the State against polluting our waters and the health and welfare of the people in the area will justify whatever additional cost there may be in disposing of the sewage. Since the prevention of water pollution is a State wide problem, the Passaic Valley Sewerage Commission should not have to bear the entire cost of constructing alternate means. If they are not eligible for State or Federal aid under the existing Federal Water Pollution Act or the State Public Sanitary Sewerage Facilities Assistance Act of 1965, I strongly

urge that provision be made to give finandal assistance to this project from the Clean Water Bond Issue if adopted by the voters in November. It is certainly consistant with the purpose of the Bond Issue to use some of the funds to prevent pollution of the Passaic River by the construction of alternate means of disposal during this emergency.

In the interest of clean water, I urge that action be taken to prevent the dumping of raw sewage into the Passaic River and financial assistance be given to the Passaic Valley Sewerage Commission to construct alternate meands of sewage disposal during this emergency.

STATEMENT SUBMITTED BY CHESTER POTTER

STATEMENT PRESENTED
AT PUBLIC HEARING
JULY 15, 1969

BY CHESTER POTTER
50 BENNETT AVENUE
KEARNY, NEW JERSEY

My name is Chester Potter. I am a resident of the Town of Kearny where I have lived all of my life. I am presently a Police Captain in the Police Department where I have served through the ranks during the past 27 years. I am presently on leave of absence in order to perform my civic duty as a candidate for Mayor in the coming election in November. I am running as a true representative of all the people as an independent candidate not affiliated with any political party, and my campaign pledge is Kearny First.

My remarks today are made as a citizen, taxpayer, and candidate interested in the welfare of my fellow residents of Kearny.

Public hearings are a part of our democratic process and should serve the useful prupose for which they have been intended - To give the people a chance to listen and a chance to be heard. The time and the place of such hearing has a bearing on the results of such hearings, naturally.

First,I would request that hearings be held in the evening when most working men and women would be able to attend. Secondly, I strongly urge these hearings be continued in the very place destined to suffer the greatest harm through the proposed plan to pollute the Passaic River with an abnormal amount of raw sewage for an indefinite period of time with potentially devastating effects. These hearings should be held in Kearny the town that is trying to save itself from an ill-conceived plan in a desperate situation that has developed from political negligence, lack of concern and poor planning. The future of pollution abateman lies in the

hands of non-partisan activity and as a non-partisan representative of the people of Kearny, there is no better time to start than now.

I have conferred with sanitary engineers, college professors concerned with these kinds of problems and conservationists who have developed data and valuable statistics to fight pollution.

The preliminary revealations are both startling and dramatic. They present foreboding signs that predict impending disaster.

In an attempt to be brief, I will merely highlight those areas of greatest concern to all our residents.

The proposed dumping of raw sewage in the Passaic River at the rate of 100 millions of gallons a day for a minimum of 45 days at the shores of Kearny spell disaster and will impose health problems of epidemic proportions that will be man made if this proposal is allowed to occur.

The Kearny riverbank park will be virtually wiped out with hopes and desires of our youngsters in need of such recreation dashed beyond reason, not to mention the hundreds of millions of dollars to rebuild such areas and to replace the millions of dollars washed away with the pollution.

The potentially dangerous and offensive air pollution and bug breeding will be both a nuisance and a health hazard that will be difficult to correct or overcome with its resultant toll of lives and ill health.

The fishlife in the river for many miles upstream and downstream will be destroyed or infected with disease.

The water along the river used by industry in production and circulating service for air conditioning or other water reuse will now, charged with multiple impurities, threaten the life and condition of the valuable capital equipment used by our major industries in order to survive.

These are merely the landmarks of indisputible harm that the sewage dumping will cause if left unopposed. I recommend instead, the expenditures of enough money to create a bypass recommended as an alternate to open sewage dumping and all of its implied perils especially to the innocent people of Kearny, N. J.

Statement of
REP. PETER W. RODINO
(D-10th District)

July 16, 1969

Water that is free of pollution is essentially a matter of money. We can have clean water if we are willing to pay the price. The technical know-how to eliminate pollution is available today. We have the expertise to maintain continuous supplies of clean water.

I am pleased to report that at a meeting with Federal Water Pollution Control Administration officials in Washington on Monday (July 14) I was assured that full technical assistance of the federal agency is being made available to the State of New Jersey Clean Air and Water Division and to the Passaic Valley Sewerage Commissioners in their effort to develop a feasible alternate to avoid dumping raw sewage into the Passaic River during a period of repair to a section of damaged sewer.

This active cooperation among Federal, State and local governments is the kind of partnership that will certainly produce the best possible solution to the serious problem we now face. It is a constructive partnership that all of us must continue to encourage.

Regardless of what choice is finally made with respect to an alternate solution, the new and more desirable approach will cost more money. This is almost certain.

The $271 million "Clean Water" bond issue which New Jersey voters will decide in November recognizes the need to spread the costs of fighting water pollution among all people of the State.

Local government and regional authorities such as the PVSC which are reimbursed directly by local governments cannot absorb the added costs of water facilities alone, in view of their limited taxing power and overreliance on property taxes.

The "Clean Water" referendum acknowledges the need for substantial State and Federal financial assistance in the fight for cleaner water.

I intend to continue to explore with FWPCA officials the possibility of obtaining Federal funds to assist the PVSC in proceeding with an alternate plan to repair sewer damage without the dumping of raw sewage into the Passaic River.

It is my understanding that Federal funds might be made available if the repair program can be incorporated into an overall plan for improvements of the existing system. This approach should be fully explored -- as should every means that promises to avert the objectionable alternative of dumping untreated sewage into the waters of the Passaic.

Government Publications

N.J. Assembly/Senate. Air, Water Pollution & Public Health Committees. Passaic Valley Sewerage Comm. to Discharge Untreated Sewerage. Public Hearing. July 16, 1969.