CN - Orgo farms + Greenhouses. Inc
v.
Twp of Colts Neck

5/2/79

Transcript of proceedings: Deposition of
Dale S. McDonald

p 129

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SUPERIOR COURT OF NEW JERSEY
LAW DIVISION - MONMOUTH COUNTY
DOCKET NO. L-3299-78 P.W.

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ORGO FARMS & GREENHOUSES, INC., a New Jersey Corporation; and RICHARD J. BRUNELLI,

Plaintiffs,

-vs-

TOWNSHIP OF COLTS NECK, a Municipal Corporation,

Defendant.

x - - - - - - - - - - - - - - - - - x

CIVIL ACTION

DEPOSITION OF:

DALE S. McDONALD

T R A N S C R I P T of the stenographic notes of the proceedings in the above-entitled matter as taken by and before FRANCINE RUDD, a Shorthand Reporter and Notary Public of New Jersey at the offices of STOUT, O'HAGAN & O'HAGAN, ESQS., Central Jersey Bank Building, Allenhurst, New Jersey 07711, on Tuesday, April 17, 1979, commencing at two-fifteen o'clock in the afternoon.

A P P E A R A N C E S

FILED
MONMOUTH COUNTY
MAY 8 - 1979
John R. Francis
County Clerk

FRIZELL, POSYCKI & WILEY, ESQS.,
By: DAVID JOSEPH FRIZELL, ESQ.,
For the Plaintiffs.

STOUT, O'HAGAN & O'HAGAN, ESQS.,
By: ROBERT W. O'HAGAN, ESQ.,
For the Defendant.

I N D E X

NAME OF WITNESS	DIRECT	CROSS	REDIRECT
DALE S. McDONALD			
By: Mr. O'Hagan	3		124
By: Mr. Frizell		121	

E X H I B I T S

NUMBER	DESCRIPTION	FOR IDENTIFICATION
D-1	One Page Document.	38
D-2	A Document.	44

D A L E S. M c D O N A L D, Sworn.

DIRECT EXAMINATION BY MR. O'HAGAN:

Q Has your attorney explained to you the nature of these proceedings?

A No.

Q Okay. Well, you will be questioned and you're now under oath, which means it will be sworn testimony, and I would expect that you'd answer my questions fully and truthfully. If Mr. Frizell has an objection to the form of the question, he will make that objection on the record and make a decision then as to the substance of the objection. He'll either advise you to go ahead and answer or to refrain from answering. If I ask you a question and you don't understand it, I'd thank you to tell me you don't understand it. If you want it to be rephrased in any manner or if you don't hear it, again just ask and I'll do so. If you don't ask me to do that in any of those instances, I'll assume that you've understood the question. Now, if you're answering, all of your answers should be verbal as a shake of the head can't really be picked up by the reporter.

A Uh-huh.

Q Now, would you advise us, Mr. McDonald, of

your educational background?

A Yes, I -- Civil Engineering Major of Ohio State and graduated with a Bachelor of Civil Engineering.

Q When did you graduate?

A 1970.

Q Was that the extent of your formal education?

A I took two years of graduate school at Rensselaer Polytechnic Institute under a training system there in the area of Environmental Engineering.

Q Was that for an advanced degree?

A No.

Q What the purpose of these studies?

A It was graduate study in Solid Waste. I did not obtain an advanced degree.

Q How many credits in fact did you take?

A (No response).

Q Would it be less than 60?

A 16?

Q 60.

A Oh, yes, definitely.

Q Less than 30?

A I believe so, yes.

Q Less than 16?

A No.

Q Are you able to approximate the number of

credits that you took?

A Approximately in the vicinity of 25.

Q When did you complete your studies at Rensselaer?

A '72.

Q Are you a licensed engineer of the State of New Jersey?

A Yes, I am.

Q When did you receive your license?

A In 1979, this year, yes.

Q Just --

A Just recently.

Q Are you licensed as a Civil Engineer?

A New Jersey just has Professional Engineer. I took the engineering -- the civil engineering portion of the specialty -- of the exam.

Q Would you advise us of your employment background?

A Yes, my first employer was Paterson Rredevelopment Agency in Paterson, New Jersey. I worked there from June -- July of '72 to, I believe, May of '74. Then I was employed by Elam and Popoff Engineering Associates in Glen Rock from May '74 to May '78, and then I've been employed by Killam since '78.

Q What were your duties with the Paterson

Redevelopment Agency?

A The title was Project Development Assistant. Basically it involved coordination of construction projects that the Redevelopment Agency in Paterson was taking at the time.

Q Would that involve design work or construction work?

A We did not do any actual design work. We reviewed designs by consulting engineers retained by the Redevelopment Agency. We were employed in a supervisory capacity by the Redevelopment Agency.

Q What was your job title?

A Project Development Assistant.

Q Did you have a superior?

A Yes.

Q Elam and Popoff was your next employer, I think you said?

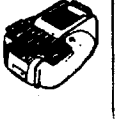
A Yes.

Q What was your job title there?

A When I left, it was Project Engineer.

Q What does a Project Engineer do?

A A Project Engineer is charged with the general responsibility of guiding a project. He has under him engineers, draftsmen, basically project coordination and supervising projects along.



Q Now, what actual projects did you work on with Elam and Popoff?

A In a chronological order?

Q Any order.

A Okay. The major ones, I'll just go through the major ones.

Q Let's do it another way rather. What was the nature of work performed by Elam and Popoff?

A I did primarily planning work and preliminary design work. The major project I was involved with was what they call 201 facility plant.

Q What's that?

A They're planning and preliminary engineering studies that the EPA requires for authorities, muncipalities and townships to obtain approval of Federally funded sewerage projects. I was involved with three facilities planning projects while I was there.

MR. O'HAGAN: Off the record.

(Whereupon there is a discussion off the record.)

BY MR. O'HAGAN:

Q So I would assume that you were familiar with the guidelines of the Environmental Protection Agency and Department of Environmental Protection as to the award of both grant money and loan money to finance sewer projects?

A That's correct.

Q Then you've been with Killam since sometime in 1978 to the present?

A May, '78.

Q What duties are you involved in with Killam?

A I'm a Project Engineer at Killam. Because I've been there such a short while, I've been involved with four projects.

Q What are they?

A The major ones are again two planning studies, 201 facilities planning studies, one in North Plainfield, New Jersey, and the other one -- for the Manasquan River Regional Sewerage Authority in Monmouth County here.

Q Prior to your involvement with the work for the Colts Neck Village planned unit development, had you ever worked on a project of this nature? I'm referring to a PUD in an undeveloped municipality?

A I don't believe so.

Q You have not?

A No.

Q Would I be correct in understanding that you were the author of the report dated January, '79, which is entitled "Conceptual Engineering Report Feasibility of Providing Sanitary Sewage, Storm Sewage and Potable Water Supply Facilities to the Colts Neck Village Planned Unit

Development, Colts Neck, New Jersey"?

A There were three engineers primarily charged with the preparation of this report: Myself and two other engineers in the office.

Q Who are they?

A They were Nick DeNicolo.

Q What job title does he have?

A I believe he's also a project engineer and Joseph Skupien who I believe is also a project engineer.

Q What involvement did you personally have?

A I was primarily charged with coordinating the overall project and directly responsible for preparing the sewerage portion of the report.

Q With reference to the other two, can you delineate which aspect they were involved with?

A Sure. Nick DeNicolo was charged with preparing the water supply portion of the report and Joe Skupien was responsible for preparing the drainage portion of the report, storm drainage portion of the report.

Q Did you review their work?

A Yes.

Q And data which underlay their conclusions?

A Yes.

Q And you're familiar with their work?

A In general, yes.

Q Let's look at the report if we might, Mr. McDonald, and starting first with a letter of February 23, 1979, which you signed, which was also signed by Mr. Fletcher (phonetic) addressed to Mr. Brunelli. You make reference to a final report.

A Yes.

Q Were there in fact other reports?

A There was a -- one draft that was submitted to Mr. Brunelli for his review.

Q Now, are you familiar with that draft?

A Yes.

Q Did you in fact prepare it?

A Yes.

Q May I have a copy of that?

A I don't have it -- a copy of the draft with me.

Q Could you see to it that I get a copy?

A Yes.

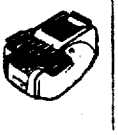
Q Are you in a position now to advise whether there were changes in the preliminary draft and the final report?

A Yes.

Q Do you know the nature of the changes?

A The changes primarily were in the sewerage portion of the report.

Q And what were the specifics of the changes?



A We -- let's see. The primary changes -- the only change that I'm really familiar with that we made in the report is in the treatment of establishing the effluent parameters for the treatment plant. We made in the original draft, we made specific reference to the anti-degradation policy of the State. In this report, we have not made specific reference to that policy because we have not received any final guidance from the State DEP on the particulars of that policy.

Q What preliminary guidance had you received prior to preparation of your preliminary report?

A We contacted by telephone Russell Nerlick - he's base manager at New Jersey Department of Environmental Protection - to get his advice as to how we should proceed in preparation of the report. He advised us that initially --

Q Could I interrupt you. Were you the one that spoke with Mr. Nerlick?

A Yes.

Q I'm sorry for interrupting you. Go ahead.

A And I lost my train of thought.

Q You started to say, "He advised us".

A Yes, we asked him for preliminary guidance for getting started on the report. He advised us what we should. An initial step would be to undertake some stream sampling of the Hockhockson Brook, because of our

primary consideration in using it as the discharge point for the treatment plant. He advised us of the parameters that we should sample for and he also advised us that we should sample the stream one time during which period there should have been no antecedent precipitation within the recent past.

Q When you say "recent past", are you talking about 24 hours, 48 hours?

A I forget exactly what he specified. When we settled, there were several weeks of dry weather before we sampled.

Q Now, you indicated that there was a change and it had to do with the guidelines that were suggested by DEP and more particularly by Mr. Nerlick. What input did Mr. Brunelli have with reference to those changes in your report?

A None.

Q No input?

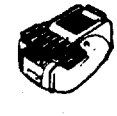
A No.

Q And you'll gather together a copy of that report and send it to Mr. Frizell for subsequent delivery to me?

A Yes.

MR. FRIZELL: I believe I have it. I think I've seen it.

MR. O'HAGAN: Okay.



BY MR. O'HAGAN:

Q Now, going to the report, on page 2 you make a statement regarding the number of dwelling units that could be accommodated on the site. Did you, yourself, make any independent analysis as to the number of units that could be accommodated?

A No, this was based on the work completed by the plan consultant for Mr. Brunelli.

Q So you have no way of knowing whether the site will accommodate 1,363 or more or less?

A We based our engineering studies on a development -- development of this site up to 1,363 residential units. That was the basis for the conceptual engineering report.

Q And all of your cost figures, I would assume, were based upon a unit of that size -- a PUD of that size?

A That's right with the exception that in the report you'll notice on page -- on most of the tables, on table S-1 for instance, we were provided with two options by Mr. Brunelli involving a shifting of residential development and office building development. There were two planning schemes that we evaluated, but in the analysis that we provided within this document, we took the worst or the highest level of facilities that would be required, for instance in the sewerage portion of the report, option

one involved thirty-three hundred and twenty thousand gallons per day and option two involved treatment of 360,000 gallons a day. Our figures reflect the 360,000 gallons per day.

Q That's the unit that reduces the size of the office building or that's the option that reduces the size of the office building?

A Yes, that's correct.

Q Now, you indicate -- you've made an estimate on page 3 regarding the sewage flow and then you advise that the amount of the flow can be reduced if certain water-saving devices are utilized.

A Uh-huh.

Q Have you made any study as to the cost of these devices?

A No.

Q Are you able to advise us as to the nature of the devices?

A Well, they -- they're fairly -- becoming more common all the time. The water-saving shower heads - most people are familiar with now - restrict the flow coming from the shower and therefore decrease the amount of water used. Toilet dams have been cited by the EPA as a technique to decrease the amount of water used in each flush. These two water saving devices have been employed

in the past to decrease the consumption amount of water and subsequent amount of sewage having to be treated.

Q Can you give an approximation as to their cost?

A No.

Q Now, on Table S-1 when speaking of the two options, I'm not sure that I completely understand it. For instance, you speak of single family, then you say 256 and that refers to population, I assume --

A Uh-huh.

Q -- How many single family units you were contemplating?

A (No verbal response).

Q And I'd ask you the same question regarding the condominiums, the town houses and the senior citizen residences.

A Those numbers are my work sheet numbers. The precise number, the number of units, we're talking about, I have in the margin in my margins, the notes, pencil notes, as to the number of persons per unit that we used in developing the population.

Q And what is that?

A For single family homes, four persons per unit.

Q With reference to condominium apartments?

A Three persons per unit.

Q And understanding that no one advised you with any precision as to the size of any of these -- strike that.

No one advised you in any respect as to the size of those proposed units?

A Not to my recollection.

Q Then it's clear to ascertain the number of units, you just divide, in the case of single family, four into 256?

A That's right.

Q Okay. Now, on your report again referring to Table 2, you speak of sewage flow allowance?

A Table 2 or 1?

Q I'm sorry, S-1 with reference to single family, you say 90 gallons/per capita per day?

A Yes.

Q Per each person per day?

A That's correct.

Q How did you arrive at the calculation that an occupant of a single family home would use more of the sewage facilities than an occupant of a condominium?

A General experience is that in a single family home, you're more likely to have more bathrooms which can lead to generation of more waste water, more extensive laundry facilities. You have wives who -- a higher percentage of

Q How did you arrive at those figures?

A Those are based on our experience. In establishing estimates of populations for dwelling units, those are standard numbers which I've used in the past to get a -- as accurate an estimate of flow as possible.

Q Now, I take it that you didn't make any study as tothe size of the individual units?

A No.

Q Would that have some bearing upon the number of persons who could occupy the units?

A It may and it may not. In Colts Neck, you have mostly at the present time single family housing and the number of persons per unit throughout the town is 3.9, I believe. And those dwelling units range, I would imagine, from mostly three bedroom homes to five bedroom homes so that the four persons per unit per single family home is a fairly reliable number to use and a fairly standard number to use with reference to the studies.

Q With reference to the town house, how many did you allocate?

A Three and a half.

Q Three and a half?

A Yes.

Q And the senior citizens?

A Two persons per unit.

wives staying home with children of school age in these units and it all -- those factors generally lead to assigning single family homes a higher per capital flow allowance than you would a condominium or town house type residential unit.

Q And you're saying that the size of the unit would have no bearing whatsoever on any of those factors that you mentioned?

A The size of the -- I don't understand the question.

Q Maybe you didn't hear it because of the airplane going over. Is it your testimony that the size of the particular unit, condominium, town house, whatever, would have no bearing on any of the factors that you previously mentioned in assigning the higher gallonage per capita per day for the single family dwellings?

A Provided they had the same sanitary facilities, laundry facilities and facilities that would generate a waste water flow and maintain that same lifestyle.

Q If that were the case, then the assumptions regarding the condominiums and town houses and senior citizens would have to be increased?

A I don't follow that question.

Q If the occupants of those units maintained the same lifestyle and had the same facilities as the single -- as the occupants of the single family dwellings, then the

estimates as to the sewage flow allowances would have to be increased for the other three?

A Not as a matter of general experience.

Q It hasn't?

A No.

Q Now, turning next to page 5, you state Hockhockson Brook discharges to the Swimming River -- down stream of the Swimming River Reservoir; therefore, treated sanitary sewage effluent from the PUD complex cannot adversely -- cannot adversely impact the water quality of the reservoir. Then again on page 8 when speaking of Slope Brook, in referring to Slope Brook you state: "However like most other streams in the municipality, it is in the Swimming River Reservoir drainage basin and is not considered a viable discharge basin for environmental impact reasons."

Now, do I understand you to say that it's important to channel or direct the sewer effluent away from the reservoir?

A If you have an option, an available option, that is generally desirable.

Q In what way?

A There is always the possibility of plant upsets. In the event of such an occurrence, you would always want your -- you would generally want your discharge to be

downstream of a potable water supply.

Q When you speak of "Plant upsets", what do you mean?

A It can range -- it can be for a variety -- you can have a plant upset for a variety of reasons. Power failures could possibly lead to an upset unless standby generation facilities are provided for that contingency. You may have an upset of the biological process. There are a variety of causes.

Q I'm interested in finding what the causes would be. You've said power failure, upset in the treatment process and what else?

A Malfunctioning of machinery within the treatment process would lead to a plant upset.

Q What else?

A Discharge of toxic load.

Q How would that happen.

A Generally that occurs when you have an industry in your service area. That's not the case here. You won't have any industries so the -- that contingency is effectively eliminated.

Q What else then?

A (No response).

Q Is human error something to be considered?

A Certainly, yes.

Q Is there any others?

A Well --

Q I guess gramatically you should say are there any others?

A Those are the major ones.

Q Have you made any studies -- strike that.

Are you thinking of others?

A Yes, I'm trying to think of other possible causes of plant upsets. Those are the major ones.

Q When you say "major", I'm understanding you to say that there are various other reasons that could go to and involve a plant upset; is that correct?

A Yes.

Q Now, would I be correct in understanding that you've made no studies as to the probability of any of those events occurring?

A No, we've made no probability studies.

Q Nor would I understand you to say then that you wouldn't recommend placement of a sewer treatment plant such as that which is proposed in this study in the drainage basin of the Swimming River Reservoir?

A If you have the available option, which this site has, it's my judgment that it would be preferable to discharge to Hockhockson Brook as opposed to Slope Brook and with respect to probability studies, in terms of plant

upset, that's not a procedure that has been employed or is required by DEP in review and approval of -- of waste water treatment systems.

Q Are you aware of any other -- strike that.

Are you aware of any sewer package plans first that discharge ultimately into a reservoir?

A Yes.

Q Where is that?

A There is one in Jefferson Township in New Jersey.

Q What county is that in?

A Morris County.

Q Morris County?

A Yes.

Q What reservoir are we speaking of there?

A The Jersey City Reservoir.

Q What distance separates, if you know, the plant from the reservoir?

A Pardon me?

Q What distance separates the plant from the area where the reservoir is?

A I can't give you precise distance. It's considerably further than the Brunelli Plant from the Swimming River Reservoir, which is roughly a mile.

Q Well, would it be considerably further than five to six miles from the reservoir itself?

A Yes.

Q Would it be considerably further than ten miles from the reservoir?

A I'm not sure of that, no.

Q Do you know the size of the package -- is that the -- is it a package sewer plant?

A Yes.

Q Do you know the size of the plant?

A No.

Q Do you know how many units it handles? When I say "units", I mean dwelling units or the equivalent?

A Not a precise number, no.

Q Can you give us an approximation?

A How approximate?

Q I gather you don't know?

A No.

Q If that's the case, it's better if you said you didn't know.

A I'm not sure.

Q I don't want you to feel I'm trying to trap you. I'm trying to find out information.

A Yes.

Q Now, have you made any studies to determine the -- strike that.

I believe you said it was the Jersey City

Reservoir; is that correct?

A That's correct.

Q Have you or your firm made any studies to determine the effect upon the water this discharge of effluent into the Jersey City Reservoir has had with this particular package plant?

A No.

Q Would I be correct in understanding that your firm has made no studies as to the effect of a -- of the discharge of effluent into the Swimming River Reservoir at any location?

A That's true.

Q Now, in your judgment, is it reasonable for a municipality to adopt their Zoning Ordinance in such a manner as to discourage placement of package sewer plants that would drain into the Swimming River Reservoir?

MR. FRIZELL: I think he should be asked whether he's formed a judgment or not initially. We're back into a situation where you're asking judment or opinion from the expert retained by the other party and I think his testimony should be limited to opinions which were solicited by his client. But if you have -- if you've formed a judgment or in other words, if he's formed a judgment,

it's one question. If he has never formed a judgment in that regard, if you're going to ask him to form one, I don't think that's correct.

MR. O'HAGAN: I'll rephrase the question.

BY MR. O'HAGAN:

Q I've already indicated to you, Mr. McDonald, that on pages 5 and 8, you've made a statement that the subject site is advantageous in that the sewer effluent will not flow into the Swimming River Reservoir?

A That's correct.

Q And in your mind, that is a factor in recommending placement of the sewer package plant in its proposed location; is that correct?

A That's right.

Q Now, do you feel that it's reasonable for a municipality to adopt their Zoning Ordinances and Master Plan and other developmental regulations in such a manner as to discourage placement of sewer package plants that will ultimately discharge into the Swimming River Reservoir?

MR. FRIZELL: I'm going to object. He can answer if he feels he can answer. He's an engineer and a sewage engineer at that. I

don't think he has any knowledge about the adoption of Zoning Ordinances or what they mean or what they do.

MR. O'HAGAN: I'll rephrase the question.

BY MR. O'HAGAN:

Q You have some familiarity with the -- you have a great deal of familiarity, I gather from your testimony, as to the dangers of placement of a package sewer plant in wuch a manner as to drain ultimately into a reservoir; is that correct?

A There are disadvantages --

Q Yes.

A -- To such placement.

Q Do I understand you to say that based upon that experience and speaking solely from an engineering point of view, that it's reasonable to zone and plan in such a manner as to discourage placement of sewage package plants, in such a manner as to cause them to drain into a reservoir?

A I'm really not prepared to answer that because it depends on -- it could depend on a whole host of -- a whole host of matters, any number of things.

Q For instance --

MR. FRIZELL: Wait a minute, I think

he's declined to answer that question. I didn't interrupt but I think at this point I will because he's declined to answer that question. I'm going to direct him not to answer those questions that deal with what is a reasonable Zoning Ordinance and what is not. I don't think it's within this man's field of expertise. I think it would be misleading to the record to pursue it. I understand that to be essentially the basis of his rejection -- or refusal in not having answered the question.

MR. O'HAGAN: I thought he had.

MR. FRIZELL: I think if you give him specific questions which deal with the engineering aspect of the case or deal with his field of expertise rather than questions that deal with these other principles, then we can deal with the question on a one to one basis.

BY MR. O'HAGAN:

Q I thought the question was based upon or bottomed upon your engineering experience and --

A Here we have a situation where we have a clear choice. We have a stream that discharges to a reservoir and is in relatively close proximity to that reservoir, and we have a receiving stream that discharges downstream

of that reservoir so we have a choice of two options. In my judgment, the preferable option to consider is locating that plant to discharge downstream of the reservoir.

Q Now, you have indicated that in some instances, a package plant could be located and the effluent could discharge into the reservoir. Now, from an engineering basis, can you advise us as to the instances when that could reasonably occur.

A It's really a case-by-case basis. You have to analyze it on a case-by-case basis.

Q What facts would enter into your judgment from an engineering point of view?

A The uses of the reservoir, the size of the reservoir, the hydrology of the watershed, the distance of the plant from the watershed, the characteristics of the stream between the plant and the reservoir, whether or not there was treatment of the water in the reservoir, if it was used as a potable water supply.

Q Would treatment be required?

A Not necessarily.

Q Now, you've made non -- you have not made any analysis of any of those factors that you've listed as far as Colts Neck Township is concerned in locations other than the subject location; is that correct?

A That's right because we had the choice.

Q Okay. Now, on page 5 you indicate that the stream sampling data was obtained to establish a base line condition for determining the feasibility of sewage treatment and disposal to Hockhockson Brook. Would you advise us firstly what you mean when you say the words "base line condition"?

A Base line is to establish what the water quality in the stream is without the treatment plant in this case being in operation, what are the conditions of the stream at this point in time.

Q Why is that done; why is that necessary?

A It's necessary to evaluate what level of treatment will possibly be required for discharge to that stream.

Q Why do you have to make that determination?

A To preliminarily design the treatment system.

Q What is it that makes it necessary to treat the water in -- treat the sewage in such a manner so that it can accommodate itself to the stream, the water in the stream?

A I don't understand the question.

Q You have indicated that the purpose of taking the stream sampling data was to determine what level of treatment was necessary to the sewage and the sewage effluent?

A It was used as a guide to determine that.

Q Why do you have to make a determination as to what level of treatment is required?

MR. FRIZELL: Let me interject. You're asking him why a study of that kind is done and I'm not sure that that's an appropriate question. Other than the fact that it is done, which was testified to --

MR. O'HAGAN: Pardon me.

MR. FRIZELL: -- He testified that it's done and it's the first step. I'm not sure why is an appropriate question. At least I don't understand it.

THE WITNESS: That's my question too.

MR. FRIZELL: There could be a whole host of reasons why things could be done. I don't want to speculate.

THE WITNESS: Could you rephrase the question?

MR. O'HAGEN: Okay.

BY MR. O'HAGAN:

Q You have indicated that you took data from the stream and you did it because you wanted to reach conclusions, tentative conclusions, as to the level of treatment that was required on the sewer effluent so as

the stream could accommodate the sewer effluent?

A Yes.

Q Why is it necessary to make a determination as to whether the stream can accommodate the sewer effluent?

A The answer seems obvious to me.

Q Well, if it's obvious, why don't you just answer the obvious question -- the obvious answer?

A It seems like your question answers your question. You establish the base line condition in the stream to determine what level of treatment will be required to be obtained in your waste water treatment system. From that, once you make that determination, based on the base line conditions in the stream then you can proceed with a preliminary design of your treatment facility. It's that logical progression of steps in developing the preliminary design. You establish what the quality of the water is at the present time and based on that data, you can establish your effluent limitations. Based on those effluent limitations, you can then proceed with preliminary designing of the plant. So that's the way the process proceeds.

Q Are you saying that you have to make the determination to the level of treatment required so as not to detrimentally affect the stream?

A That's one criteria, yes.

Q What other criterias are there?

A You have to take into account upstream characteristics in the stream, what points are -- what point source discharges there are upstream of your proposed facilities.

Q Anything else?

A You try to -- you establish flows in the streams, characteristics of flow in the stream.

Q Now, with reference to upstream flows and characteristics, why is that important?

A Well, if you have, say, a point source discharge upstream of your treatment plant, that should be taken into consideration in the establishment of effluent parameters for the downstream plant and then in the preliminary design of the treatment facility.

Q If there were an existing upstream plant, sewer package plant, that was discharging into the waters, would that mean you would have to take any special precautions in the design of the plant at the subject location?

A Not necessarily.

Q How would you take that into consideration in developing your guidelines or your base line, as you call it?

A If you have a point source upstream of your plant --

Q Could I interrupt? When you say "point source", I'm understanding you to say that's another sewer package plant?

A Yes.

Q Go ahead.

A If you have another treatment plant upstream of your proposed discharge point, that has to be taken into consideration in the analysis that's undertaken in determining the effluent limitations in the plant under study or the proposed plant under study.

Q Now, in fact is there a -- an additional package sewer plant upstream of this location?

A Yes, there is.

Q Where is that?

A The Earle Naval Ammunition Depot.

Q Do you know the age of that plant?

A No.

Q Do you know the level of treatment?

A Yes, it's secondary treatment.

Q Do you know whether that was in place prior to the development of guide lines by the DEP or the EPA, whichever has jurisdiction?

A It's operating under a MPDS permit.

Q What does that mean?

A A Federal permit that allows it to discharge in this

case into Hockhockson Brook so that the design of the plant has been reviewed by the EPA and the DEP in establishing permit conditions.

Q Now, the fact that they have secondary treatment doesn't mean automatically that you would be allowed secondary treatment at this location; does it?

A That's true.

Q You might have more stringent requirements to adhere to?

A That's true.

Q And you couldn't form a conclusion in any manner as to the level of treatment required merely because an upstream sewer package plant exists?

A You have to take it into consideration in establishing guide lines for the downstream plant. You can't ignore the fact that that plant is up there.

Q Now, how is this sampling done?

A This was a grab sample done at the site.

Q What does that mean?

A Basically, what we did is we went on the site on one day and took two samples in the stream and took them back to the lab and analyzed them for the 13 parameters that we note in the report.

Q How large were the quantities of water that you took?

A They were -- I'm not certain on the exact quantity.

Q Was it a --

A It was probably two quarts.

Q Approximately two quarts?

A Approximately two quarts.

Q Now, you indicated that you did it on one day?

A Yes.

Q In your view, is a one-day sample sufficient in order to gauge the characteristics and chemical properties of a stream?

A We base the one-day --

Q I'm not sure my question was clear.

A Okay.

Q Is a one-day sample sufficient in order for you to properly gauge the characteristics of the stream and the chemical properties of the stream?

A It provides a starting point. It's not sufficient enough to base a final design on.

Q Now, am I correct in understanding that you submitted -- oh, strike that.

Now, you say that it's not sufficient to base a final decision upon and that additional studies would be required --

A That's correct.

Q -- And they may lead you to conclude that more stringent requirements would have to be adhered to; is that correct?

A Not necessarily. The findings of the additional studies may demonstrate that a lower level of treatment would be required.

Q Now, in your assumptions as to the level of treatment, am I correct in understanding that you relied upon solely the tests made on the two quarts of water that you extracted from the Hockhockson Brook?

A Not solely.

Q Pardon me?

A Not solely, no.

Q What else did you rely upon?

A We relied on the up -- the conditions of the upstream plant, the permanent conditions that the upstream plant has and the base flow conditions in the stream.

Q Did you analyze any data that NAD Earle had compiled?

A Yes.

Q Who did you speak with at Earle?

A NJDEP.

Q That's reduced to writing?

A This was over the telephone.

Q By telephone?

A Yes.

Q Now, is that reduced to writing, the data related to you from Earle?

A I have telephone logs.

Q Who did you speak with in the DEP pertaining to the data?

A I don't have it here.

Q Would that be Mr. Nerlick?

A No, it was not Mr. Nerlick.

Q Was it a man or woman that you spoke with?

A It was a man.

Q What level job did he have?

A I'm not sure.

Q And you've never seen any writing to confirm your telephone discussions?

A No.

Q Now, are you familiar enough with the contents of that telephone discussion to advise us as to the level of treatments adhered to by Earle?

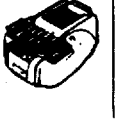
A Yes.

Q Mr. McDonald, you're referring to notes?

A Yes.

Q What are they?

A These are notes that I reduced from the telephone log. This was some of the information on my telephone



log.

Q May we have that marked for identification?

A Sure.

MR. O'HAGAN: I guess you should mark this D-1 for identification.

(A one-page document is marked D-1 for identification.)

BY MR. O'HAGAN:

Q I would assume that you need this in front of you to testify?

A I don't have it comitted to memory, no.

Q Please tell us what you learned from having your discussions with the State.

A Okay.

Q If you don't mind, I'd like to look over your -- maybe I'll make the copy first. Off the record.

(Whereupon there is a recess.)

MR. O'HAGAN: Now, would you repeat the last question, please.

(Whereupon reporter reads back as follows:

"Question: Please tell us what you learned from having your discussions with the State.")

THE WITNESS: The first thing I

inquired about was that the data that I received from the State is all Federal permit data that Earle Naval Reservation is required to submit to the State quarterly. So the first items of information I inquired about was the permit conditions that they're required to meet at the Earle Treatment Plant and those are the first group of numbers you see at the top of the page. The design flow --

BY MR. O'HAGAN:

Q When you say --

A Design capacity --

Q That means design flow?

A Yes, if design flow or design capacity --

Q Okay.

A -- Let's say of the plant is 370,000 gallons per day.

Q How does that compare with the size of the plant you've designed?

A Approximately the same size. The BOD --

Q What's that mean?

A Biological oxygen demand, that's five day biological oxygen demand --

Q All right.

A -- Is 45 milligrams per liter on a seven day

average basis or 95% removal. Suspended solids is also 45 milligrams per liter. These are effluent parameters. This is what they're allowed to discharge from the Earle Treatment Plant.

Q Right.

A 45 milligrams per liter on a seven day average or 85% removal and they have PH limitation of between six and nine. They also have a parameter for grease and oil but I didn't include that on this note sheet.

Q Is there any reason for that?

A In domestic plants, that parameter is usually not given a numerical value on the permit. Evidently, at Earle they have some maintenance operations or something where they evidently have a lot of grease and oil.

Q Do you know the distance separating the Earle plant from the proposed plant?

A I don't know the precise distance.

Q Can you approximate it?

A It's less than a mile.

Q You're not in a position to say that the water conditions of the stream are the same at the subject location as they are at the Earle plant?

A No.

Q So that if I understand you then, in developing your data for level of treatment you relied upon your --

the two quarts of water that you had taken and the data that was developed based upon the experience at Earle?

A Yes, those two factors were involved.

Q Anything else?

A Those were the two primary -- those were the two primary pieces of information that we pieced together to establish the effluent parameters here.

Q Okay. So then conclusions regarding a level of treatment required were based upon the water that you extracted from the stream and the experience at Earle?

A That's right.

Q Now, did you take a sample of the water upstream of the Earle package plant?

A No.

Q Aside from the sam -- strike that.

Where was the sample -- what was the location from which you took the sample that you referred to before?

A It was in Hockhockson Brook at the approximate point of discharge that we are contemplating --

Q Okay.

A -- That it was done.

Q Now, am I understanding you to say that all of your cost figures that you referred to in the report concerning the capital cost to construct the sewer package plant and the operational cost were based upon the samples

that you had taken and the data taken from Earle's experience?

A Could you rephrase that?

Q Yes, when you made estimates concerning the cost of treatment and the cost of operation and the capital cost to construct the plant, did you base them upon the level of treatment which you felt was required at this particular location?

A That's correct.

Q If the requirements as to the level of treatment were more stringent, would I be correct in understanding that the cost would increase?

A That's likely, yes, that they would increase.

Q Now, did you submit the report that we referred to prior to this at the early stages of your Deposition to the Department of Environmental Protection?

A No, we did not.

Q Did you submit the data and the conclusions that you had reached which you referred to in the report to the Department of Environmental Protection?

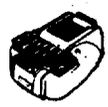
A No, we did not.

Q You had some communications?

A No, wait.

Q Okay.

A We did submit some of the data to the New Jersey



DEP.

Q Was there some data that was referred to in the report with reference to level of treatment and cost of treatment not submitted to DEP?

A This report wasn't submitted to DEP, no.

Q But the underlying basis and the level of treatment that you've indicated was necessary and the cost figures for operation of the plant?

A No, that was not submitted to DEP.

Q What in fact was submitted?

A We submitted to DEP the stream sampling data that we acquired and asked them to establish effluent limitations for the treatment plant.

Q Okay. Did you receive a response?

A Yes, we did.

Q By the way, did you submit your data to the Department in writing?

A Yes.

Q Do you have a copy of that writing with you today?

A No.

Q Would you mail me a copy of that letter?

A Yes.

THE WITNESS: That's okay?

MR. FRIZELL: Right.

BY MR. O'HAGAN:

Q Did the DEP approve your preliminary investigations?

A The response we got from DEP was that additional sampling would be required to establish a final limitation by the DEP.

Q Now, I show you a letter dated March 27, 1979, the original of which would have appeared to have been directed to yourself and which is signed by Russell E. Nerlick, Manager of the Raritan River I. C. S. Basins.

A Yes.

Q Have you seen that letter before?

A Yes, that letter is in error to a certain extent.

Q Yes, but we'll get to that.

A Okay.

MR. O'HAGAN: May we have this marked for identification.

(A document is marked D-2 for identification.)

BY MR. O'HAGAN:

Q Do you have a copy of the letter with you, Mr. McDonald?

A Yes, I have a copy of the first page. I don't have a copy of the second page.

Q You have now a copy of the letter in front

of you; do you not?

A Yes.

Q Now, you started to say that the letter was in error?

A Yes.

Q In what respect was it in error?

A In its first sentence, it says, "The Division of Water Resources has reviewed" --

Q Now, the first sentence --

A On the letter.

Q Okay.

A "The Division of Water Resources has reviewed the conceptual report submitted by Ellson T. Killam Associates on the proposed Brunelli Corporation Sewerage Treatment Plant, which would discharge into Hockhockson Brook." We did not submit the report to Division of Water Resources. That part of the letter is in error.

Q Is that the sole portion that's in error?

A Let me read the whole letter. There are some things in here that I couldn't say for a fact whether it's correct or in error.

Q Am I understanding you to say that you're not in a position to disprove the assertions made by Mr. Nerlick in his letter?

MR. FRIZELL: Excuse me. I don't

know if that's what he said.

BY MR. O'HAGAN:

Q Would you like the question repeated, Mr. McDonald?

A Please.

Q Am I understanding you to say that you're not in a position to refute the balance of the assertions made by Mr. Nerlick in his letter of March 27, 1978 that has been marked D-2 for identification?

A There are some statements of fact that he mentions here that I'm not able to refute but I don't have the data in front of me to determine if it is in fact correct.

Q What particular paragraphs do you refer to?

A One that sticks out is whether or not the stream is a trout maintenance stream. I know for a fact that it's an FW3 class stream.

Q Now, is FW3 something different from a trout maintenance stream?

A No, it can be classified FW3 and be classified as a trout maintenance stream or it can be FW3 and not be classified as a trout maintenance stream. I'm not disputing what he's saying here, but I'm not in a position to say whether or not he's correct.

Q Now, Mr. Nerlick indicates on the bottom of page 1, there is insufficient data for this stream at

your location.

A That's correct.

Q Do you agree with that assertion?

A If that's what the Division of Water Resources is telling us, I would have to agree.

Q And you agree with the accuracy of that assertion?

A That's what they're telling us. They give us data. It's not a matter of agreeing or not agreeing.

Q You're not quarelling with their statement that in order to make a judgment of the level of treatment required, more data should be submitted?

A No.

Q And they indicate that further sampling must be done in order to provide an adequate data base for determining existing water quality?

A That's correct.

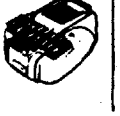
Q Do you quarrel with that?

A That's what they're telling us.

Q Do you quarrel with the accuracy of that statement as to the need for additional sampling?

A Generally, when you design a treatment plant, you do it on more than one grab sample.

Q Would in fact the data that was necessary be based upon samples taken from a period as long as a



year?

A I can't answer that. That would be a judgment on the part of the Department. I just can't answer that question.

Q Have you ever submitted data to the DEP prior to this particular application seeking approval of the level of treatment proposed?

A No.

Q Prior to your submission of this data to the Department, was it reviewed by the superiors in your firm?

A I believe so, yes.

Q Who reviewed it?

A I believe Ken Sipler (phonetic).

Q What job does he have?

A He's Vice-President.

Q Did Mr. Fletcher review it?

A No.

Q Now, am I understanding you to say that you are the member of your firm who would have the most familiarity with the sanitary aspects of this proposed PUD?

A That's correct.

Q And do I understand you to say that you are -- strike that.

Do I understand you to say that no other member of the firm was involved with the field work that went into the recommendations that you finally made as outlined in the report that we referred to before?

A Involved in the field work?

Q Yes.

A What do you classify as "field work"?

Q What field work in fact was conducted?

A We collected the samples. I was involved in collecting the samples.

Q Were you the senior man?

A Preparing the samples and taking them back to the lab, I was solely involved in that.

Q With reference to the calculations that were made concerning the level of treatment required --

A Uh-huh.

Q -- Were you the sole member of your firm involved in those calculations?

A No.

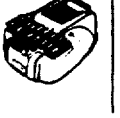
Q Who else was involved?

A Ken Sipler.

Q What role did he play?

A We reviewed the stream data and established the effluent criteria.

Q Who made the calculations?



A I prepared the calculations and we reviewed the final.

Q He reviewed your work?

A He reviewed the final limitations.

Q Did he change any of the determinations that you had arrived at?

A I believe he did, yes.

Q Do you recall how in particular?

A No, not in particular.

Q Now, again with reference to Mr. Nerlick's letter, I'm referring to page 2, now I'm understanding you to say that you submitted to him data with reference to the level of treatment that you had proposed to --

A Could you repeat that? Start again?

Q Yes. I'm understanding that in the letter of communication that you directed to the DEP which ultimately came to Mr. Nerlick's attention, you submitted data regarding the level of treatment that you felt was required at this particular location for the sewer --

A No.

Q -- Package plant? You did not?

A We submitted to Russ Nerlick the stream sample data that we acquired. We sent that. That was the only data we sent to Russ Nerlick.

Q Has he reviewed as yet the determinations that

you had made as to the level of treatment required?

A Evidently he has by this -- receipt of this letter, yes, he has.

Q He has reviewed it?

A I would assume so. He states here that he reviewed the water --

Q He indicated --

A That the Division of Water Resources reviewed the report.

Q When he made reference to the report, what report is he referring to?

A The conceptual report.

Q That would be the document that was delivered to me by Mr. Frizell --

MR. FRIZELL: Objection. I don't know how Mr. McDonald can testify as to what Mr. Nerlick meant. Mr. Nerlick wrote a letter. I think we can all read it just as well as Mr. McDonald.

BY MR. O'HAGAN:

Q Mr. McDonald, are you familiar -- do you know whether your firm submitted to Mr. Nerlick and/or the DEP this conceptual engineering report that I referred to in the beginning stage of the Deposition?

A Our firm didn't submit a copy of the report.

Q To the DEP?

A No.

Q You don't know whether he has reviewed it at this stage or not?

A I don't know what report he's talking about. He didn't review a report submitted by us.

Q Now, Mr. Nerlick indicates that: "The company" and I guess he would mean the Applicant - "May have to provide a very high level of waste water treatment." Do you understand what he means by that clause?

A Not particularly, no.

Q Would you understand it to be higher than the level of treatment that you have submitted in this conceptual engineering report?

A I wouldn't be able to state that, no.

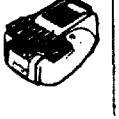
Q Have you had discussions with Mr. Nerlick subsequent to your receipt of his letter dated March 27?

A No.

Q Do you know whether any member of your firm has had discussions with him?

A No, I don't know if any of them have.

Q Now, we were speaking of the time period within which the data would have to be accumulated. Are you in a position to advise as to the length of time that would be required in order to ascertain adequate data?



A No, that's established by -- that would be established by DEP.

Q Now, in your mind, is it important to obtain the data in the four seasons of the year?

A It's not necessary to.

Q Do you feel that the conditions in the stream might differ in times of high water as opposed to times of low water?

A I would think that would probably be the case.

Q How would they differ?

A Well, during -- during periods of low water, low stream flow, the effects of Earle, the Earle Naval Reservation Plant, would have a more profound effect on the stream than during high water flow days.

Q During periods of low water -- strike that.

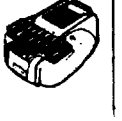
In streams that have always had a low water level and assuming that there is an existing -- strike that.

In streams that would have a water level equivalent to Hockhockson Brook at its low water time, would I be correct in understanding that a greater degree of treatment would be required?

A Possibly not.

Q Pardon me?

A Possibly, possibly not. It would depend on the



characteristics of the stream and the policy under which DEP would be establishing the effluent limitations.

Q Well, assume that the stream is an FW3 trout maintenance stream --

A Uh-huh.

Q -- Would it be accurate to say in that instance that a higher degree of treatment would be required if the level in the stream was low?

A Higher than what?

Q Than the treatment that you've described in your conceptual engineering study.

A I believe it probably would depend on what policy New Jersey DEP was using to establish the effluent limitations in Hockhockson Brook.

Q What policies do you make reference to?

A Its anti-degradation policy, it's possible that a lower level of treatment would be adequate.

Q Okay. Now, the DEP is indicating to you in this letter of Mr. Nerlick's that a high level of waste water treatment may be necessary?

A Uh-huh.

Q Do you understand that?

A I understand, yes.

Q Assume that a high level of waste water treatment would be necessary. Do you feel that a higher

level of treatment other than what you have described in your report - and I'm making note particularly of Table S-2 - would be required?

A Could you rephrase that one more time?

MR. O'HAGAN: Would you repeat that please?

(Whereupon reporter reads back pending question.)

THE WITNESS: The question, I don't -- I really don't understand the question.

BY Mr. o'HAGAN:

Q What don't you understand about it?

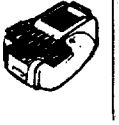
A The first sentence, you're talking about a high level of treatment then a higher level of treatment, and I don't --

Q Let's back track now. The DEP - and I'm speaking of Mr. Nerlick's letter dated March 27, 1979 --

A Uh-huh.

Q -- Makes reference to a high level of waste water treatment.

MR. FRIZELL: Just for the record, I'm going to object to any characterization of that letter as being any kind of official statement of the DEP. It just has to speak



for what it is. Mr. Nerlick is employed by the DEP, he wrote the letter and the letter speaks for itself.

BY MR. O'HAGAN:

Q Do you understand that Mr. Nerlick's job function would be to approve or disprove of proposed levels of treatment for sewer package plants to be constructed?

A I don't know that that decision rests in him, no.

Q Do you know what his job function is with reference to --

A He's base manager of public water facilities element and I'm not certain whether his job response -- one of his job responsibilities is approving and disproving of conceptual engineering designs. Of course, I'm not certain.

Q Did you write to Mr. Nerlick?

A Yes.

Q Why did you write to him?

A To transmit to him the stream sampling data that we obtained.

Q For what purpose?

A Requesting effluent determination from the DEP.

Q Did you feel he was the proper party to refer to?

A Yes.

Q Was that based on prior experience?

A He's the base manager of the Raritan Basin.

Q Mr. Nerlick, in his letter of March, makes reference to providing a very high level of waste water treatment. Do you understand what he means by that?

A Not precisely, no.

Q Now, do you feel that the level of treatment that would be required would be higher than you proposed and I'm making reference to your report and more particularly Table S-2?

A No, I don't.

Q You don't think that's so?

A No.

Q Okay. Now, are you in a position -- strike that.

Getting back to the level of the stream, are you saying that the treatment requirements and the level of treatment in a stream classified as FW3 trout maintenance would not be influenced by the level of water in the stream?

A You have to consider all factors involved in the stream at the point of discharge. In our particular case, you have an existing point source discharge area that has to be taken into consideration in establishing the effluent limitations for the plant. So you have to take that into consideration also and not just the factor that it's an

FW3 trout maintenance stream. And I'd like to point out that the FW3 classification stream is the lowest classification that DEP uses in classifying streams. FW1 is the highest class of stream, FW2 and FW3 is the lowest class of stream.

Q Could you discharge effluent that was purer than FW3 and have the DEP approve it?

MR. FRIZELL: Excuse me. Purer?

MR. O'HAGAN: Purer.

THE WITNESS: No, I don't think you phrased the question properly. Every FW3 stream is a class of stream. There may be hundreds or thousands in the State that are classified FW3. Each of those has different water quality characteristics.

BY MR. O'HAGAN:

Q Doesn't the classification of FW3 have anything to do with the purity. I understood you to say FW1 was purer than 3?

A No, it's a higher class of stream.

Q When you say "higher", does that have anything to do with the purity?

A Of the stream water quality?

Q Yes.

A Not necessarity.

Q What does it have to do with?

A It has to do with the designated water use.

Q What could you use FW1 for?

A Potable water supply.

Q Drinking water?

A Yes.

Q You're saying that FW1 doesn't have to be purer than FW3?

A No, it doesn't necessarily have to be purer. It depends on the characteristics of the stream.

Q You're losing me on that one. I'm not understanding you.

A When you're talking about the purity of streams, you're talking about conditions in the streams at this point in time and an FW1 stream, although it's the highest class of stream, has, say, a certain quality of water in it. You may find an FW3 stream, which is a lower class, that has somewhat higher quality. FW3 classification has nothing to do with the purity of the water in the stream is what I'm saying. The classifications are based on the designated water uses of those streams.

Q The ultimate use of the water?

A That's correct.

Q Do you know what the -- what use the water in Hockhockson Brook is put to downstream of the subject

location?

A It's an FW3 stream and I would have to consult the State classification index to determine exactly what uses would be permitted in FW3.

Q So do I understand you to say that the conditions in the stream would not differ from season to season?

A I didn't say that.

Q What did you say?

A They possibly will differ from season to season.

Q How do they differ?

A Well, it really is dependent on -- it can vary with each stream. Seasonal variations in flow and water quality, it really can't -- it would be difficult to generalize.

Q On Table S-2 you spoke of effluent discharge limitations. For instance, you say BOD and you say less than 5.0 milligrams per liter. What does that mean?

A It means that we would be designing a plant whose effluent BOD, 5-fay BOD, would be less than 5 milligrams per liter.

Q Does that have anything to do with the absorption in the stream and the ability of the stream to absorb the effluent without adverse environmental impact?

A No.

Q What does it have to do with?

A We base that on the general guidance we obtain from the stream sampling we got. When we sampled the streams, we took a look at the parameters, the existing -- the existing quality of the stream and then based on that, we established these parameters.

Q Now, the parameters that you established --

A Uh-huh.

Q -- Are they for the ultimate aim of minimizing the environmental impact upon the stream?

A So as not to -- what we tried to do in establishing these parameters was to not increase BOD within the stream.

Q And the same thing would be so with the suspended solids and ammonia, nitrogen and all the way down the parameters that you mention or the eight, since you said it was non-visible for oil and grease?

A Could you rephrase that now that I've got the table in front of me?

MR. O'HAGAN: Off the record for a moment.

(Whereupon there is a discussion off the record.)

BY MR. O'HAGAN:

Q Now, Mr. McDonald, we've had an off-the-record discussion pertaining to what effect, if any, a low or a small stream flow would have upon your calculations and would have upon the effluent discharge limitations, and you made certain statements and you related it to the effluent being discharged from Earle. Would you advise us once again as to how you make your calculations bearing in mind those two considerations?

A Sure. You have two things happening that you have to consider during low flow condition. You have the natural flow in the stream and you have the discharge from Earle. Discharging -- the base flow in the stream is relatively pure and the Earle reservation discharge under permit conditions will tend to degrade that base flow in the stream so that the water quality that we see at the Brunelli site of the combined natural flow in the stream and the Earle Naval Reservation effluent discharge, we considered that factor in establishing these parameters on Table S-2.

Q Now, you took your sampling on what date?

A November 7th.

Q Are you in a position to advise us as to whether that was a period of high water or low water?

A No, I can't make that judgment.

Q Did I understand you to say off the record

that during periods of low water, the discharge from Earle would have a greater environmental impact than it would during periods of high water?

A It will have a greater impact on the water quality in Hockhockson Brook.

Q Now, during the periods of low water, is it necessary or would it be necessary in order to secure DEP approval for a higher degree of treatment, higher level of treatment, to be followed at the proposed plant than it would be if the water were higher water, if water flow were higher?

A Not necessarily. It depends on what policies and what bases they establish, the effluent limitations.

Q So then you're saying this is really a decision that's made by the DEP?

A That's correct.

Q And the effluent discharge limitations that you've set forth on Table S-2 may or may not be accepted by the DEP?

A We establish these to the best of our judgment --

Q Right.

A -- And in accordance with our experience with DEP's policy on discharges to streams.

MR. FRIZELL: Can we take a break? We've been going almost two hours.

MR. O'HAGAN: Did you finish that answer?

THE WITNESS: Yes, I finished that answer.

(Whereupon there is a recess.)

MR. O'HAGAN: Would you repeat the last question?

(Whereupon reporter reads back last question.)

BY MR. O'HAGAN:

Q I'm not so sure, Mr. McDonald, that you answered the question. You're not in a position to answer, you say, now as to whether the DEP will accept the effluent discharge limitations that you've recommended; isn't that correct?

A No, I can't interpret their policies for them.

Q If you just answer my question, which is that you're not in a position to advise us as to whether they accept it or they don't accept it?

MR. FRIZELL: You're asking for a judgment but in a sense of his certaintly?

MR. O'HAGAN: Yes.

THE WITNESS: I can't be certain they would be accepted by DEP.

BY MR. O'HAGAN:

Q And in fact -- strike that.

If in fact the DEP required a higher level of treatment would that affect the capital cost?

A Yes.

Q Would it?

A Yes.

Q Why?

A Well, you would have to go to more sophisticated methods of waste water treatment.

Q To your knowledge, has your firm designed a plant of the same size as that proposed by the Applicant?

A Same size.

Q Yes?

A Approximately the same size, yes.

Q Where is that located?

A Johnson & Johnson, I believe, has the capacity of about the same size as this one.

Q Is that in New Brunswick?

A No, I believe that's in Skillman.

Q When was that designed?

A Gee, I don't know. When I say that -- that we designed plants of the same size, we have to differentiate that from the same level of treatment. There was a package -- not a package plant but a plant down near Camden, the Levitt Company plant, that I believe is around the same

size, about half a million gallons per day, in that vicinity. We've designed other package plants in New Jersey.

Q You're not in a position to compare the level of treatment in those plants as against the level of treatment involved in the Brunelli tract?

A I haven't been involved in those, no.

Q Now, with reference to the level of water, would I be correct in understanding that if you took the sampling during a period of high water or high level of water --

A I don't -- okay. Go ahead.

Q -- That the data that you obtained would lead you to one conclusion as to the level of treatment required than if you took the sampling during a period of a low level of water?

A Well, first I can't state that we took it at a period of low level of water because -- let me repeat. I'm not sure whether we took the sample at a level of high water. I don't know what you mean by "high water" exactly. Could you give me an indication what you mean by high water?

Q Are there times of the year when the level of water in streams is commonly lower in this particular area?

A (No response).

Q For instance, aren't they lower in the summer months?

A As a general statement, they probably would be lower in the summer months.

Q And do you recall whether the fall of 1978 was a rainy season?

A I believe when we sampled, if I recall right, and I really can't say for certain, I'd rather just say that I don't believe there was a lot of rain in the fall of '78 but I'm not certain.

Q Well --

A That's why I really can't state for a fact that there was high water or low water.

Q I'm asking you to assume for the moment that it was not a low level of water. Would it be accurate to say that the data that you gathered together in your sampling would lead you to one conclusion regarding the level of treatment required than if you had taken the sampling during a period of low level of water such as in the summer months?

A I'm not prepared to say that we took it during the period of higher water.

Q I think perhaps the question wasn't clear. I'm asking you to make an assumption that you took it

during a period when the water was higher than during the summer months. Making that assumption, would it be accurate to say that the data that you gathered would differ from that that you would gather in the summer months when the level of water was lower?

A Let's strike out the seasons. Let's differentiate between high water and low water.

Q Fine.

A Now, rephrase your question one more time. I want to get away from the seasonal thing.

Q I am asking you to assume that the level of water was mid to high during the time that you took the sampling. Would the data that you gathered be different than if the level of water was low or at a low point?

A Probably, yes.

Q Would the conclusions that you reached concerning the treatment required differ as a consequence of the composition of the water taken during the high water level season?

A Not necessarily.

Q What factors would enter into your saying "not necessarily"?

A Well, the -- if the stream flow was lower at the point where we sampled, the water quality would likely be lower because you have less dilution of the Earle Naval

Reservation Plant.

Q Right.

A So that during low water conditions, it's likely that the water quality in that stream is of a lower quality than when we sampled it.

Q In that event, would the DEP in your experience require more stringent limitations as to the treatment that is required recognizing that the content of the water is less pure, so to speak, during those periods?

A I can only give you my interpretation of the anti-degradation policy where they base the effluent limitation on the quality of water during base flow conditions in the stream and during that low flow -- during those low flow conditions in the stream, water quality in Hockhockson Brook is probably of a lower quality than it was when we sampled.

Q Let's speak of it --

A If --

Q I'm sorry. Go ahead.

A -- If they establish the effluent parameters based on those criteria, which has been their experience in the past, it's likely that the effluent limitations for the Brunelli treatment plant would be greater than what we have in our report although I can't say that for certain.

Q Were there limitations as to the treatment

greater?

A If you follow strictly, by my interpretation of the State's anti-degradation policy of establishing the water quality, what they refer to as MA-7 CD-10 conditions --

Q What's that mean?

A That's the 10-year 7-day low flow, the lowest flow that will occur in the stream for 7 consecutive days during a 10 year period.

Q All right.

A During those conditions, the Earle discharge will be not diluted as greatly and the water quality in Hockhockson Brook will be lower so that if you base the anti-degradation policy standards, if you establish a standard developed in accordance with the anti-degradation policy guide lines, they could be higher.

Q What could be higher?

A The effluent limitations for the Brunelli plant.

Q And the level of treatment would be more stringent?

A It could be lower.

Q You've already advised us that you took the sampling during a period when it hadn't rained for two weeks. So we can assume then that the level of water was not high; could we not?

A I don't know if you could assume it. I don't

know if you could assume that.

Q If in fact you took the sampling during a period of low to mid water, would it be your testimony that the limitations on the effluent discharge would be more stringent than if the sampling had been taken during a period of high water as for one --

A No.

Q -- Thing the discharge from the Earle plant would be disolved in a greater quantity of water?

A No, because in establishing those numbers on those parameters on Table S-2, we considered the impact of the Earle discharge on Hockhockson Brook, and we also -- and we combined that with the base flow conditions in Hockhockson Brook of natural sources, and we derived those figures. So that at the time of sampling, it would change the characteristics of the samples but it wouldn't substantially change the characteristics of the effluent parameters because you have to use both of them in combination.

Q Now, in designing the effluent parameters, are you saying that the volume of water has no impact -- has no influence upon the parameters that are ultimately determined?

A The low flow conditions in the stream have a bearing on the effluent parameters, yes.

Q Are you in a position to advise us what the flow was on - did you say - November 7th?

A November 7th, '78, no, we didn't take measurements of flow.

Q And you can't compare it to whether it was high, low, or medium?

A No, I can't make that judgment.

Q Are you in a position to advise us as to what the flow was absent measurement at the time you took your sampling in terms of gallons per minute?

A No.

Q Are you saying that it's not necessary to make that determination?

A No.

Q You don't know or it is not necessary to make that?

A No, it's not necessary because we realize we don't -- we realize that we have to consider Earle and the stream in combination, and we have to consider Earle under a set of flow conditions different from what we encountered in the field at the time. And in using those two factors, in establishing these parameters, it wasn't essential that we couldn't gauge the stream flow at the time of the sample.

Q Now, referring again to S-2 -- strike that.

Referring to D-2 for identification, Mr. Nerlick recommends or suggests that additional evaluation of land application as a disposal method be pursued. Do you know whether your company has submitted data to Mr. Nerlick as to your considerations as to the viability of land application?

A No, we didn't submit -- no, we did not submit him any data to that effect.

Q He indicates that an additional evaluation of land evaluation be pursued?

A Yes, because he evidently reviewed a copy of the report.

Q What report?

A Of the report he refers to in his letter.

Q To your knowledge, do you know whether this conceptual engineering report was sent him by some other party?

A No, I don't.

Q Do you know what report he's referring to?

A No.

Q Did you prepare any other reports?

A The only information we submitted Russ Nerlick --

Q I'm not sure my question was clear. Aside from this conceptual engineering report that we referred to before and the letter that you sent to Mr. Nerlick, did

you prepare any other reports?

A No.

Q Okay. He indicates that evaluation of land application as a disposal method be pursued.

A Uh-huh.

Q Since your receipt of Mr. Nerlick's letter, have you given further consideration to the land application method?

A We evaluated it in the report and determined that it was economically unfeasible to pursue.

Q Why was that?

A Cost of land requirements, land application --

Q And --

A We evaluated exactly what Russ Nerlick is referring to in his letter and came to a conclusion that it was economically unfeasible. And in his letter, I'm not sure that he had the data at his dis -- well. I don't know how -- what he based his statement - the company may have to provide a very high level of water treatment - on. I don't know -- on what basis he made that statement in his letter.

Q You haven't spoken with him?

A I haven't spoken with him.

Q Have you conducted any further samplings since November 7, 1978?

A No, I haven't.

Q Have you done any further work on the conceptual engineering work for this particular project since your completion of this report?

A We prepared a preliminary cost estimate on an access road to the site and that, to my recollection, is all we've done since we finalized this report.

Q You're referring to the road to the sewer plant?

A An access road to the corporate office site and then a continuation down to the treatment plant.

Q In doing that, did you reach conclusions as to the cost?

A Of the access road?

Q Yes.

A Yes.

Q What conclusions did you reach?

A We estimated the cost for Mr. Brunelli.

Q How much was that?

A I don't know.

Q Now, in making that judgment, did you give any thought to the cost of acquiring land so as to provide an access route?

A No.

Q You assumed that land was available to

utilize?

A. Along the existing right of way that's shown on the plat maps.

Q That would lead to Route 34?

A Yes, I believe so.

Q Now, on -- backing up --

MR. FRIZELL: Off the record for a moment.

(Whereupon there is a discussion off the record.)

BY MR. O'HAGAN:

Q We had gotten sidetracked with reference to the road. Are there levels of treatment that exist that are more stringent than you've recommended in your report and particularly on Table S-2?

A What do you mean? I don't quite understand your question. Are there --

Q Levels of treatment that exist that are more stringent than those you've described on Table S-2?

A I think I know what you're driving at but I'm not certain exactly.

Q Okay. Now, you -- you've talked about your report and on S-2 removal of BOD - I guess - and suspended solids and ammonia, nitrogen, phosphorus and whatever?

A Uh-huh.

Q Are there methods of treatment that would remove greater quantities than those that you've proposed on S-2?

A Yes.

Q What are they called?

A Other tertiary treatment processes.

Q And they would be more expensive?

A If they had to be added to the process train, yes.

Q Are you in a position to advise us as to the percentage of increase?

A No.

Q As to the dollar volume of increase?

A No.

Q Now, am I understanding that you didn't recommend those levels of treatment for one reason because you were mindful of the fact that the developer desired to construct least cost housing at this location?

A No, that had nothing to do with establishing the criteria. It was based on water criteria. If the least cost housing had been an issue, we would have recommended substantially lower quality effluent. Based on the criteria on S-2, it was a very high level of treatment, higher than we've ever seen in a municipally owned treatment plant. So, no, that had no bearing at all in establishing the level of treatment.

Q Now, you make certain estimates regarding the cost of the -- certain estimates concerning the lineal feet of pipe required and the laterals and the mains and the pumping station and the force main. How did you make those calculations as to the proposed or expected cost?

A We had an inch-equals-a-hundred-feet scale topo map, and we actually laid out the street patterns on that topographic map and measured the quantities from that topographic map.

Q How did you reach then the conclusion that total cost for construction of the collection system would be $1,010,000?

A Based on our cost experience in installing sanitary sewers, based on cost of materials, based on guide lines published by HUD and EPA.

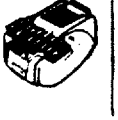
Q Is it accurate to say that the smaller the installation, the larger the per foot cost would be as far as installation of the sewer leads is concerned?

A Could you repeat the question?

Q Is it accurate to say that the smaller the lineal feet to be installed, the greater the cost would be per lineal foot?

A Well --

Q I'll ask it another way. When a contractor



bids on a job, is one of the factors that he's concerned with the total work that he is to perform and the greater the volume of work that is to be performed, the lesser the unit charge would be?

A That's one factor but there are a whole host of other factors involved in him establishing the price.

Q Any other factors would be?

A Topography, soil-water conditions, ground-water conditions.

Q Now, in reaching the determination as to the $1,010,000, you've already indicated, I think, that your firm had not designed or you had not designed a plant that was of a similar size as this one; is that correct?

A What was that?

Q You've already advised us that you had not worked on a plant, sewer treatment plant, sewer collection system, that was of a size similar to that proposed by Brunelli?

A I didn't say that. I advised you that I never worked on a PUD type project before regarding the size of the project -- let me see. Probably not.

Q You did not?

A Probably not.

Q Who did you discuss this with?

A Discuss as far as what?

Q The cost, your projected cost, who did you discuss it with?

A They were established based on guide lines in various publications and drawing unit cost from those publications.

Q And that's the sole method by which you determined the cost?

A Yes, various published policies.

Q What would be the cost of installing 16,200 lineal feet of building laterals?

A I don't have that number right off the top of my head.

Q Well, you have notes in your report that you referred to from time to time?

A I don't believe they're referring to cost of installing 16,200 feet of building laterals.

Q Did you commit that to writing, an item-by-item break down, to writing?

A Yes.

Q You have that available --

A No.

Q -- In your office?

A They're copies of work sheets.

Q Would you mail that to me?

MR. FRIZELL: Sure.

THE WITNESS: Sure.

BY MR. O'HAGAN:

Q Now, did you make any studies as to what effect, if any, the effluent coming from this plant would have on the environmental balance of the stream downstream from the subject location?

A No.

Q Is that a consideration that you would have to make before receiving approval from the DEP?

A Could you repeat that one more time?

Q Would the DEP require you to make studies as to the environmental impact of the sewer effluent on downstream locations?

A It's possible that they would or they may make that determination themselves.

Q In your experience, have you ever been involved in a project where the DEP made the determination themselves?

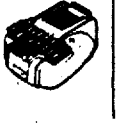
A Not in my experience, no.

Q In your experience, has your company - we're referring to Killam and then Elam and Popoff --

A That's right.

Q -- Have they made studies regarding the impact upon the environmental balance on a sewer package plant?

A No.



Q And --

A Let me re-answer that. In any project that I have worked with -- on with the companies I've worked for, the company has not prepared the environmental studies in establishing the impact of stream quality and stream biota.

MR. O'HAGAN: Can you spell that?

THE REPORTER: Yes.

BY MR. O'HAGAN:

Q Was an outside firm retained to do that work?

A Yes.

Q And that is the requirement then of the DEP that some studies be made as to the environmental impact?

A I don't know whether it's a requirement or not.

Q Do you know what acts and studies are necessary to determine the environmental impact of a sewer treatment plant?

A No.

Q You can't tell us then whether the DEP would require that special precautions be made to minimize the environmental impact on downstream areas?

A No.

Q And you, yourself, have made no studies in that regard?

A No.

Q Now, on page 11 of your report, you speak of

off site disposal of dewatered sludge and I'm taking that to mean the sludge that remains after the treatment process; is that correct?

A That's correct.

Q And you indicate that that could be disposed of in a licensed sanitary landfill?

A Uh-huh.

Q Are you aware of whether the DEP has adopted regulations as to the ability of a private package plant to dump in a licensed sanitary landfill operation?

A A plant?

Q Yes.

A I'm aware of the sludge management regulations that the Department has issued.

Q Would that pertain to existing plants or to new plants or both?

A It would pertain to both.

Q And do those regulations allow a private company to dump in a sanitary landfill?

A I don't know if they differentiate between private and public.

Q Do you know of the location of the nearest sanitary landfill?

A Long Pine is the nearest, I believe.

Q Where is that?

A In Freehold Township.

Q Do you know whether they have available space to accept the dewatered sludge from this proposed PUD?

A No, I'm not certain of that.

Q Do you know the cost they charge for the acceptance of the dewatered sludge?

A No.

Q Do you know the cost that would accrue to the operator of the plant to dispose of the dewatered sludge?

A No, I don't know.

Q So I'm correct in understanding, when you calculated your operating costs, you placed no -- you did not refer in any manner to the disposal of dewatered sludge?

A We costed out the -- the treatment of the sludge, the dewatering of the sludge.

Q But not the disposal?

A Not the disposal of the sludge.

Q Now, with reference to your costs - and I'm referring now to your capital costs depicted on S-3 - how did you arrive at those figures?

A Those figures were arrived at based on our discussions with manufacturers fabricating and supplying waste water treatment units. They were based on cost

data provided by EPA and cost data provided by HUD documents.

Q How recent were those HUD and DEP -- did you say EPA OR DEP?

A EPA.

Q -- EPA documents, how recent were they?

A The EPA was 1976. We did update in accordance with ENR cost indexing criteria.

Q What does that mean, ENR?

A Engineering News Record.

Q It isn't written in your notes?

A No.

Q What other means did you utilize to calculate the capital costs?

A The HUD document, it was mainly the HUD document.

Q What particular publication are you referring to as far as HUD is concerned?

A I don't recall the name and title of the document.

Q And with reference to the EPA, what particular document are you referring to?

A That was -- I don't recall the exact title.

Q Now, you draw a conclusion as to capital cost per unit and of course, it would be clear that the lower the number of units the higher the capital cost would be; isn't that correct?

A That's true.

THE REPORTER: I need to change my paper now.

MR. O'HAGAN: Sure.

(Whereupon reporter changes paper.)

THE WITNESS: Could you repeat the last question just to make sure that I answered it properly?

(Whereupon reporter reads back last question and answer.)

THE WITNESS: Let me change that. That's generally true. Of course, it may not always be true but generally it is true.

BY MR. O'HAGAN:

Q Now, with reference to operation and maintenance costs, what assumptions have you reached as to the number of occupants of the PUD in reaching those conclusions?

A We used the flow population of flow figures given in the front of the report.

Q That would be the first --

A Yes, that would be Table S-1. It was developed from that.

Q Fine. Now, what assumptions have you made

as to the operation cost as opposed to the maintenance cost in terms of dollars per million gallons?

A I don't think I quite follow the question.

Q When you speak of operation cost, what are you speaking of?

A Electricity, chemicals, labor.

Q In speaking of maintenance costs, what are you speaking about?

A Labor and parts and materials.

Q Okay. Are you able to distinguish between that portion of the cost which is attributed to operations and that portion which is attributed to maintenance?

A In a treatment plant of this size, we're able to distinguish. I don't have the numbers in front of me as to how much cost we allotted for parts and supplies per year or electricity and chemicals per year. In a treatment plant of this size, usually you will have just one operator and he'll be dividing his time between operating tasks and some maintenance tasks too. It is rather difficult to pin down with respect to that.

Q To your knowledge, has your firm been the consulting engineers and thus familiar with the day to day operations of a plant similar in size to that proposed by Mr. Brunelli?

A I've never been involved in a plant of this size on

a day to day operation.

Q And you, yourself, have not been involved?

A Not with a plant of this size.

Q How did you arrive at the cost of operation and maintenance?

A Well, we have a good idea of certain basic requirements of a plant of this size, the electrical requirements. We have a -- an accurate idea of how much electricity would be required by the type of units we specify and the size of those units. Chemical requirements are fairly easy to compute in a plant of this type, of these types. Labor, as I said, usually you can go with one operator and he can take care of both operations and maintenance tasks.

Q What salary would he get? For instance, what would his salary be?

A I don't know what figure we used in the report.

Q What would you pay for chemicals?

A I don't have those numbers at my disposal.

Q Who prepared them?

A I did.

Q Did you commit them to writing?

A Yes.

Q Would you send me a copy of that writing?

A Sure.

Q If the level of treatment were made more stringent, would it be accurate to say that the cost of operation would increase?

A Generally, yes, almost without exception.

Q Could you advise us as to the percentage of increase?

A It depends on -- I wouldn't have those numbers available now, but it would depend on how much you increased the level of treatment.

Q And I think you've already advised us that the capital cost would increase if the level of treatment were made more stringent?

A Probably, yes.

Q Now, who would you feel would operate the treatment plant, a private concern or a public utility?

A I have no opinion on that.

Q Would it be accurate to say that the cost to the public would be identical to those whether it is operated by a private company or a public utility?

A I would think whether a private company or a public body operated the plant, the operations and maintenance costs should be the same or nearly the same.

Q Would it be fair to say that a private company would expect to derive a profit from their operation of the plant?

A They would expect to derive some profit, yes.

Q What profit did you anticipate the company operating this plant would derive?

A No profit, we didn't know what there would be.

Q So that the operations cost that you referred to per dwelling unit on Table S-3 would be increased to the extent that the profit was cranked into the formula?

A That's correct.

Q Do you know of the level of profit allowed by the Public Utilities Commission?

A I'm not certain of that figure. I believe it's around 15%.

Q 15%?

A I believe around that.

Q Now, you indicated in the beginning of the Depositions that you were familiar with Federal and State guide lines pertaining to grants and loans for the financing of sewer projects?

A Uh-huh.

Q Would it be accurate to say that either the State or Federal Government would finance a private package plant in the Colts Neck area?

A That's accurate.

Q Would it also be accurate to say that the State and Federal Governments would follow the recommendations

of the Tri-State Regional Planning Commission and the State Department of Community Affairs as to the locations in which grants and loans should be made available to public utilities for the construction and operation of new sewer treatment plants?

A I'm not positive on that, no.

Q Would it be fair to say that it's unlikely that either the Federal or the State Government would make a grant or lend money to the Township of Colts Neck to develop its own sewer treatment plant?

A I really don't know.

Q And now, have you given any thought as to whether it would be feasible to develop a sewer treatment plant in the Township of Colts Neck taking in the Township as a whole?

A In this study?

Q In general.

A No.

Q Now, in developing the costs, would one factor be the distance separating residences?

A That would be one factor.

Q Would it be accurate to say that if there was a large distance separating residences, that would result in a greater cost?

A Yes, I would say that would be true.

Q If the streets could not accommodate any gravity feed sewer line and, therefore, pumping station or pumping devices would be required, would that also be a factor that would increase the cost for providing a sewer system for Colts Neck?

A I'm really not that familiar with the topography of Colts Neck. I don't have a good idea of what would be required to construct a sewer line.

Q If the streets were constructed in such a manner as to a -- as to not accommodating a gravity feed sewer line, would that be a factor that would increase the cost of construction of a sewer system in Colts Neck Township?

MR. FRIZELL: I'm going to object to the whole line of questions starting back about eight questions ago. Mr. McDonald is being asked to opine on matters which are not contained within his report and on matters for which he has not been hired. He is not being paid by my client to answer any of these kinds of questions or to delve into these issues. He would have to -- since he was not retained for that purpose, he would have to be shooting from the hip on all these questions. I don't think it's

fair to the witness.

MR. O'HAGAN: Are you directing him not to answer?

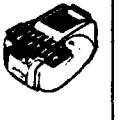
MR. FRIZELL: I'm not. I'm objecting to the relevance of the questions. If you feel it's going to help you in some way, he can answer. Obviously I would strenuously object at the time of trial.

BY MR. O'HAGAN:

Q Do you feel you're able to answer the question? I'm asking you to assume that the streets are laid out in such a way that gravity sewers could not be utilized and that, therefore, some pumping devices or pumping stations would be required. Would that be a factor that would cause the cost of construction to be raised or driven up?

A It would be a factor. I don't really see where it's relevant here but it would be a factor.

Q Now, referring down to the potable water supply and I direct your attention to pages 23 and 24 of your report, and referring to the last paragraph on page 23, which continues over to page 24, do I understand you to say that you've made no investigations to determine the availability of water in the Raritan formation so as to adequately handle this PUD?



A What do you mean "investigations"?

Q Studies.

A We are -- our firm has extensive experience in developing the Raritan formation and it was based on that that we recommended that this formation be the one used for potable water supply for the development.

Q But you indicate that actual safe yields can only be confirmed upon actual drilling of a well upon the sige?

A That's true.

MR. FRIZELL: What page are we on?

MR. O'HAGAN: 23.

BY MR. O'HAGAN:

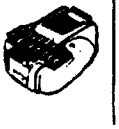
Q Am I correct in understanding that the availability -- strike that.

Am I correct in understanding that the -- that there's a chance that the Raritan strata does not underly this subject site?

A No, I don't believe -- there's little chance of that.

Q Am I correct in understanding that the availability of water in the Raritan strata may differ from location to location?

A Safe yield of wells would vary somewhat from location to location.



Q Would safe yields have to do with volume or chemical make up of the water?

A Volume.

Q Your firm indicated that in order to reach a final decision, you'd have to actually drill the well?

A That's true. Although, I would like to continue answering that question. I would like to refer you to Table W-2.

Q What page is that?

A Page 22 and that just indicates that there is some variance in the same yields in the formation.

Q And none of those yields equal the proposed diversion at the subject site, do they, in gallons per minute?

A That's true.

Q Now, have you made any studies as to whether the level of the Raritan formation has remained constant from year to year?

A I'm -- I don't know. I can't answer that question.

Q Who would know that in your company?

A I don't know the answer to that question. There is somebody there that could answer that.

Q Would I be correct in understanding that you made no studies as to the recharging capacity of the Raritan strata?

A I really can't answer that question.

Q Meaning that it's not within your field of knowledge?

A That's right.

Q Now, with reference to that question, is there someone in your firm who could answer the question?

A I can't answer that question.

Q Now, you -- you've indicated on page 24 that you must seek and obtain diversion rights from the DEP. Do you know the data and information that must be submitted before the approval will be forthcoming?

A I've seen a list of the data that is required.

Q You personally have never done any of this?

A No.

Q And so you're not really aware as to whether that type of data can be submitted on this particular location?

A At this point in time?

Q Yes.

A No, I'm not.

Q I would be correct in understanding that no investigations in that regard have been made as yet by your firm as to this particular site?

A The -- well, I believe the -- on page 24 and page 25, we list the data that's required in terms of a

detailed engineering report that the State requires for development of ground water supplies.

Q And the approval may or may not be forthcoming based upon whatever determinations the DEP might make of this application?

A Yes, until such time as an application is formally submitted.

Q Now, on page 27 - and I'm referring to the second paragraph - do I understand you to say that laboratory tests as yet have not been made on water taken from the Raritan strata?

A No, taken from the aquifer underlying the site. We have done tests on other ground water from the Raritan formation in the county.

Q Now, does the quality of the water as to its chemical content differ from location to location in the Raritan strata?

A I can't answer that for certain.

Q You're not in the position to tell us then as to the chemical make up of the water in the Raritan strata at this particular location?

A No.

Q Nor can you tell us as to the cost of treatment of the water at this location?

A We can make adequate estimates for the purpose of

conceptual engineering purposes --

Q But you're not --

A -- To estimate the cost of the water treatment. Whether that will be precisely the cost once the wells are put in operation and water is being -- potable water is being supplied from those wells, we can't give the precise estimates but we can give a -- a knowledgeable judgment of those costs at this point in time.

Q Now, how did you reach the conclusions concerning the cost of treatment?

A As far as --

Q The treatment of the water?

A Where are you, what page are you referring to?

Q Well, does your report make reference to the cost of treatment?

A Yes, I believe it does.

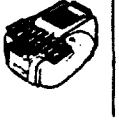
MR. O'HAGAN: Let's go off the record for a moment.

(Whereupon there is a discussion off the record.)

MR. O'HAGAN: Would you read back the last question.

(Whereupon reporter reads back last question and answer.)

THE WITNESS: Let me change that



answer to, no, it doesn't.

BY MR. O'HAGAN:

Q Right.

A That refers me back to the waste water report where we cite the O and M cost on Table S-3, the O and M cost.

Q Could you tell me the page you're referring to?

A Page 12. The cost, the O and M costs on page 12, Table S-3, were included for comparisons of the three comparative purposes of the three treatment systems that we have here in this table and that is the reason why in this portion of the report we do include O and M's because we're talking about three distinct options and we wanted to look at the comparative total costs of those systems. And for that analysis, we included the O and M portion of the costs. Throughout the remainder of the report and in the summary, we include only the capital share, the capital cost of the project.

Q Why was it that you declined to make an estimate as to the operational cost with reference to the balance and I'm referring to the potable water supply and the storm drainage system?

A Because we weren't comparing alternative systems and, therefore, we didn't have to consider that in selecting one system over another. And in this

conceptual report and the summary of the conceptual report, we have indicated what the total cost of the project will be. We haven't worked the maintenance cost for those systems.

Q Now, when we had that short recess, Mr. McDonald, I believe you advised that you were not familiar in any respect with the calculations made as to the storage capacity and the data referred to on page 29 entitled Systems Storage; is that correct?

A That's correct. I did not compute that data.

Q Would I also be accurate --

MR. FRIZELL: Let's clarify it. You asked him if he was familiar in any respect and he answered that he did not compute it. I assume from reading it, he's familiar in some respect with it. I don't know if you should continue. I'm not personally satisfied with the answer as the question was asked.

BY MR. O'HAGAN:

Q Now, did you review the data?

A No, I did not review the data with the Project Engineer that prepared this segment of the report.

Q And did you read this raw report prior to its being typed up?

A Yes, I did.

Q Now, would I be correct in understanding that this field of potable water supply and storage capacity and cost of supply of potable water is not within your field of domain?

A I have done very little work in this field. That's correct.

Q Do you feel qualified to answer questions pertaining to cost and storage capacities and the rest of the data that's in this report?

A Not pertaining to cost and storage capacities, but you can proceed with asking your questions and I will answer those I am able to.

Q Must approval from the Department of Environmental Protection be obtained in order to operate a water treatment plant?

A That's correct.

Q Do you know the data that must be submitted to the DEP before approval would be forthcoming?

A No.

Q Have you ever worked on a project --

A No.

Q -- Wherein approval was sought?

A No.

Q Do you know the -- I'm understanding you to

say that you cannot estimate the cost of drilling the well?

A No.

Q You cannot estimate the cost of provision of the storage facilities?

A We had a Project Engineer that did this for this project so I would say no.

Q You cannot estimate the cost for any pumping stations?

A No.

MR. O'HAGAN: Is there another representative of Ellson Killam who will be made available with reference to the potable water supply?

MR. FRIZELL: Am I being Deposed?

MR. O'HAGAN: Yes, you're under oath.

MR. FRIZELL: As I think I said, I will advise you by Friday as to that. I don't know. Truthfully, I don't know.

BY MR. O'HAGAN:

Q Now, just to shortcut it, Mr. McDonald, on page 31, there is a section of this report entitled "Cost Estimates"?

A Uh-huh.

Q Would I be accurate in understanding you have no idea as to how those figures were estimated?

A No, I have some idea.

Q How were they estimated?

A I have --

Q Strike that.

How did you arrive at the knowledge that you do have as to cost?

A In discussing the preparation of this section of the report with the Project Engineer who prepared it.

Q And who was that again?

A Nick DeNicolo.

Q Go ahead.

A The treatment plant, to the best of my recollection, was based on the cost of a similar type plant that we've recently installed or designed in the county.

Q Where was that?

A I believe -- I'm not sure.

Q What size was it?

A I'm not sure of that.

Q Who is the owner?

A Pardon?

Q Who is the owner?

A What do you mean -- okay. It was one of the municipalities. I'm not sure of the municipalities. It

was either Freehold, I believe, or Howell Township.

Q You're saying it was the same size as this?

A No, I'm not.

Q What size was it?

A I'm not sure.

Q Was it a private concern or a public concern?

A I believe it was municipally owned.

Q Municipal Utilities Authority?

A Muncipally owned water system.

Q Okay. When was it constructed?

A The work was done fairly recently. I'm not sure of the date. I can't answer that.

Q Did you review the actual cost of construction?

A The only thing -- Maybe I can cut the questioning short by saying that the only information I know on this cost is that it was based on the cost of construction of an actual facility in the county and that's the extent of my knowledge on the development of this $75,000.

Q Would that be the only item that you're familiar with as to how the cost figures were derived?

A Yes, that's correct.

Q Who's going to operate this water plant, a private concern or a Public Utilities Authority or a municipal operation?

A I'm really not certain.

Q Pardon me?

A I can't answer that question.

Q Would you anticipate it being a private concern?

A It's possible it would be a private concern.

Q Now, again would you assume that the cost of operation and maintenance would be identical between a private concern and a public authority for a municipality operating the system?

A Like I said before, the actual operations and maintenance would be the same.

Q Okay. And the private company would have a profit motive; would it not?

A That's right.

Q Do you know the percentage of profit that the PUC will allow for a water company?

A I'm not sure but as I said before, I believe it's in the vicinity of 15%.

Q Do you know the rates that are charged by the Monmouth Consolidated Water Company?

A No.

Q And you're not in a position to advise us as to the rates that would be charged by the company that operated this plant?

A No.

Q With reference to the storm water drainage, what work did you perform on this aspect of the report?

A Similar to the potable water supply portion of the report.

MR. O'HAGAN: Off the record again.

(Whereupon there is a discussion off the record.)

BY MR. O'HAGAN:

Q Based upon the discussions that we've had off the record, Mr. McDonald, I would continue to Depose you on the storm water drainage. And would you tell me please what role you had in the preparation of this aspect to the report?

A Similar to the water supply portion. I supervised the preparation of the report but did not participate in developing the data that went into this section of the report.

Q And who prepared this section again?

A Gene Skupien.

Q I'd ask you to refer to Plate 4, which is to be found following page 32. With reference to point D, it talks of a total drainage area of 37 acres. How was that calculated?

A I'm not certain.

Q Now, does that 37 acres include the Hockhockson

Brook upstream of the subject site?

A No.

Q That's drainage in addition to the Hockhockson Brook or water flow in addition to the Hockhockson Brook?

A These are areas that currently flow to the Hockhockson Brook. They're part of the current Hockhockson Brook water shed and you're referring -- excuse me -- you're talking about these two?

Q Right.

A These refer to ground water.

Q When you say "these two", we're talking about Point D?

A Yes.

Q It's to be found on the right-hand side of the map as you look at it?

A We're referring to surface water run off emanating from these two areas from the water shed.

Q When you say "these two", you're pointing to the arrows?

A Yes, there are areas outside of the development limits that drain at the development and are in the Hockhockson Brook water shed. This 37 acres represents that area that currently drains to the water shed.

Q Well, how was that calculated?

A Based on topographic and planometric maps.

Q With reference to Plate 4, I'm understanding the Plate and also the verbiage in the report to indicate that after construction of the PUD, points A, B and C will still continue to drain ultimately to the Swimming River Reservoir; is that correct?

A Not D?

Q No, Points A, B and C?

A Correct.

Q Are you able to advise us as to the run off presently emanating from the site and more particularly that presently leaves the site at points A, B and C?

A Plate 4 shows the volumes of run off, the volumes of peak run off leaving the site under existing development and land use conditions, the 50 year peak run off discharge. Plate 4 represents that.

Q That would refer to a storm that was mathematically calculated to occur every 50 years?

A That's correct.

Q It refers to Point A 50 cubic feet per second?

A Uh-huh.

Q Are you able to advise us as to the run off that will leave the site in terms of cubic feet per second after the development is in place?

A Yes, we've designed into the PUD storm system development the retention basins.

Q I know that. Ignoring that, I'm talking about the total volume of water. I misled you when I used the term "cubic feet per second". What I'm interested in is a comparison of the volumes that presently run off the site and the volumes that will run off the site after the development is in place?

A The peak discharges are the same. The volumes, I don't have those numbers available.

Q Is that in the report?

A The volumes?

Q Yes.

MR. FRIZELL: What volume? I'm a little bit confused between peak discharge and what volume means. Is it different from peak discharge?

MR. O'HAGAN: In my mind it's different in that it's taking in not just any particular minute or hour but what would occur in a 50 year storm throughout the duration of the storm. Off the record.

(Whereupon there is a discussion off the record.)

MR. O'HAGAN: Okay. Back on the record.

BY MR. O'HAGAN:

Q Mr. McDonald, have you made any calculations as to the -- or has your firm made any calculations as to the total volume of water flowing from the subject site at present from Points A, B and C and in its undeveloped state during a 50 year storm?

A When you're talking about a 50 year storm, you're talking about -- you have two parameters that are involved. You have a duration of the storm and the frequency of the storm. The frequency of the storm is once every 50 years.

Q Right.

A The duration affects the average intensity of the event. So say you have a 50 year storm for one hour - I'm picking numbers out of my head to illustrate now - say you have a 50 year storm for one hour, the intensity may be five inches per hour. If you have a 50 year storm for 24 hours, the intensity wouldn't be five inches per hour. It may be one inch per hour. So when you're talking about a 50 year storm, you also have to specify the duration of the storm to determine the actual volumes that are leaving the site.

Q Is it your testimony that the 50 year storm has no bearing -- strike that.

Is it your testimony that the 50 year storm does not refer in any respect to the duration of the storm?

A (No response).

MR. O'HAGAN: Let's go off the record.

(Whereupon there is a discussion off the record.)

BY MR. O'HAGAN:

Q I'm understanding you to say then, Mr. McDonald, that when we refer to the 50 year peak discharge, we have no reference to the duration of the storm; is that correct?

A The duration of the storm for the calculation we have cited in the report reflects the amount of time that it would take for water from the furthest hydraulically furthest-most part of the drainage area in the site to reach the outlet point and on that basis, we determined the duration.

Q What length of time was that?

A Huh?

Q What length of time was that?

A I believe it varies for each outlet point.

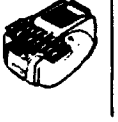
Q Now --

A I don't have the numbers with me.

Q With reference to the furthest point, what duration is that?

A I don't have that with me.

Q When we were off the record, I understood you



to say that you may have a storm of high intensity that occurs that has a duration of one minute, and you're saying that might be a 50 year storm?

A Let's say one hour. It's just more common. I don't know if they're calculated what a one minute 50 year storm is. There's a 50 year, one hour storm. There's a 50 year two hour storm and a 50 year five hour storm and the average intensity for the storms are quite different.

Q What intensity did you utilize in your calculations?

A It was based on the inlet time, what they refer to as the inlet time, which is the time that it takes for run off to move the furthest -- the most remote part of the drainage area to the reference point that you're analyzing.

Q What duration would that be?

A I would imagine that it varied for each different point, A, B and C, because you have different hydraulic characteristics for each of the areas.

Q Let's talk about the furthest point from Point A. What would be the duration there?

A I don't have anything of these numbers with me.

Q Your answer would be the same as to B, C and D then?

A That's correct.

Q Now, I'm interested in ascertaining the volume of water that now flows off the site in the 50 year storm of the duration that you utilized in your calculations. Are you in a position to advise us as to that volume?

A I don't know those volumes.

Q Are you in a position to advise us as to the volume of water that will flow from the site for the 50 year storm of the duration that you utilized in your calculations after the development is in place?

A I don't have those numbers with me.

Q Would it be fair to say that the volume would increase?

A For the durations that were used in computing the discharge?

Q Yes.

A Yes.

Q What factors would cause an increase?

A The increase in the impervious surface of the area.

Q Such as blacktop?

A Blacktop, sidewalks, possibly -- well, some things would decrease the amount of run off also but generally with development you're going to be getting more run off

from the site than you do under existing conditions.

Q Have you made an analysis as to the -- do you speak of degree of impervity or degree of porosity? Is that what you're talking about when you talk about raw land?

A Permeability coefficients.

Q Have you made a study as to drainage characteristics of the existing soil in terms of permeability?

A That's correct.

Q Have you made that study?

A The firm, yes.

Q How do you characterize the existing soil as to its ability to retain water?

A I'm not aware of that. I know those studies were carried out in conjunction with this report.

Q Now --

A I don't know all the exact values that were assigned to the existing conditions versus the developed conditions, but they were computed.

Q Has your firm made an analysis of the amount of sediment presently flowing from the site in a 50 year storm of the duration that you utilized?

A No.

Q Have you reviewed the raw data that went into the making of this report?

A No.

Q Have you had discussions with the man who prepared this report?

A Yes, yes.

Q And it's your understanding that he made no calculations as to the amount of sediment presently running off?

A That's correct.

Q Now, you've made reference to detention basins. Are you in a position to advise us as to the size of the detention basins?

A I believe the volumes are given in the report on Table D-2, required detention storage.

Q D-2?

A Page 36.

Q That gives you the detention storage required for each of the drainage areas. Now, on page 40, the report indicates that additional detention -- areas for detention basins must be provided at Points A and C?

A Yes.

Q Are you familiar with how many units will have to be eliminated to provide for the adequate drainage basins -- drainage detention basins?

A No, I'm not aware of the number of units.

Q What depth will be-- will the detention basins

be?

A Well, that's one of the reasons why we estimated that additional open space may be required. We really aren't certain what depth they will be because we don't know what the final site topography of the area is going to be and what the outlet conditions of those detention basins are. So we've made just some estimates as to -- rough estimates as to depth.

Q Okay. In making reference in the beginning of the report to number of units, you indicated that that figure was taken from the planner?

A That's correct.

Q I'm talking about page 2 of 1,363 residential units?

A Uh-huh.

Q Am I correct in understanding that you did not subtract any units because of the proposed increase of the detention basins?

A That's correct because we don't know in fact if there will be a loss. It really depends on what the depth of the detention basins are finally. If we can increase the depth of the detention basins, these areas cited on page 30 -- on page 40 may not apply.

Q That's a factor -- that's a decision that would have to await the ultimate grading of the site?

A That would be a final design consideration.

Q Now, you speak in that report on page 38 of reducing the existing amount of sediment that will be transported downstream from the site?

A Uh-huh, what -- okay. I see it.

Q How did you reach the determination that in fact there would be a reduction in the amount of sediment?

A Well, if you had these mitigating measures, there will be a reduction in sediment. We didn't quantify it here.

Q What mitigating measures?

A With baffle walls and screens and various types of outlet structures, you can reduce sediment discharge from a pond or retention basin.

Q Have you personally done that?

A I've not designed such a thing.

Q Are you aware whether your firm has designed such a system?

A No, I'm not certain of that.

Q Who would be most familiar with that?

A Probably the engineer who prepared the report or somebody else in the Drainage Department.

Q So am I understanding you to say you would have no knowledge on your own as to the amount of reduction if in fact there is any reduction or the amount of

pollutants that could be removed?

A Well, there would be a reduction but we did not quantify it in this report and I'm not able to quantify it now.

MR. O'HAGAN: Off the record.

(Whereupon there is a discussion off the record.)

BY MR. O'HAGAN:

Q Mr. McDonald, I understand you to say that you're not aware of the present amount of sediment running from the site nor are you aware of the amount of sediment that will run from the site after the development is constructed?

A No.

Q You're not aware of the amount of other pollutants presently running from the site?

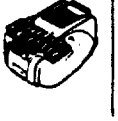
A That's correct.

Q Nor are you aware of the amount of pollutants that would run from the site after the development is constructed?

A That's correct.

Q And you're not aware of the amount of pollutants that could be reduced from the run off from the site or eliminated from the run off from the site?

A That's correct.



Q Would I be correct in understanding that you would have no knowledge of your own as to how long it would take the storm drainage basins -- strike that -- the storm detention basins to empty after a 50 year storm of the duration you've mentioned in your report?

A No, each basin, I do know that each basin has different hydraulic characteristics so it wouldn't be the same for each of them. And I believe some of the basins would never drain completely. There are provisions for a permanent water surface upon some of those basins.

Q That would be at Point B?

A I believe that's correct.

Q With reference to the other points, can you tell us how long it will take for them to empty?

A No.

Q Is there any other knowledge that you have of this drainage portion of your report that you have not told me about?

MR. FRIZELL: Well, I think that's a little too broad to answer.

MR. O'HAGAN: Off the record.

(Whereupon there is a discussion off the record.)

BY MR. O'HAGAN:

Q What -- I'm correct in understanding, Mr.

McDonald, that you did no original determinations that went into the make up of that portion of the report entitled "Storm Water Drainage"?

A What do you mean by "Original determinations"?

Q You made no calculations?

A That's correct.

Q You made no investigations?

A That's correct.

Q You made no examination of learned treatises?

A For this --

Q Storm water drain --

A -- For this particular project?

Q Right.

A No.

Q No, you did not make any, you did not study any learned treatises?

A No.

Q You did not write this portion of the report?

A That's correct.

Q And the one who would have knowledge of this particular aspect of the report would be Joe Skupien?

A Right. He prepared this portion of the report.

Q In light of that, I don't think there would be any useful purpose in further Deposing you on this aspect; therefore, I have no further questions.

MR. FRIZELL: I have a few brief questions.

CROSS-EXAMINATION BY MR. FRIZELL:

Q In -- I'll start chronologically backwards. In the storm water drainage portion of the report, what was the standard that the company sought to achieve in the storm water drainage facilities?

A We attempted -- our -- in the design of storm water facilities for Colts Neck Village PUD, we designed the system so as not to increase peak run off from the site in the 50 year storm conditions. By designing the system in this way, we are relatively sure that will not cause any increased flooding to downstream portions of the basin. We won't overload existing -- let me rephrase that.

Downstream hydraulic structures will not be overloaded because of the project. If they're currently overloaded, they'll be overloaded with this project but we won't cause any additional increases in peak discharges from the site and that was the basis upon which we prepared the storm water portion of the report.

Now, the -- in my reading of the Colts Neck and Monmouth County Ordinances, I don't believe there are specific requirements in those Ordinances for developers

to construct storm water detention basins. So with respect to that, I believe the storm water facilities that we've outlined in this conceptual report exceed current local and county standards.

Q In the -- in the sewage treatment -- I think you've answered that question.

Do you know of any reason why a municipal utility would not operate at a profit? Do you have any experience in that?

A Why they would not?

Q Not operate at a profit?

MR. O'HAGAN: Are you asking him for a legal conclusion?

MR. FRIZELL: No, I'm asking if he has any experience in municipal utilities operating at a profit.

THE WITNESS: Well, I do have experiences with municipal authorities that within their bond resolutions, they do have monies set aside, funds set aside for emergency repairs, renewal and replacement funds and things of this nature which a private utility, I don't believe, is required to carry and also in a municipal -- municipal debt service schedules, many times the bonding,

the financial advisors recommend that the debt that the municipal utilities are carrying be increased by a factor of anywhere from 10 to 20% as a reserve to guarantee payment of those notes. And therefore, they get a lower or a -- or they get a better bond rating. So in that regard, they do require some excesses over and above actual operating expenses.

BY MR. FRIZELL:

Q How many employees are there of Ellson T. Killam?

A I can't answer that question.

Q You don't know?

MR. O'HAGAN: I didn't hear you answer.

THE WITNESS: I don't know that.

BY MR. FRIZELL:

Q This document, the report that you submitted, it's entitled "Conceptual Engineering Report", what does "Conceptual" mean in that title?

A It means that it's the first step in establishing for a client, in this case R. J. Brunelli and Company, whether it's feasible to develop in this case sanitary sewage, storm drainage and potable water supply systems. It's not meant to establish precise parameters, precise

estimate, precise determinations as to whether or not a water supply can be developed, for instance.

Based on this report, we recommended that it was our feeling that it is feasible to develop these public facilities for the site and that the -- that we can advise the client that he can proceed with some of these other detailed studies that are required to establish the final, more final and precise parameters in actually developing the public facilities that we're proposing here.

MR. FRIZELL: That's all.

REDIRECT EXAMINATION BY MR. O'HAGAN:

Q If the number of units were reduced by half, would you still think it was feasible to go forward in light of the cost per unit for the sewage facilities, the storm water facilities and the potable water supply?

A I can't answer that question.

Q What would be the cut off point beyond which it would not be feasible to go forward with --

A If you look --

Q -- Let me finish.

A Yes.

Q What would be the cut off point beyond which it would not be feasible as to the number of units to go forward with the development of the project?

A I can't really determine that. We haven't done any analysis with that regard. But if you look at the current zoning, just with respect to - if I can limit my comment to sanitary sewage - in the current zoning, you had, I believe, it was two acre zoning in the area and based on that, to develop on-site facilities for each of those, for each unit in a two acre unit zoning development and if you consider the land requirements that you need to establish, domestic wells, on-site septic systems, those two facilities, I believe you have to consider in that economic analysis the cost that is required for the land that's necessary to support those on-site facilities.

And if you compare -- if those land costs are taken into account, the cost for -- for construction, for -- for these amenities is considerably higher than for a development of this type.

Q You're not in a position though, to repeat my initial question, to advise as to when, if the amount of units were reduced, it would be unfeasible or unwise from a financial or fiscal view point to proceed with the development; you don't know of any cut off?

A No, we haven't run that analysis.

Q How many individual septic systems have you designed?

A None, I've never designed a septic system.

Q How many individual septic systems have you been involved with as to cost factors?

A I've done an analysis of operation, maintenance and construction, from a planning point of view on septic systems for several municipalities.

Q When was that?

A Several years ago.

Q Would it be accurate to say that the cost of the septic system differs from place to place?

A Yeah, there are various site-related constraints in construction.

Q Would it be accurate to say that the cost of the system varies depending on the amount of land available for the septic fields and dispersal of the septic waste?

A Yes.

Q The greater amount of land available, the lower the cost would be; isn't that correct?

A Not necessarily. No, I don't think that's a correct statement because some -- it's entirely possible the large lot sizes are required to support the septic system and if that's the case, the cost of that large lot should be considered in evaluating how much the ultimate cost of the septic system is in fact.

Q You're in no position to advise as to the

cost of operation of individual -- strike that -- cost of operation and maintenance of individual septic systems; are you?

A The cost --

Q Yes, of the operation of them and maintaining them?

A Not any specific -- well, as a layman I may be.

Q But not as an expert?

A Not as an expert.

Q Now, in response to Mr. Frizell's question, you indicated that a public utility authority could reserve monies for emergency repairs and emergency events and repairs and renewals and et cetera. Are you saying that private companies don't make provision for similar reserves?

A Not to the --

Q You're not saying that; are you?

A Well, it depends on what outside resources are available for disposal in coping with the failures and you're also talking about much larger systems in municipally owned systems generally speaking that require larger reserves to be carried.

Q You're not saying that the Public Utilities Commission would disallow a private utility from making and providing for reserves for emergency events and

repairs and renewals?

A I don't know whether they would or not.

Q And you haven't had enough experience with private utility companies to advise as to whether that is their practice, isn't that correct?

A That's correct.

Q Now, with reference to the bonding cost, would it be accurate to say that frequently private utilities seek and obtain financing to construct and operate their plants?

A I would assume that they finance.

Q You're not aware of any requirements that the private lending institutions might have as to debt coverage; are you?

A No.

Q So you're not in a position to advise us as to whether those procedures and practices differ from the debt coverage required by the bonding trust provisions?

A That's --

Q Relating to public utility authorities?

A That's true.

MR. O'HAGAN: No further questions.

MR. FRIZELL: No further questions.

(Witness excused)

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION - MONMOUTH COUNTY
DOCKET NO. L-3299-78 P.W.

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ORGO FARMS & GREENHOUSES, INC., a New Jersey Corporation; and RICHARD J. BRUNELLI,

Plaintiffs,

-vs-

TOWNSHIP OF COLTS NECK, a Municipal Corporation,

Defendant.

x - - - - - - - - - - - - - - - - x

C E R T I F I C A T E

I, FRANCINE RUDD, a Shorthand Reporter and Notary Public of the State of New Jersey, certify that the foregoing is a true and accurate transcript of the Deposition of DALE S. McDONALD who was first duly sworn by me.

I further certify that I am neither attorney or counsel for, nor related to or employed by, any of the parties to the action in which the Deposition is taken, and further that I am not a relative or employee of any attorney or counsel employed in this case, nor am I financially interested in the action.

Dated: May 2, 1979
My Commission Expires on May 7, 1979.

Francine Rudd
FRANCINE RUDD
Notary Public of New Jersey