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New River Border Pollution

Assembly Select Committee on International Water Treatment and Reclamation

HEARING

ASSEMBLY SELECT COMMITTEE

ON

INTERNATIONAL WATER TREATMENT AND RECLAMATION

STATE OF CALIFORNIA

NEW RIVER BORDER POLLUTION

STATE CAPITOL
SACRAMENTO, CALIFORNIA

WEDNESDAY, MAY 9, 1984
1:30 P.M. - 4:00 P.M.

MEMBERS

Assemblyman Steve Peace, Chairman

Assemblywoman Marian Bergeson
Assemblyman Jim Costa
Assemblywoman Sunny Mojonnier

Assemblyman Gary Condit
Assemblyman David Kelley
Assemblywoman Sally Tanner

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HONORABLE J. STEPHEN PEACE
CHAIRMAN

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Members Present:

Assemblyman J. Stephen Peace, Chairman
Assemblywoman Marian Bergeson, Member
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Assemblyman Jim Costa, Member
Assemblyman David Kelley, Member
Assemblywoman Sally Tanner, Member

Also Present:

Senator Ollie Speraw

Staff Present:

Susan J. Ronnback
Committee Consultant

Rosie Cereceres Windheim
Committee Secretary

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ASSEMBLY SELECT COMMITTEE
ON
INTERNATIONAL WATER TREATMENT and RECLAMATION

J. Stephen Peace, Chairman

HEARING ON NEW RIVER BORDER POLLUTION PROBLEM

State Capitol, Sacramento, California
May 9, 1984

CHAIRMAN J. STEPHEN PEACE: The first presentation includes a slide presentation, so I'm going to hold that back on the agenda until we get some other people here; and move on down the list and take some of the people a little out of order. Senator Speraw will be here later, so we'll skip past him as well.

Why don't we start with the Department of Fish and Game? The Department is represented by Tim Farley and Richard Hansen.

Before you fellows start, first of all, to the extent that you have written testimony, let me encourage you to submit that testimony and give us a summary on the basis of the testimony. Then we'll try to rely on the questioning as much as possible so we can kind of move through here as we go along.

By way of a little bit of background -- first of all, is Jim O'Banion in the audience? Is he back yet? There he is. I wanted to make sure that everyone knew you were here from Senator Cranston's office. And we'll call upon you in a little bit here, to see if you had any success in finding out what's happening back in Washington.

In addition to that, we're going to cover a wide range of background here today, basically, in terms of touching base with different people; and giving some perspective on the different issues that affect New River environmentally: ranging from the border juxtaposition and the pollution coming from across the border, to whatever contributants may be there on this side; to the conflicting demands of the Salton Sea, and the problems in terms of water conservation and how that may reflect upon the demands for both improvement of water quality and for reduction of Salton Sea level. And that's something I'm sure I will have some questions about for you gentlemen here from the Department of Fish and Game as we start out. And I'll pretty much conduct an open forum.

The New River, unlike the prior testimony we have in the Tijuana River situation, has a little different kind of circumstance; more complex; probably more serious perceptually, if it were not for the more isolated nature of the population area. But in terms of the actual contaminants in the rivers themselves, there is some indication -- and some disagreement over that -- but it may actually be a more serious problem with respect to that.

So I'm going to go ahead and start with the Department of Fish and Game folks. And welcome.

MR. TIM FARLEY: Thank you. Did I understand that you'd rather have us just sort of skim through here, or summarize it, then you could ...

CHAIRMAN PEACE: Yes, rather than read, if you'd just summarize what you have there and we'll submit the written testimony for the record. That will allow us to focus on ...

MR. FARLEY: Fine. I'm Tim Farley. I'm with the Department of Fish and Game. I'm the Legislative Coordinator for the Department. I have with me Dick Hansen, who is the Director of our Water Pollution Control Laboratory. And I will be brief and to the point, and I'll just sort of skim through our handout here.

By background, we are responsible for the protection, maintenance, enhancement and management of the fish and wildlife resources of California, as well as the habitat in which they occur. And in terms of habitat, obviously, one of the important things is water quality.

We operate under statutes of the Fish and Game Code, which are listed in front of you.

Enforcement of anti-pollution statutes is normally done by our warden force: the Fish and Wildlife Protection Officers. We provide technical services with a staff of 34 biologists, chemists and technicians, under Mr. Hansen's direction. And the technical services related, primarily, to investigating impacts of toxic substances and other kinds of pollution on fish and wildlife, and to seek corrective measures.

Within protecting fish and wildlife from toxic substances, our goal is to prevent these substances from occurring in quantities and places where they can have an adverse effect. We do this by identifying problems, locating sources, enforcing

pertinent sections of the Fish and Game Code. And we work primarily through the regional water quality control boards.

With respect to your Committee's interest in the pollution problems of the New River, we've provided a couple of written letters to the Chairman, including most, if not all of the information we have on the New River and the Salton Sea. And additionally, on the Alamo River.

To summarize those written inputs, I think if you'll bear with me, I will read these summaries -- the Items 1 through 7 -- which summarize the input that we've given to you:

1. Our legal authority remains limited solely to the protection of fish and wildlife resources; and legal responsibility for protection of human health values is mandated to the state and county health agencies, and to the regional water quality control boards.

2. Our source of funding for our studies on the Alamo and New Rivers is primarily from the State Water Resources Control Board. And we are not presently spending Fish and Game Preservation funds on these studies.

3. In terms of technical details, we have found that of the many agricultural chemicals noted in fish flesh, DDT, toxaphene, and PCB's are the principal compounds of concern in the New River. Also, the National Academy of Science guideline recommendations, published in 1972, for the protection of fish species, have been routinely exceeded in catfish. We emphasize, however, that no public health standards have been exceeded in any of the samples we have examined in the New River.

4. In the Alamo River, the National Academy of Science guideline has been exceeded for total DDT, toxaphene, endrin and dieldrin. In 1983, for the first time, DDT concentrations in carp and catfish exceeded the Food and Drug Administration guidelines for protection of public health. On a statewide basis, fish from the Alamo River routinely bear some of the highest body burdens of toxicants, in terms of both concentrations and number of pesticides.

5. Salton Sea fish samples collected in 1980 and '81 indicated presence of some chemicals, dacthal and DDT, but the levels were well below both the National Academy of Science and Food and Drug Administration guidelines. Periodically, there are

fish kills in the Salton Sea; but from the knowledge we have, they're probably related to localized dissolved oxygen levels. And to the best of our knowledge, none can be correlated with the polluted condition of the Alamo and New Rivers.

6. We've long recognized the chronic pollution condition of these two rivers, and we've acted in accordance with Fish and Game Code §5651. We suspect that much of the pollution has its source in Mexico, and we, unfortunately, don't have much control over that.

7. During the next few years, we will be continuing our studies in the Salton Sea, Alamo and New Rivers in our Toxic Substance Monitoring program. And we will be transmitting data from this program to the state and county health agencies, and the Colorado River Regional Water Quality Control Board, for their review and action.

We do appreciate the opportunity to be here today. If you have any questions, Mr. Hansen or I will be available to answer them.

CHAIRMAN PEACE: Let me ask you one question in terms of the difference between the testing, insofar as it relates to health standards of human consumption -- the flesh testing versus the fat content -- could you elaborate on that and what the exact difference is in those kinds of tests?

MR. RICHARD HANSEN: We reported our values in the information we transmitted to you in our letters. We reported it on a fillet fish basis. And then we also reported in terms of the fat content. The more fat that is contained within the flesh, generally the higher pesticide content you'll find because pesticides are fat soluble. And that's the difference, sir.

CHAIRMAN PEACE: What are the environmental consequences of those fat contents? Is it true that the level of concentrations in fat content is not a health hazard to human

beings, per se, but it may be a problem in terms of affecting the health of the species itself. Is that true?

MR. HANSEN: It's not that simple to answer. If there is a fat content in the flesh which people eat -- and that could be, you know -- if it exceeds the FDA guidelines, there could be some public health significance. One of our big problems is being able to relate the concentrations of various toxic materials -- whether it be pesticides, heavy metals, whatever -- to the health of the fish. These require long-term studies, and usually much of this is done at the university level, not by our ...

CHAIRMAN PEACE: And not much of that has been done in this case?

MR. HANSEN: No, not in this case, merely reporting what we call body burden concentrations; body burden levels.

CHAIRMAN PEACE: I'd like to personally welcome the members of the Committee here. And by way of explanation so you know where we are, we've taken the agenda out of order because the first item is a slide show from the Water Quality Control Board that I knew none of you wanted to miss. So we're starting with the Department of Fish and Game, and then we'll jump back up to the top of the agenda.

Mrs. Bergeson, you have a question?

ASSEMBLYWOMAN MARIAN BERGESON: Yes. Mr. Farley, is there anything in Fish and Game's budget related to this particular issue? In this year's budget?

MR. FARLEY: Correct me if I'm wrong, but I don't believe there is.

ASSEMBLYWOMAN BERGESON: There are no appropriations at all involved?

MR. HANSEN: There would be in case of fish kills. We use Department funds to investigate those type of problems. But on this routine long-term monitoring program where we've been reporting the toxicant levels of various pesticides, that program has been funded solely by the State Water Resources Control Board. We're a contractor to them.

CHAIRMAN PEACE: Thank you, gentlemen. Will one or both of you ...

MR. FARLEY: Would you like us to remain?

CHAIRMAN PEACE: Yes, that's what I was going to ask, because I think we probably will have some questions as we move along. And I appreciate your being willing to kickoff.

I was just thinking about the consequence of the word "kickoff" in the context of this hearing -- that probably wasn't a real good way of putting it! I should get out of the sports terminology.

Next, the gentlemen from the Water Quality Control Board, Mr. Swajian and Mr. Gruenberg.

MR. ARTHUR SWAJIAN: I'll use this mike over here ... I'm Arthur Swajian, Executive Officer of the Regional Water Quality Control Board. Phil Gruenberg will follow my presentation here with the slide show.

You have my prepared statement in front of you, and I'll just kind of peek at my statement and speak from that.

In the Colorado River Basin Region we have the most polluted river in the state, and probably in the entire nation, which is New River, which originates in the Mexicali Valley in Mexico, flows northward across the International Boundary at Calexico, and then courses through the urban and rural areas of Imperial Valley -- California's Imperial Valley -- and then discharges into the south end of the Salton Sea. The flow in the New River as it crosses the International Boundary averages about 350 cubic feet per second. And then the contributory flows from the Imperial Valley bring it to about 800 cubic feet per second, as it enters the Salton Sea.

The primary purpose of the New River is to transport agricultural drainage water from the Mexicali Valley and from the Imperial Valley to the Salton Sea, thus stabilizing the soil salinity in those two agricultural valleys. There is a corollary use of the New River, which is to transport community and industrial wastewater via the New River to the Salton Sea.

This corollary use in the Imperial Valley is controlled very strictly by waste discharge requirements prescribed by the Regional Board, so that the communities that discharge and the industrial dischargers have to meet those requirements, many of which are federal requirements that are enforced through the Regional Board. However, in its corollary use of the Salton Sea, Mexico, and particularly the Mexicali area, discharges raw and inadequately treated sewage, slaughterhouse wastes, industrial

toxics, septic tank pumpings, sewage discharges from residences, geothermal wastes into the New River, and mostly in the proximity of the boundary. And then, of course, it comes across into the United States into California. Recently we have found toxic chemicals also in there. Now, as Mexicali's industry and its population increases -- the population presently being something like 750,000 people -- why, the problem is going to worsen unless corrective measures are taken.

Until August 1983, the responsibility within the United States to obtain correction of the New River pollution was vested with the United States Commissioner on the International Boundary and Water Commission. And we, for some 30 years, have been making representations to that commissioner to try to get the matter corrected, but it has only worsened in all those years. We're very pleased now to note that the coordination role in the United States has been given to the Environmental Protection Agency. We think that it's a new show; a new ball game. And, you know, maybe something will come from that.

Since 1975, the Regional Board has been monitoring the New River at the boundary, and we have been sending that information to federal and state and local agencies that are interested in that data.

Although Mexico made some efforts during the 1970's to upgrade its sewer system -- it made more local sewers, it made some pumping stations, it made some sewage lagoons, so that it supposedly could pump all that up there -- the efforts were not enough and certainly did not keep up with the population.

Additionally, there was very poor maintenance, so that deterioration of the system took place faster than it could be maintained. The result is that their fail-safe system -- if anything goes wrong, the sewage and other wastes go to New River; which is what has been happening.

In 1978, the Regional Board held a public hearing on this New River pollution problem. And we were able to get quite a bit of national media coverage at that hearing and subsequent to that, with the result that it sort of paved the way, or got it on the agenda of Presidents Carter and Portillo. And with the result of that, this Minute Order 264 was developed, which is an agreement between the two nations as to works that are needed by Mexico; the schedules by which they will put them in; and the quality that they will meet.

The Regional Board worked with the United States Commissioner to develop those quality standards for New River in that Minute 264. We were not pleased with the quality standards. Obviously, if it was a discharge within the United States, there's no way we would have ever agreed to those quality standards; but, nevertheless, we considered it a first shot. However, almost from the date that that Minute 264 became effective, which was December 1980, Mexico has been in practically full violation of all of the schedules and the standards.

CHAIRMAN PEACE: So what you're saying is that the standards themselves were mediocre or ...

MR. SWAJIAN: Minimal.

CHAIRMAN PEACE: ... not as high as you'd like to see them at any rate; and even those standards have not been met.

MR. SWAJIAN: Yes, that's right. In fact, they were extremely higher than what we would have allowed.

ASSEMBLYWOMAN BERGESON: When an agreement of that nature is enacted, is there any form of monitoring or enforcement that is provided? Otherwise, what does the agreement do if there's not some guarantee that the terms are going to be met?

MR. SWAJIAN: The agreement does nothing in case the terms are not met. It merely said, here's what we'll do by such and such a time; and here's what we'll get as a result, in the river. Well, they did not do those works, and they are not getting that quality. For example, even EPA considers that 200-400 fecal coliform -- just for a number, a comparison value -- is what should be discharged into American streams. When they first started, this was their value. The Minute 264 says 30,000. And even that isn't met. We get way up in the millions of fecal coliform, which is a sewage indicator.

ASSEMBLYWOMAN BERGESON: Well, since the federal government was a party to this agreement, I assume, has there not been followthrough, or some kind of a chastising of the lack of agreement, or dissipation on the part ...

MR. SWAJIAN: Just -- actually the signatures were the United States Commissioner on the International Boundary and Water Commission, and his counterpart in Mexico. And, oh, I presume that the United States Commissioner has presented to his Mexican counterpart the fact that these values are not being met.

That's about it. I don't know what else to say. I'm sorry I can't answer your question any better.

CHAIRMAN PEACE: Mrs. Tanner had a question, too.

ASSEMBLYWOMAN SALLY TANNER: If we're not getting cooperation from another government, then is there something that we can do in this state at the border to prevent the contaminants from entering the United States? Is there some ...

MR. SWAJIAN: Not easily. We are downhill ...

ASSEMBLYWOMAN TANNER: I'm not asking if there is something easy that could be done. Is there something that could be done?

MR. SWAJIAN: There are a few possibilities. They'd be expensive. One of them would be -- and it would be quite costly -- that it could be lifted over an elevation of 250 feet and dropped into the Colorado River south of Arizona, and let it go through the Gulf of California. Now, that's very expensive.

ASSEMBLYWOMAN TANNER: What would happen with the Colorado River?

MR. SWAJIAN: Well, there is no drinking water intake in this range here. Mexico gets its water from the Colorado River at Morales Dam, which is right about here. After that, there's probably some farming intake here, but to the best of my knowledge, there is no domestic use.

ASSEMBLYWOMAN TANNER: And another possibility?

MR. SWAJIAN: Another possibility, which would, however, require at least a minimal cooperation from Mexico, would be to come this way, discharge -- there'd be about a 40-foot lift. I think it's about 40 feet, isn't it?

(Unidentified and inaudible response)

So a total of about a 70-foot lift, and then it would flow to the Laguna Salada, which is a large inland body of water there. I don't think there is too much water there, though. Is there? Rather dryish, but there may be some water there.

ASSEMBLYWOMAN TANNER: That would be a very expensive process?

MR. SWAJIAN: That would be less expensive than this route, but ...

ASSEMBLYWOMAN TANNER: Well, then are we considering doing that? Have we made any attempt toward doing that? Obviously, we're not getting the cooperation from Mexico. We are polluting the waters in the United States; and you know, we can't just hope that someone else will do something to correct the situation. Are we planning, are we hoping to do that?

MR. SWAJIAN: These ideas, now, the Regional Board staff, Phil Gruenberg particularly, has been working on those ideas, and has made, to the extent that we can with our limited staff and the limited time we have, some ball park estimates on that, but ...

ASSEMBLYWOMAN TANNER: I understand you have limited staff and limited time ...

MR. SWAJIAN: Yes.

ASSEMBLYWOMAN TANNER: Have you asked for additional staff?

MR. SWAJIAN: Yes, we have asked for additional staff through the regular budgetary process with the State Water Resources Control Board, and ...

CHAIRMAN PEACE: They're getting one additional staff person -- the equivalent -- in this year's budget. At least, it's in our version of the budget.

ASSEMBLYWOMAN TANNER: Okay. One additional staff would do?

MR. SWAJIAN: Yes, if we had what we consider -- If we had a total of 1.7, we feel that that would take care of our contribution to the works necessary. Obviously, the EPA is going to be in on assistance, and so forth.

ASSEMBLYWOMAN TANNER: Yes.

MR. SWAJIAN: We wouldn't be the whole engineering staff.

ASSEMBLYWOMAN TANNER: It seems to me that we've got to proceed in some manner such as that; because we can't depend on it being taken care of in Mexico.

One other question -- the Salton Sea, the contaminants are moving into the Salton Sea, is that correct?

MR. SWAJIAN: Well, there's a question about that. Now, the sewage ...

ASSEMBLYWOMAN TANNER: Wait. Do you people check the Salton Sea for contaminants?

MR. SWAJIAN: Yes, we do, we do some checking on that. There seems to be a diversity of results. The results we have say that at this time there is no contamination of Salton Sea fish. Now, what may take place in the future I don't know; but at this time, we have not considered that there -- is this not correct, Phil?

(Response inaudible)

ASSEMBLYWOMAN TANNER: How could we have that water, that contamination flowing into the Salton Sea and not have contamination?

MR. SWAJIAN: Well, for this reason. First of all, there is 61 miles of flow from the boundary to the Salton Sea. The river flows very fast; it is quite turbulent; and therefore, there's a tremendous amount of dissolved oxygen being developed in the river. And it burns, shall we say ...

ASSEMBLYWOMAN TANNER: Aerates?

MR. SWAJIAN: ... the organic matter. Now, there are certain toxicants which will not decompose under those circumstances. There may be, therefore, some toxic buildup in the Sea; but at this point, we're not detecting anything that would cause alarm.

ASSEMBLYWOMAN TANNER: Okay.

CHAIRMAN PEACE: Didn't the EPA tests have some different results when they went in?

MR. SWAJIAN: Yes, and Phil, I believe, is going to speak to that. We're not sure -- there's an inconsistency here, and we feel we should sample with them and get replicate samples, for each organization to find out just what seems to be the problem.

CHAIRMAN PEACE: My understanding was that, at least from the EPA perspective, the Water Quality Control Board was doing too much of their testing with fish that feed more at the surface rather than down at the bottom of the Sea. And that by

going down deeper, they were more likely to find the problem at an earlier point. In other words, I guess the junk sinks, is what it boils down to.

MR. SWAJIAN: Well, you are correct there, sir. The pesticides do sink. We have found from studies made in late 1960 and early 1970, on the federal/state study of the Sea, that the pesticides and other toxicants do sink into the bottom muds; which, let's say thank goodness for that, although there's life down there too. It does sort of give a filtering action to the main body.

CHAIRMAN PEACE: Do you have a question?

ASSEMBLYMAN DAVID KELLEY: Yes, I do.

On the chart up there, on the right-hand side, you've got the Colorado River flowing south.

MR. SWAJIAN: Yes.

ASSEMBLYMAN KELLEY: In the center of the chart, you've got the New River flowing north.

MR. SWAJIAN: Yes.

ASSEMBLYMAN KELLEY: Is the topography such that the flow of the New River cannot be reversed and flow south to that point there, coming up from the Colorado River? You've got a finger coming up there. I don't know what river that is, but is the topography such that you can't reverse the flow of the river?

MR. SWAJIAN: Well, the problem is, of course, that the wastes are coming in continually downstream, until finally, here, even these large collectors are crossing the river practically at the boundary. The sewage lagoons of Mexico discharge this way;

and discharge right at the boundary. So no matter what, you're here with the wastes. Over here, there really isn't any waste to speak of, let's put it that way.

ASSEMBLYMAN KELLEY: So the flow of the New River, at that point south of Mexicali, is small compared to what it is at the border.

MR. SWAJIAN: Yes, it's small and it's far less polluted.

ASSEMBLYMAN KELLEY: Then as you proceed north of the border into the Salton Sea, you've got a wildlife sanctuary there at the southern portion of the Sea, correct?

MR. SWAJIAN: Yes, yes.

ASSEMBLYMAN KELLEY: According to the Fish and Game report here, they find DDT, which is not used in the United States but apparently is used in Mexico. Do you find any damage to the wildlife, to the birds in the sanctuary there in that habitat? Has it been damaged as a result of the DDT that you're picking up in the ...

MR. SWAJIAN: Well, the Regional Board, to the best of my knowledge, has not made samplings in the wildlife refuge. If there's any data on that, it would have to have come from the Department of Fish and Game. We do not have that.

ASSEMBLYMAN KELLEY: Okay. But that shows, then, if you're picking up DDT and toxaphene in these materials that you're picking up agricultural by-products -- chemical by-products -- from the Mexicali Valley and the agricultural operations there; because if those materials are not available in the Imperial Valley, then they must be coming in from Mexico.

MR. SWAJIAN: Well, we are finding one thing. We have made some investigations in regards to soil in the Imperial Valley, and DDT, of course, had been used for many, many years. And it looks like we're still getting a washout from that, even though none of it, to the best of our knowledge -- and I would say none of it -- is being used in the Imperial Valley and hasn't been used for many, many years. Nevertheless, we're still getting soil washout results. And our tests are showing that.

ASSEMBLYMAN KELLEY: Okay.

CHAIRMAN PEACE: As long as we're on the questions of alternatives, we might as well cover them all real quickly. And one item that you didn't touch base on: the City of Calexico has suggested either tubing or covering or otherwise removing, at least from the surface landscape, that portion of the river which goes through Calexico. And of course, being right at the border and in an urban area, it is in the greatest proximity to the greatest number of people. Have you looked at, or have you any position on that suggestion?

MR. SWAJIAN: My comment on that would be that I would not want that recommendation to come through my office. I cannot recommend that.

CHAIRMAN PEACE: Why is that?

MR. SWAJIAN: I can appreciate Calexico's feeling. Frankly, if I were living there, I'd make that recommendation, too, in that, after all, it gets it past Calexico which is the populated area.

CHAIRMAN PEACE: Well, why doesn't that make sense?

MR. SWAJIAN: Oh, I wouldn't say it doesn't make sense. It has its possibilities, but the problem is that all it does is move this problem over to here, and here. The problem ...

CHAIRMAN PEACE: Doesn't that then put the problem in an area where the land availability is very large; where there's a very sparse population; where then maybe we could deal with some of the experimental possibilities in terms of treating, whether they be a combination of hyacinth technology, tules, et cetera, by just separating it from the populated areas and getting us out into a flat area where we can do some kind of experimentation? I mean, basically what I'm hearing is you don't have anything other than very expensive engineered kinds of possible ways of approaching this. If that's the case, what do we have to lose by going into what is, comparatively speaking, a relatively inexpensive means of at least making an effort? The worst thing that could happen is that we fail; and we've separated the worst portions of the river from the highly populated area in Calexico.

MR. SWAJIAN: Well, of course, I'm looking for, you know, the actual solution to the problem. And yes, it would be engineering; yes, it would be expensive. I have to admit that. There's nothing cheap about this thing at all. I can appreciate the idea that it will pass Calexico, which is a populated area. You're certainly correct on that. And it may give some experimental possibilities, but we can do that anyway. At this point you can still do your experimenting whether or not there's a tube there. The one thing I'm a little concerned about is that even to put the tube in for that distance it has to be large

enough to take storm waters, too. Otherwise, there will be periodic overflows, and those overflows will include the sewage and everything; so that it would have to be much, much, much larger than the present flow of the river. I would presume that if we're trying to get federal funds, which is after all the only big source of funds available that I know of, they will probably just give us one shot at the money. If we put the tube in and then try to solve -- find out that, oh, gosh, we still have a lot of solving to do ...

CHAIRMAN PEACE: But there's no negatives to the tube, per se. I mean, it's just that you're concerned that that would impact getting to the ultimate solution?

MR. SWAJIAN: That's right.

CHAIRMAN PEACE: But the tube itself, it seems, would do what it is that Calexico thinks it would do?

MR. SWAJIAN: It would take more than just a tube, though. It would have to take air intakes all along the line ...

CHAIRMAN PEACE: Well, whatever the engineering element ...

MR. SWAJIAN: ... for oxygenation throughout there.

CHAIRMAN PEACE: All right, thank you.

MR. SWAJIAN: Yes, all right.

I wanted to mention that in December of 1982, the Regional Board staff conducted some testing at the New River for other than sewage -- the toxicants -- and we found considerable toxicants in the river. The result is that in the Spring of '83, we made some tests inside Mexico itself. And finally, in June

'83, we made a five-day study and came up with the report which you have, which Phil Gruenberg prepared, about the "Water Quality Investigation of New River Watershed in Mexico." You have copies of that report. There were photographs with that. He has some slides from that that he will show.

Strange though it may seem, through all these 30 years that the Regional Board has been making representations, we have had extreme difficulty in getting federal, state, and local governmental officials to show an interest in doing anything about the New River. The lone exception to this has been Dr. Lee Cottrell, the Imperial County Health Officer, who has always been in the forefront in this matter. We are pleased to see that during the last year or so, there is a very accelerated rate of interest in all levels of government and in the citizenry.

So in regards to what we can do about the Salton Sea and about the New River problem -- I think I've kind of jumped ahead of that anyway, and I have explained what we consider to be the feasible engineering alternatives; although yours is also an engineering alternative, so far as that goes. So it's to pick it up and get it some way, somehow to the Laguna Salada.

And we call this our "present" recommendation, because any thorough recommendation will involve thorough study. And we're hoping that this meeting that's going to take place May 21-22, in El Centro, will be the beginning of these real technical studies, because that's really necessary.

And I'd like to thank Chairman Peace and the Assembly group here for assisting us in getting staff so that we can provide the participation that we should provide for this important problem.

Phil Gruenberg, Senior Environmental Specialist on our staff, was the one that conducted those studies in Mexico. He's very much acquainted with the area and with the problems there. And he will make a slide presentation

And following that, if you have any questions, we will stay and try to be of assistance. Eventually we have a flight, and when it gets near to that, why we would have to leave. Thank you very much.

CHAIRMAN PEACE: Actually, we all have a flight, somewhere.

MR. PHIL GRUENBERG: For the record, my name is Phil Gruenberg. I'm an Environmental Specialist with the Regional Water Quality Control Board, Colorado River Basin Region.

To begin with, I would like to show you some slides that depict some of the problems in the New River Watershed in Mexico. All of these slides were taken in Mexico, and most of them were taken last Spring and Summer.

First, I'm going to be discussing the sewage problem over there.

Mexicali does have a sewage treatment facility. It's essentially a series of raw sewage lagoons. This is the effluent, or the final treated product, from those lagoons. It is not very good. It would not meet our standards over here; however, it is treatment, at least of sorts.

Despite the inadequate treatment, Mexicali isn't even using all of their lagoons. Their detention time has been estimated at less than 10 days, which is totally inadequate. It should be about 30 days, really. So it seems amazing that they have these basins over there -- and here are two of the largest basins that weren't even being utilized. I have no explanation as to why they weren't being used.

The biggest problem over there concerning the sewage, though, really isn't with the inadequate treatment in the ponds, it's with their collection system. In other words, getting the sewage to the ponds. This is the South Collector here where it crosses the New River. Just about every time that I've been over there looking at that, they have been bypassing raw sewage from the South Collector into the river. That dark colored water down there in the foreground is raw sewage, and it's actually moving back upstream there a little ways. It was a very considerable volume.

In addition to these problems with their pumping plants and the bypasses at the collectors, much of their pipeline along the collector systems has deteriorated and needs to be repaired. We hear about a break occurring about every six months.

This is a sewer that was never intended to be connected to the collection system. It was designed to convey sewage directly into the New River. We located at least eight such sewers over there. And all of them were independent of the City's collection system. Some of these were as much as 5 or 10 miles away from the treatment facility.

In addition to those unconnected sewers, there's another problem with residences which have single sewerage systems that discharge raw sewage into the river. There's a house there with -- you can see a pipe in the foreground which is a sewer pipe, which is draining off the sewage from that one or two houses there. There's a lot of this over there along the banks of the river and its tributaries. They have these outhouses, and then they run pipes right down into the water. There's another one there, with the outhouse right over the water.

CHAIRMAN PEACE: Don't want to miss!

MR. GRUENBERG: There's some more there.

Another problem, and this isn't an isolated problem because we've noted it several times on just very brief trips we've made over there, and what it is is septic tank waste haulers dumping loads of their waste directly into the New River or its tributaries. There's where the waste from the trucks is entering the drain, which is tributary to the New River just a ways downstream.

That concludes my discussion of the sewage problem. Next, we'll take a look at the industrial waste problem.

This area here is Industrial Zone 4, which is one of the largest industrial zones in the city, and the one where we have noted some particular problems. That ditch there is the ditch that conveys wastewater from the industrial plants to New River. There's another view of the ditch. And another view. Note the sludge and such. Another view. In some places, there was a tar-like, oily-like substance that floated on top; and then the flow

of the other wastes went underneath that. Again, note all the sludge in there.

Okay, some of the particular industries that are discharging into this ditch -- let's see if I can get that sign in focus. Anyway, that's Quimica Organica. And here's a couple of pictures of the plant. This plant is involved in the manufacture of pesticides and also, apparently, some rubber products. One of the main products that they manufacture is pentachloronitrobenzine. There's their main point of discharge through the drain. There's another picture of it. Note the different colors. Every time I've gone by there, there's a different volume and different color of material coming out of there. A little bit different again. There was a second point-source; a smaller pipe discharging some stuff from the same plant. And another pipe there.

Another one of the industries that's discharging wastes into the New River is Conosupa. And this is a plant that apparently is involved in the manufacture of vegetable oil. Here's some of the discharges that come from this plant. By the way, we did test some of these discharges and found that these particular ones were very high in oil and grease.

And I forgot to mention it, but on the Quimica Organica discharges, the ones you just saw previous to these, we had also analyzed those and found very high concentrations of volatile organic toxicants, including carcinogens and many pollutants which are on EPA's list of 129 priority pollutants.

There's another Conosupa discharge. There were about a dozen pipes coming from that outfit, each pipe discharging something different looking. This ditch gets quite a mixture.

Getting into another area, there's a paper mill, Fabrica de Papel San Francisco, which is also discharging wastes in the New River. We were not able to take any samples of this. It also serves as a recycling center, apparently. We are concerned about the discharge though, because downstream of it, there was a considerable number of dead fish. So, although those fish could have been killed from a lack of oxygen, there's still concern.

Another industrial discharger is this cotton gin operation here. They were discharging that black, tar-like material into the water.

Now we'll take a look at another problem, which is that of solid waste disposal.

This is the Mexicali dump here, the entrance to the Mexicali dump. That's the dump there. Notice the garbage trucks: they back right up to the edge of the bank and discharge their loads right directly into the water. And that's tributary to New River about one-quarter mile downstream to that point. In addition to the main Mexicali dump, there are many numerous smaller dumps located throughout the Mexicali Valley area, such as this one. And this one. And another one, getting closer to the border.

And this was apparently an industrial solid waste disposal site. Note the plastics materials. There are apparently several plastics manufacturing plants in the area dumping drums in there, and everything else.

Now we'll talk about another problem, which is that of animal waste.

To begin with, this is Planta Leobardo Lechuga Cruz, which is the main Mexicali slaughterhouse. And it's a very big slaughterhouse. All the wastes from their operation are apparently dumped into this drain, which is tributary to the New River. Very intense odors there, of course. A ways down it formed a very thick crust. It looked so thick, you could almost walk across it, with the liquid flowing beneath it.

This is a government-owned hog farm, and wastes are washed from the hog pens out into the drain periodically. And again, it's tributary to the New River a mile or so downstream of this point.

Dairy wastes: that dark brown color up on top. There were several dairies in the area that were discharging wastes.

Cattle feed yards: there's a discharge from a cattle feed yard. Runoff through a feed yard there and where it enters the stream.

In addition to the larger animal production and feedlots and such, there are many small operations which were just small pens that they'd put along the banks of the river, and in most cases, the animals had access to the water. And in one particular area, there was about a one-mile length of river that had had these operations situated on it. They design them such that when the pens get full of manure, it'll just sort of sluff off into the water and get carried on down. There's a hog pen with hogs up there in the background. Ducks, goats, everything.

What that is, is somebody had apparently slaughtered an animal and then dumped the innards there in the water. It's in the background there.

There's a dead animal carcass that was disposed of there in the foreground.

Finally, we'll take a look at the geothermal situation.

This is the Serra Prieto Field, South of Mexicali. And this is a ditch here that is tributary to the New River and flows right through the geothermal area. Now, it was fenced, so we couldn't get in there and actually find a point-source discharge, but we did take samples of this water and had them analyzed. And the results indicated that it is of geothermal origin and not of Colorado River origin. So we suspect that geothermal wastewaters are being diverted into this ditch.

There was another tributary ditch in the same area. And even a point-source discharge.

They were putting in a lot of new wells, and putting in a lot of new transmission lines. And it appeared in the area that they were putting all this new development in that all of the drainage would be to the New River Watershed. Previously, in the other area where they had developed, the drainage was to Laguna Salada, or to the Gulf. But not so with this new development.

I also understand they're getting prepared to sell electricity to San Diego, so that may be why there's so much construction on-going now.

To sort of sum things up, the New River as a whole really is -- there are some areas of it that are not badly polluted at all.

This is Lake Xochimilco, and it's about 5 miles upstream of the International Boundary. And there are people that swim in it and fish in it and boat in it. And it has some water quality problems, but in my estimation, they're relatively minor ones compared to what we've looked at here. So that's pretty darned good water there.

(Inaudible)

Yes, on the Mexican side. And that represents probably about two-thirds of the total volume of water in the New River.

Now, immediately downstream of this lake, you have a tributary that comes in, that one in back there, and that represents the drainage from the Mexicali dump; from Industrial Zone 4; from most of those animal pens; and a great deal of the pollution that I showed you in these pictures. Also, some raw sewage discharges. That is some very, very foul stuff. It looked to me to be almost nothing but concentrated wastewater.

There's a little better shot of it that shows it in a more typical state. The only thing growing in it was some kind of a grayish-white fungal slime. There's another shot of it there.

So anyway, at this point, if this particular drain, which has a fairly small flow, could be intercepted away from the New River so it didn't pollute the New River, that might be the start of a solution to the problem.

They had another tributary that enters the New River. About 2 miles downstream is this lake where they have a park there, and a zoo. And again, the water is a very good quality.

There are people swimming in it and boating, et cetera, and it looked very good to me. And a fairly significant flow discharges from that lake into the New River.

A little bit further downstream, a couple of miles from the International Boundary, Drain 134 is tributary to the river. And again, this is extremely polluted water. It appeared to me to be nothing but concentrated raw sewage and industrial waste. It flows right through the heart of the city. And again, not too much of a flow -- there it is on one day. And, admittedly, the flow was a little bit greater on that day. It varies from day to day, depending on what's going in there.

But anyway, it seems to me that possibly the bad flows, which would be Drain 134 and that drainage from the dump, et cetera, if those could be collected and put in a channel parallel to New River; and in addition collect all those raw sewage pipes into that, that we could have a pretty clean river flowing across the border into the United States.

That concludes my slides. I'd like to go over here to the map for a minute and just very briefly -- actually, this map is not drawn to scale and it doesn't really show the extent of the New River. The New River really spreads out over a tremendous area here. Up to this point here, where this lake is, represents about two-thirds of the flow in the river. This small tributary here, which is the one where the dump is and Industrial Zone 4, that represents probably about 20 or 30 CFS of flow. And then that Drain 134, which was also a mess, that's only about 10 CFS. So if an interceptor could be put in at this point -- to

pick up this mess here; any of these raw sewage discharges along here; this Drain 134 -- you could possibly put in a pump right here at the boundary -- you'd have a 30-foot lift -- and pump this stuff to a point over here, which would be about 5 miles away; and then from here, pump to Laguna Salada, which would be about another 5 miles away, and we'd have possibly a 40-foot lift there.

Then finally, to wrap things up, before Art and I begin answering your questions, I wanted to briefly discuss our monitoring programs.

The Regional Board is presently monitoring the New River at the boundary on a monthly basis for a variety of constituents, such as bacteria, which indicates sewage; dissolved oxygen; detergent; oxygen demand; salt; and a few other things. This monitoring does not routinely include analyses of toxics, due to the high analytical cost of analyzing for toxics. So most of our toxics work is done as special samples that have been collected.

We have this year collected quite a few samples for toxics, and delivered them to the California Department of Health Services laboratory for analyses. And since December 1982, a total of 83 different volatile organic toxicants have been reported from samples collected by the Regional Board at the International Boundary and at locations in the New River and its tributaries in Mexico.

The Regional Board also participates with the State Water Resources Control Board in the statewide toxic substances monitoring program. And since Fish and Game just discussed this,

I'm not going to get into any great detail on that, except to say that EPA had also analyzed some samples on that program. And their results did not appear to be in agreement with the Department of Fish and Game's. And again, there's some speculation that that may have been due to the species of fish that were looked at. We do have future plans to have replicate samples run by both labs to resolve any disparity.

And as concerns the Salton Sea, we're going to be sampling all the different species of the fish in the Sea in this next go-around. So we shouldn't run into that problem about different species of fish and different results.

EPA has also done some work for us on toxics analyses of New River water samples. And in general, these have not been reported at a low enough level of detection to be comparable to results that were reported by the Department of Health Services laboratory. Most of EPA's results were simply reported in a way which indicates speculation that a given substance may have been present. So this kind of data really doesn't do us a lot of good. So we'll have to talk to the lab about that and see if we can get them to report the values so that they are more useful to us.

Finally, there are some future plans to continue toxics monitoring of New River water and fish, both in the United States, particularly near the International Boundary, and possibly in Mexico. Such monitoring will be useful in gauging Mexico's progress and correcting point-source discharges of toxic industrial waste, and in identifying new discharges of toxic waste in New River.

That concludes my comments. So if there are any questions, Art and I will be happy to try to answer them.

CHAIRMAN PEACE: I think I'm going to reserve any questions I have until we get through some of the other testimony. That way we can make sure we're directing questions to the right people.

Senator Speraw will return in just a few moments, so let's move on to the Department of Health Services.

MR. RICHARD WILCOXON: Mr. Chairman, for the record, my name is Rich Wilcoxon. I'm Chief of the Toxic Substances Control Division. I've previously sent you a letter indicating the Department's position regarding placing the New River on the state Superfund list.

CHAIRMAN PEACE: Why don't you explain that?

MR. WILCOXON: I'd be happy to. Before addressing the issue ...

CHAIRMAN PEACE: And before you do that, let me for the record indicate that I met with Mr. Blonien in the Governor's office, and had subsequent discussions with Mr. Swoap; and next Thursday at -- 1:30, is it? -- we will all meet and discuss this decision.

MR. WILCOXON: Good.

CHAIRMAN PEACE: And hopefully come to a different conclusion!

Why don't you go ahead and go forward.

MR. WILCOXON: Before addressing the issue of the New River, I'd like to briefly explain the state's Superfund program and how it operates.

The state's Superfund program, which was established in 1981, provides for a response to be made for releases of hazardous substance, including spills and hazardous waste sites, and also provides funds for the state's 10 percent share of the cost for sites that are eligible to receive monies from the federal Superfund.

The basic thrust of the Superfund program is to clean up sites which contain hazardous waste. It is apparent that the intent of the legislation was not to establish facilities for the continuous treatment or removal of hazardous waste from rivers, streams, and/or oceans. The authority for the building and operation of such facilities is vested in legislation known as the Clean Water Bond Act, which provides for the establishment of water treatment facilities.

I would like now to discuss the appropriateness of placing the New River on the state priority ranking list, which would indicate that it is, in fact, a hazardous waste site. The Department is aware that the New River is one of the most polluted rivers in California, and that there are public health dangers associated with this river, particularly as the river flows through the City of Calexico, California.

Twenty-three priority pollutant organic compounds have been identified in the New River water. The most notable toxic waste discharges to the river in Mexico are TCE, benzene, bromofluoromethane acetone, and dichloromethane. The inadequate sewage system in Mexicali, and the practice of dumping untreated and partially untreated sewage into the New River, has also resulted in high levels of bacteria.

I've been in contact with the Imperial County Health Office, and have been informed that the river has been posted, which warns our citizens of the pollution and the public health threat that it poses.

The Environmental Protection Agency, my program's counterpart at the federal level, also is aware of this problem at the New River, and in discussions with EPA, we have determined that the appropriate remedy to this problem is for action to be taken by the government of Mexico. Ranking the river on the Superfund list ...

CHAIRMAN PEACE: Have any of those folks given you any odds on that ever occurring?

MR. WILCOXON: Well, let me get to that in a minute.

CHAIRMAN PEACE: Okay.

MR. WILCOXON: Ranking the river on the Superfund list would be inappropriate. We feel that the work being done by EPA, the State Department, and the Border Commission is the most appropriate mechanism for resolution of this problem.

In summary, the problems with the New River are similar to problems being encountered with the Alamo River and the Tijuana River -- that is, raw sewage and industrial waste being dumped in these rivers in Mexico. Placing these rivers on the Superfund ranking list will not resolve the problem. The solution appears to be to have EPA and the State Department work with the Government of Mexico to resolve the problem at its source: establishment of waste treatment facilities and better sanitation practices in the area where the problem occurs. That is, in Mexico.

Thank you.

CHAIRMAN PEACE: Senator?

SENATOR OLLIE SPERAW: Do you really believe that the EPA, working with the State Department, is going to cause Mexico to expend funds, the necessary funds, to cure these problems?

MR. WILCOXON: Well, in late August of last year, President Reagan and the President of Mexico signed an agreement which designated EPA and the State Department, with EPA as the lead, to resolve these pollution problems that are emanating from Mexico. Frankly, Senator, in response to your question directly, I think that is the way it will have to be resolved in the final analysis. How soon it will be resolved -- I think all of us here in this hearing wish it would have been resolved years ago. It's a real problem. But I think that working together with the government of Mexico and our government, it can be and will be resolved.

SENATOR SPERAW: I feel the President got a lot of bad advice from the State Department, and it is nothing more than a continuation of what's been going on for 30 years, which is the State Department and the federal government completely ignoring a vital problem.

I might add that when Mexico complained about the salinity of the Colorado River because of the drainage water from agriculture being put back into the river that we jumped in and cleaned up the Colorado River for them. But we didn't quite have the intelligence or the good sense to demand something in return; that they do the same thing.

I think it is pure wishful thinking that anything in the predictable future is going to come out of this conversation the President had with the President of Mexico. I met with the EPA Deputy Director, Fitz Hugh Greene, in Washington a couple of months ago, and he didn't hold out a great deal of hope. He said that as beginners, they had been asked at the first meeting to set forth what they considered to be the problem and possible solutions. And he said they provided the letter in a matter of days. And at that time there was a meeting scheduled in March; however, there was infighting in Mexico over who the Mexican representative was going to be. It was somebody's wife, and somebody else's wife wanted to be it instead. And he didn't know when that was going to be resolved.

And I think that we have somehow literally got to take the bull by the horns and do something and not wait around for the President to have another meeting with the President; or for the Mexicans to decide to do something. We have to initiate something. And if it means using Superfund monies to buy it; or building a dam across the damn place and confining it in Mexico, or whatever it is, I think we'd better start using our imagination and our initiative and our aggressiveness to cause something to happen. I <u>do not</u> think that we can say, well, it's up to the State Department and the EPA to negotiate with Mexico and therein lies the solution. I don't believe that. I don't think anything is going to happen. And I think we're foolish to sit around and hold hearings like this and entertain that type of thinking.

I don't know the best -- well, I think what I would be tempted to do, after some negotiations had taken place and we had discovered where we were heading, is perhaps to line up a small force of bulldozers and start filling the New River to a sufficient height that it would create a dam. And I think we ought to rename it. I think the name New River is a misnomer; I think it ought to be called the "River of No Return," and perhaps we would get more attention.

Those are substantially all the remarks that I had to make; and I have to get back to another committee ...

CHAIRMAN PEACE: Thank you, Senator.

SENATOR SPERAW: ... so I used this opportunity. I might add that Jack Germain, my Administrative Aide, was in contact today with the EPA representative in San Diego, and perhaps that's going to be brought out here, or already has been brought out, I don't know. But they're bringing in technical experts to begin a comprehensive study and evaluation of the alternatives on the U.S. side. God knows why we have to do it again. And they did want us to know that they had concentrated on the Tijuana problem and had gotten some $55 million for that. And they did acknowledge that the New River had been shortchanged. And so maybe that's encouraging, if anybody can find any encouragement in that.

Mr. Chairman, I want to compliment you on your work towards highlighting this situation. And I want to be of any help I can. But I really feel that we've got to figure out some aggressive action that the State of California can take to force

something to be done. I think any other solution is just more words over the diplomatic dam.

CHAIRMAN PEACE: Thank you, Senator, and of course, I appreciate the help that you've been on this.

Mr. Wilcoxon, in following that line, you try to make the comparison in your letter with respect to Tijuana and Alamo and New River. Let me tell you why Tijuana and New River are totally different animals. They are not in any way comparable. And the fact that you would come before us -- and in your letter -- and make that statement concerns me. Because it tells me that the Department didn't do much beyond surface investigation in evaluating our request for Superfund status. You will note that I never made a request for Superfund status for Tijuana River, nor would I, because for the reasons you stated, it certainly would not be an appropriate request.

However, the thing that is different about the New River, and you may have seen it in the slide presentation that was just made, the New River is, in fact, a toxic waste dump site for both liquid and solid toxic waste. And as the Attorney General clarified for us, in response to your first refusal to designate, the fact that that happens to emanate from Mexico as opposed to its source being in the United States is not relevant to the question of designation as a Superfund site. What is relevant is that the people who are potentially damaged by the fact that it is a toxic waste site are American citizens.

Moreover -- as we'll find a little more out about as we go through this hearing -- you're going to also find that a

significant portion of those companies in operation in Mexico are companies which have direct and indirect ties, both in terms of ownership and in terms of customers of their products, to American industries. So the question as to the source of the funds coming from American industries operating in California -- and we have a list which the members have in their packets of California and other American companies that are actually operating in Mexico and contributing to the problem, okay? The fact that we collect our Superfund monies from these California companies is entirely appropriate.

Moreover, if, in fact, we are left with the circumstance of addressing the problem that the Senator describes -- and we'll hear from some folks who have lived in Mexicali and the Imperial Valley for years. They have a little more realistic expectation in terms of dealing with the other side of the border, because they've lived there their whole lives. And I've lived in a border community my whole life, and I think we understand a little more about hearing the wishful thinking and the every four-year summits between presidents. Every time there's a new president, there's a new summit between Mexico and the United States, and the presidents agree they're going to solve this. That's not new. We all know that. It's nonsense and we expect them to do that. But that's politics.

We're not interested in politics. We're interested in solutions. And that's why we went to our Department of Health here in California and asked for a solution, not more politics. We asked for the first step of at least recognizing and saying to

people in Imperial County, we're over this 30 years of total degradation of the area. We know we have a problem; we're going to recognize it's serious; and we're going to recognize it's a toxic waste site.

If we do have to go in and solve the problem on this side of the border, and that solution is the kind of solution you heard talked about in terms of the engineering work that has to be done, that is precisely the kind of operation that the Superfund was established to take care of, because it's not an on-going kind of thing.

For example, if we just did Calexico's suggestion of tunneling to get this toxic waste away from the populated areas near the border, if nothing else qualified -- if no other activity qualified, because of the on-going maintenance criteria -- at least that could qualify.

And for the Department to draw the line at the beginning and say, "we're just going to shut you out of the ball game;" and say, "you don't even qualify for consideration," really concerns me. Because, let me tell you something, if it were the same toxic circumstance -- which by the way does not exist in Tijuana. To our knowledge, at any rate. And there seems to be pretty good evidence that the seriousness of the toxic situation is not there. But if the same thing were occurring in a metropolitan area of the state, I guarantee you your Department, whether it wanted to or not, could not respond negatively to a request like this.

That concerns me, because combined with some of the conclusions you've drawn in your letter, in terms of making comparisons with Tijuana that don't make any sense, and not recognizing the uniqueness of the toxicity problem, it reflects to me maybe a certain insensitivity to rural communities. I wonder how many other rural communities there are where we have solid waste sites, other kinds of sites, that aren't getting the kind of attention other parts of the state receive, because we don't have the population concentration?

Now, I don't mean that as a "beating up" proposition; but, you know, it needs to be said. We'll meet next week. I've got to tell you that I was more than disappointed in your letter. I think all of us in this business -- you know the way it goes, your first reaction is to be angry and stuff. But while I was driving home, I realized I wasn't really angry about it. I was really a little depressed and hurt, because these people are living with a circumstance that only you and I can solve -- not the EPA; not the federal government; not Mexico; not the International Monetary Fund -- you and me.

I appreciate your testimony.

The next person on the agenda is Mr. Schueller from the Water Resources Control Board. Hi.

MR. HARRY SCHUELLER: Hello. For the record, Harry Schueller, Deputy Executive Director, California State Water Resources Control Board.

In my written presentation I had a rather lengthy explanation of the physical circumstances, but I don't think I can compete with the photo display.

Just briefly, there's been a long and exceedingly disappointing history with this problem, as we all know and we've all heard today. In the past, we've attempted to take actions. Those actions seem to start off and kind of lose their effort after a while.

The most notable was back in 1980, when we approached the International Boundary and Water Commission with suggestions to establish a new Minute to the existing Treaty, to establish only the most minimal water quality standards. We hoped that this would at least be a show of good faith to the Mexican government. We weren't asking for the impossible; the terribly costly. And we had no response.

Similarly with the agreement in August of '83: to date there have been no meetings with Mexican officials on the Mexicali New River problem. All the effort has been concentrated on the Tijuana situation, which is larger -- it impacts a larger number of people -- but not nearly as complicated a problem, as you can well see from the previous presentation.

CHAIRMAN PEACE: Given that experience, what's your expectation? We've asked some other people, you know, really, how realistic is it to expect the Mexicans to act? In your opinion, are we dreaming?

MR. SCHUELLER: Well, I think the Mexican government has taken actions. Their priorities are different than our country's. I mean, in defense of them -- slightly -- they have different priorities; they have people to feed and people to clothe; a tremendous economic problem ...

CHAIRMAN PEACE: Well, given all of that criteria then, at what point do we say, okay, let's recognize the difference in the priorities, and seize the seriousness of the problem, and deal with our problems?

MR. SCHUELLER: The thing that's most disappointing to me is I think we have to assist them. We absolutely have to assist them economically in achieving solutions. In the Tijuana problem ...

ASSEMBLYWOMAN BERGESON: Now, by we, are you referring to the State of California or the federal government?

MR. SCHUELLER: I'm referring to the federal government.

ASSEMBLYWOMAN BERGESON: All right.

MR. SCHUELLER: I'm referring to the federal government; we as a nation have to assist.

In the Tijuana situation, we've especially looked for solutions where they can be constructed on the United States side of the border, so that we can have the caretaker responsibility for those facilities. I think that's similarly essential in the New River situation.

CHAIRMAN PEACE: So you would say that we need -- that's an important point, because that's different than a lot of the testimony we've heard, in terms of where the solutions lie.

MR. SCHUELLER: I agree with Senator Speraw. If we place the control in the hands of the Mexican government, because of their different sets of priorities, while we may solve the problem temporarily, it'll come back to haunt us in the future. We have to look for solutions that are low technology solutions,

and ones which we can assist in controlling, so we can provide the necessary operation and maintenance in case of system failure. And as an engineer, no matter how well engineered a system is, it will, indeed, eventually fail. It needs replacement parts, et cetera.

ASSEMBLYWOMAN BERGESON: Do you think that the subject has been effectively articulated as far as the seriousness of the problem, say, to the Mexican government? I mean, are they aware of the nature of the problem, both to their people and to our people?

MR. SCHUELLER: I'm sorry, I do not know. I do not know what the diplomatic communications have been between this country and the federal government of Mexico.

ASSEMBLYWOMAN BERGESON: I assume someone must know what the diplomatic relations are, and to what extent that kind of communication is parlayed into some degree of ...

MR. SCHUELLER: Historically, the International Boundary and Water Commission, which is an arm of the Department of State, essentially handled all negotiations with the Mexican government. That was essentially true up until last August, when they transferred that responsibility to the Federal Environmental Protection Agency. Rather unique. I don't know the precise reasons for it, other than the speculation that 40 years of unsatisfactory response on the behalf of IBWC was the reason. But I'm sorry, I just can't answer that question. I haven't been privy to the nature of those communications between the two federal governments.

ASSEMBLYWOMAN BERGESON: Well, when you talk about priorities, you're talking about public health, you're talking about basic issues of human life, survival and ...

MR. SCHUELLER: Right.

ASSEMBLYWOMAN BERGESON: I would find it difficult to believe that if there was an awareness on the part of the Mexican government of the seriousness of the problem -- I'm not sure that that's even been articulated to many of the general public.

MR. SCHUELLER: Well, I think you'd perhaps agree with me, though, that we, in this country, have generally had a different standard of public health than other parts of the world.

ASSEMBLYWOMAN BERGESON: Do we have any idea what the disease conditions are; the impact of this kind of infestation on the people of Mexico?

MR. SCHUELLER: I do not have any in the case of Mexicali. Now, there have been reported cases of disease in Mexico -- and I'm trying to think of the disease off the top of my head, and I've forgotten -- with regard to the Tijuana situation, with children playing at a beach just a little bit south and to the west of Tijuana, where the raw sewage empties into the surf -- and I'm tempted to say hepatitis, but I can't be certain.

CHAIRMAN PEACE: In terms of what has been found in the river, in terms of the diseases: polio, dysentery, salmonella, hepatitis, typhoid. That's just a few examples of what's in there.

MR. SCHUELLER: I'd be glad to answer any questions that you might have; but quite frankly, there's very little that I can offer that hasn't been said.

CHAIRMAN PEACE: I appreciate your testimony.

MR. SCHUELLER: It's a disappointing situation.

CHAIRMAN PEACE: Thank you.

MR. SCHUELLER: Thank you.

CHAIRMAN PEACE: And now we have Dr. Cottrell from the Imperial County Health Department, who I've no doubt will expand upon the last area we were touching on. You're getting to spend more time up here than you do down there.

LEE COTTRELL, M.D.: Yes, really. I have heard a lot of my life go by here today. And one of the main things is that every time Mr. Art Swajian makes a presentation on the New River, he has had the bad habit of making me follow Mr. Friedkin, and it would just blow me away. And now I have it in for you, Mr. Peace, for having me follow Mr. Wilcoxon. And I had to go out there and chew him out and just about didn't get back in to the hearing.

You've all been given a description of the river as it flows through Mexicali, picking up its raw sewage, foam, trash such as tires, dead animals, household refuse, vegetables; and the monitoring of the river in the United States has said it's the dirtiest river in the United States. And that appeared in the Times magazine in 1978.

The coliform count, which we designate as E. coli, is our barometer that we use to determine sewage contamination of a

water source. It's not always the best, but it's economically and technically easy to do and, therefore, has been used. The water qualities in the United States for beaches and so forth allows approximately 1,000 E. coli cultures. At the border, we're getting as high as 35 million cultures per hundred cc's of river water. The river flows through some populated areas of Calexico. It also goes very close to Seeley; it goes very close to the Naval Base; and it goes very close to Brawley, before it empties into the Salton Sea. The New River is a reservoir for numerous diseases.

Studies are very expensive and can only be performed here in Sacramento or our Department. We usually don't have the money, so we depend on other agencies, such as Mr. Swajian's and our own State Department of Health, to assist us. We had two extensive tests run in 1979 and 1982, and we found 15 viruses which were capable of producing disease in man, including hepatitis, but also all three strains of polio. And we found five bacteria that could cause disease in man. These diseases are especially devastating in their attacks on children.

The New River has been able to extend its contagium beyond its banks because, as you noted from the slides, a foam has been created at the effluent entrance into the New River just distal to the boundary. And this foam has been noted to be blown above and beyond the banks of the river. We have had samples of the foam taken from the front door of a major food market and have isolated pathogens capable of producing disease.

The Health Department in Imperial County is not projecting the possibility of a disease outbreak. We're projecting the probability of a disease outbreak. And the closer our human population moves to this source of contamination, the more exposed they will be and the more likely they will be of getting sick.

Increasing the problems at this time are the existence of proposed city and county parks adjacent to the New River. We have new subdivisions that are getting awfully close to the New River. We have expansions at the Naval Air Base. We have shopping centers and activity centers that are coming with population expansion.

But we also have the uninformed traveler -- hunter, fisherman, weekender, which sometimes number 50,000 in our county; and snow birds, who number approximately 15,000. There's concern for these people, because as a group, they will have a low immunity to the diseases that they would contact in that area.

We also have a serious problem with encephalitis. And I'd like to parenthetically add here that the gray matter, expressed by Mr. Wilcoxon from the State Department of Health, reflects exactly the problem that we had when we were anticipating and projecting an encephalitis outbreak because of the flooding along the Colorado River. And I can say that you were the only one that listened to us, Mr. Peace; and yet I remember one night, late, you turned to me and said, "Do you really believe what you're saying to be true?" And as we all know now, we did

experience a 25-year high outbreak of encephalitis laid directly to the Colorado River.

But this mentality was the same thing we were bucking at that time. They wanted somebody to be sick or dead before they would help us eradicate a problem. And we were saying that this is contrary to our schooling. We are trying to protect the public health and avoid an outbreak.

The Culex Tarsalis mosquito grows along the New River, and it's been shown that they not only grow more prolifically but that they also are more virulent in sewage water. Our studies along the New River indicate that 42 percent of the mosquitos breeding there are carriers of Western Equine Encephalitis, and also St. Louis Encephalitis.

We have also shown, contrary to the textbook, that these mosquitos are capable of traveling 15 miles, rather than the 3-mile radius of their breeding ground. This is a danger to people, particularly children, who may play and swim in the New River in spite of its being posted.

And I would again like to deviate and tell you about that posting, about which you've been told in earlier testimony. That posting was one of the -- it was a Goldstein invention to the ultimate. Because one day, Friday afternoon at about five minutes to 5:00, we were notified by the State Health Department that we, the Imperial County Health Department who can't even afford to do the virology tests, had to post the river and keep people away from it because it was so contaminated. So without even being privy to their reports, we tried to explain to them

that we didn't have the money, we didn't have the personnel. We finally got the state to donate 50 signs to post both the Alamo River and the New River as a danger to your health if you had a contact with it. So that's that posting that was supposed to do such a good job.

In dealing with a communicable disease, we worry about the source of the infection, the human population susceptibility, the disease in the transmitting form that can take that disease to the people. We believe that the eradication should be at the source, which would make it in Mexico; but we're also realistic enough, and at this point experienced enough, to know that that will never happen. I'm not being facetious when I say that if something breaks in Mexico, they paint it white and walk around it. And that's been our experience with the pumps.

Temporary measures by the Imperial County Health Department include the signs, the "Danger Water Polluted;" we spray for mosquito larvae as well as the adults, but we have no eradication program going. And we try to carry out a publicity campaign to tell the people to stay away from the New River and avoid contact. But these measures cannot take the place of positive efforts to eradicate the disease-laden sewage waste being introduced to our country from an outside source.

I have no facile solution to this for you to consider. I kind of like this going to the Laguna Salada, but I'm not an engineer and I'll leave that to the engineers. But I must insist that a solution be reached before we have this serious and pending epidemic, resulting in death, primarily to children. And the cost of this solution cannot be equated to a life.

Now, I would also like to say that I'm always asked a simplistic and Neanderthal question -- that I know I wouldn't get here -- so I would like to relate it to you. And that is, have we ever had an epidemic relating to the New River? Well, in the first place, you have to understand that epidemiologically, it would be very difficult to isolate a case. We get probably 10 cases a month, which are referred to us as contacts; but we have to finally discuss with the patient that there isn't any way that we can lay the blame at the New River. But we're telling everyone, what difference does it make? We've got the bacteria; we've got the viruses, so what's all the talk about waiting for a body?

Thank you very much.

CHAIRMAN PEACE: In your testimony, you took particular note or concern at the proximity of populations to the area. Given that, do you feel that the ideas discussed by the City of Calexico with respect to undergrounding or tubing the area near and within the city boundaries of Calexico and such, would be a priority item to pursue?

DR. COTTRELL: I don't have a whole lot against that. It would get it away from a very highly populated dense area, and it would get it out into the open space where we then could maybe experiment. But I would leave that to engineers. And just tell you, as a gut feeling, I would like to see it diverted. Because we could have it tunneled past there and it would take care of the people in Calexico, and that would be very good. And I want the people of Calexico to be protected and work with them in that way. But I think then that we might be giving a signal to Mexico

that anything goes. And right now, we probably have a condition which could be controlled. The sewage problem could be controlled as a sewage problem; but if they ever thought that they had a free ticket and we started getting the real heavy toxics at volumes that we couldn't control, we would still be back to square one. I took the long way to answer that, didn't I?

CHAIRMAN PEACE: Well, that's par for the course. No problem.

DR. COTTRELL: Any port in a storm, I guess, would be the answer.

CHAIRMAN PEACE: Are there any other questions? Mrs. Bergeson.

ASSEMBLYWOMAN BERGESON: Yes. Dr. Cottrell, in the areas of, say, recreational activity that are now or have in the past taken place around the Salton Sea, is this pretty much eliminated now as a result of what's happened with the Salton Sea?

DR. COTTRELL: No, the Salton Sea still attracts people, and there is a lot of fishing going on there, especially on the weekends. I don't think that it has impacted it. I can only make known my number, because they're going to go back to Los Angeles, San Diego, and get sick if they are. And hopefully, they'll know enough to tell their doctor to call us. We can tell him what was found.

ASSEMBLYWOMAN BERGESON: There is contamination, though, in that area. Is it posted as such?

DR. COTTRELL: I believe that there is, and I'll tell you why. We use E. coli as a barometer. Well, E. coli is not going to be found in any great amounts in the high salinity environment at the Salton Sea, so our barometer is lost and we haven't gone into the more extensive thing. I think that Fish and Game, with their work on the fish tissue, is telling you, yes it is there. It just hasn't gotten to a level that we've turned on any red lights.

CHAIRMAN PEACE: Thank you, Doctor.

Don Twogood, Executive Officer with the Imperial Irrigation District.

MR. D. A. TWOGOOD: Thank you, Mr. Chairman. I want to commend you, first of all, for having this hearing and for giving us this opportunity; and I also appreciate your attitude because it's something that really has to be faced up to.

For the record, my name is Don Twogood and I'm the Executive Officer to the Board of Directors. And I am giving this testimony on behalf of the District. They have approved the testimony that I am giving.

I'd like to call your attention, maybe just briefly, since my statement can be brief, and point out the little plat sheet that I've attached. The District took what we consider a small, tiny positive step by making a survey of the land that I've circled. It's called "proposed ponds," and this was in connection with Bob McElvany's idea. Senator Speraw was down and saw the site. So did Swajian and the other people. It's kind of on a back burner, because it's the type of thing that very obvi-

ously isn't going to solve the problem. We feel, the District feels, that it is a small step, and something that should be pursued. We don't have the expertise to do it. We can do construction; we can offer the land.

On this plat you'll see some cross hatched parcels, three of them in fact, that are in the river. The District now owns all of those sites. And we will offer them for any use of ponding sites and this type of thing. We have expertise in engineering and design, other than designing the actual ponds. That's beyond our expertise, I think, and you've really got to go to biologists and those kind of people. But the Board showed a positive attitude, I think, by making the survey.

We offered the maps to the committee, the ad hoc committee. We are concerned, and we want you to know that. Our responsibility is primarily to bring water into the valley, but we also provide drainage; and New River is a backbone drain -- one of the two. It drains almost half the land in the valley. So we are concerned. Actually, if it weren't for the drainage, the Salton Sea would be getting pretty well polluted, because the agricultural drainage actually dilutes the sewage.

I don't think I have any more to say, other than my written testimony ...

CHAIRMAN PEACE: We all know the tremendous amount of interest in seeing some cooperation from the Imperial Irrigation District with other parts of the state and the Metropolitan Water District, in terms of attempting to work out a sharing of resources, in terms of water and such. Since New River obviously

is part of that whole system and it's necessary for either the Metropolitan Water District or state agencies or others to make some kind of good faith effort to improve the water quality in New River, to date has the Board considered any action conditioning such negotiations, with respect to potential water swap; on seeing some kind of financial assistance or other action taken?

MR. TWOGOOD: Well, the talks are ongoing with the Metropolitan Water District. In fact, they are meeting today and tomorrow. It's going to go fairly slow. We met about two weeks ago, I believe for the first time. This is the second meeting. We have committees that are working and have assignments; like the legal people are starting to draw up some parameters and so on. I think your bill, that has passed so far, is going to be helpful in that regard, for our people especially. Even though we had some problems, why, I think they have the assurance that there are people that are concerned about protecting the rights. Because locally, that's the big issue. But I think what I sense in your question, maybe, is that this can be a part of a total agreement. You know, an exchange type thing that involves a lot of things.

I look at this as being conservation in a broad sense. Down at the bottom of that plat you'll see a big evaporation pond.

That's the pond that the District constructed. That does not dam up New River -- I might point out that -- it merely isolates drainage water. But Fish and Game itself has recognized

that pond as a good habitat. That kind of thing could be built all down the river. I think that we can also include New River in that, with proper treatment and so on. So there's a lot of potential for recreation use, ultimately. Part of the reason for this particular pond was to evaporate water. It's a hundred acres. That's 100 X 6 feet; or 600-acre feet of water that doesn't go into the Salton Sea. It's not such bad water, though. That's one problem.

CHAIRMAN PEACE: Well, you know, you've heard today some of the problems we're having in terms of getting some of our bureaucrats up here on board. And I use that in a neutral sense; I don't mean to be negative with the terminology. But perhaps the inordinate interest in your assistance may put you and the District in a unique position to be of assistance to Mrs. Bergeson and Mr. Kelley and myself and the others who are attempting to get some response at this level and others. Maybe you can help us out a little down there. I appreciate that. Thanks for coming up, Don.

Mr. Tirado, City of Calexico, Mayor pro Tem.

MAYOR ANTONIO TIRADO: My name is Antonio Tirado, Mayor pro Tem, City of Calexico.

A lot has been covered here today, and perhaps some of this is going to be repetitious.

First of all, we're talking about 40 years back: Mexicali population 25,000; the sister City of Calexico was 7,000; sewage being drained to the New River; at that time the New River fairly new -- no problems. Perhaps a little mud

flowing downstream. Again, no problem. But that was 40 years ago.

Right now Mexicali has a population anywheres up to 750,000. And that would only be Mexicali. The surrounding area would probably bring it up to a million.

Mexicali, in a growing stage and looking for an economy recovery like everybody else, has industrialized itself. So now we don't only have raw sewage. You've seen the slides here today. There's a combination of things that is eventually going to hurt someone.

The New River in its infancy was called a drainage ditch; today it's a ditch of raw sewage and chemical waste. And it floats right through the west side of the City of Calexico, which is a commercial, industrial and residential area. If this doesn't pose a health hazard, I don't know what does. Hearing all this testimony, I can assure you, ladies and gentlemen, that we see it, we live it, and we inhale it. It's right there in our backyard. And right now, with the summer season coming around, it's even worse. I cannot over-emphasize the importance of finding a solution. From 40 years back, progressive presidents talking to each other, making agreements, breaking agreements, and it's still continuing.

Calexico, because of priority number one, concern for its citizens and their health, asked Mr. Steve Peace's office to have a meeting with certain dignitaries of the federal government and the state agencies. A meeting was held on April 23rd; you have the minutes before you as to who was present and what was

discussed. Basically, it was a repetition of the slides that were presented here to us today, which I think is a very awesome sight. But then again, you have to live it and see it and smell it -- to be there.

I'd like to correct those minutes for the record. Mr. Phil Gruenberg, who is here, was referred to as "Bill Rueger."

Private citizens were concerned. And again, they emphasized the importance of solving this problem. Overall what came out of that meeting -- and one statement made by EPA, Mr. Dick Reavis -- was that the federal government was not going to allocate any money to Mexico in solving their problems because it was their problem. Well, I can live to a certain extent with that philosophy or theory; but then again, I'm wondering, what is Calexico? Are we human beings or what, that no one has really taken a concern?

I made a statement there, that day, that the state and federal governments have totally neglected the Imperial Valley and Calexico. Mr. Arthur Swajian expressed at that time that he has been making every effort to solve this problem. I say to this committee here today, and I said to those people at that time, I'm not speaking against you personally. As a matter of fact, I want to congratulate you for this initiative. I want to congratulate you for some of the positive remarks that have been made by all of you, and for recognizing what's taking place in Calexico.

Calexico, historically, could say this is the most polluted river in the United States. No one would believe us. The government said it; but I guess they still don't believe it, because no action has been taken. And it is the most polluted river; one of the most polluted rivers. And again, it affects human beings.

For the record, on May 1st, as an outcome of that meeting on the 23rd, Calexico adopted a resolution. And you have that resolution before you, too. And basically, what that resolution is all about is that we're urging the state and the federal government to solve this problem. If not, we, as human beings, have a duty to our constituents; we have a duty to all those lives, and we will have to take some class action lawsuits against the state and federal governments, and perhaps even Mexico -- if we have to. We believe that it's way past overdue.

I guess I can say that it's better to pay now what you really have to do to correct the problem than to pay tomorrow with the lives, the epidemics, or whatever. Whatever it costs now, I assure you it will be a lot more later. I don't know if the State of California or the federal government is ready to buy Imperial Valley after it gets all polluted with the chemical waste coming downstream.

Calexico has a solution. I'm going to say Calexico has a solution: that from the source, the port of entry, or the borderline, that a pipe system be set to proceed in the northwesterly direction that the New River travels, to approximately anywhere between two and three miles. One thing it

will do is for the future, because we don't know -- as I keep hearing this, and yet the problem is there -- how polluted, how dangerous it is, and so forth. Again, I think we had better pay now than pay later. I think that this would be the solution.

It would provide one thing, it would bypass Calexico, because Calexico is the only populated area that this New River goes through. After that point, a retrieving plant or whatever technology comes about to solve the problem, at least you've tapped it, you've covered it; it would prevent our health problem. I think that would be an immediate solution. And I don't think we can wait.

If we're going to funnel it back to Laguna Salada, or shove it up to the Colorado River, I think we're going to have problems. And I can see, then, that I might as well turn around and go back home and say forget it. It will be another thousand years. If you're going to have to negotiate something with Mexico, and it takes two to tango, it's taken a long time for that. It's way past overdue.

You can take all the tests you want to at this time, from the University of California, as was expressed here by the Fish and Game -- and yet they're short of funds and so forth, and so I don't know how long we're going to have to wait for any kind of testing. But I think we have qualified people, such as from the county, who have made some statements here, and I think what we really need now is some action; to say, "Let's pipe that portion; let's get the Corps of Engineers, and if it's going to take an Act of Congress to allocate money to the Corps of Engineers, let's do it."

I was really depressed, I must say, by that letter from the Department of Health, which recognizes the problem: 23 priority polluting organics, and yet compares apples with oranges, the New River and the Alamo. The Alamo is 7 miles east of Calexico. At least it flows through nonresidential impacted areas, unlike ours.

I really sincerely hope that you take some serious actions on this. I appreciate the statement of Mr. Steve Peace here, and the Senator, in relation to the Superfund, and their concern and their foresight; and the rest of the committee that has made some expression to this effect.

We've had meeting after meeting. I understand there will be more meetings coming about. I think perhaps as a City Councilman, whether I'm a Democrat or a Republican, I'm here as a nonpartisan. I'm here to help protect my people. I think in this case it takes the unity of Assemblyman Peace, who's very much concerned; representatives from Senator Cranston's office; Senator Pete Wilson; and Congressman Hunter, to represent this great state of ours.

I just have to reemphasize that we are human beings. We do see it. We live it, and we inhale it. And it's not pleasant.

Thank you very much.

CHAIRMAN PEACE: Thank you.

MAYOR TIRADO: Any questions?

CHAIRMAN PEACE: Thank you, Mr. Tirado.

Bert Elkins, San Diego Regional Water Quality Reclamation Agency, Santee. Hi, Bert.

MR. BERT ELKINS: Hi.

Thank you Mr. Chairman and members of the committee for this opportunity to provide some information to the committee that hopefully will be useful in seeking solutions to the New River pollution problem. I've submitted to you a rather voluminous amount of background information, so I'll keep this extremely brief.

My Board of Directors, San Diego Regional Water Reclamation Agency, asked that I make this presentation; and submit to you their Resolution No. 84-2. In essence, 84-2 offers the Reclamation Agency's expertise and facilities in any way that we can to help solve the pollution problems.

We are a research and development agency, and have been in business since 1977. The members of the Agency are the County of San Diego; the County Water Authority; the Cities of Poway, Santee and Cardiff. And then there are seven special districts that are members, concerned with serving water and sanitation.

Basically, what I'd like to tell you is that we have developed, in this period of time, a water reclamation and demonstration study center. We have developed, in this period of time, two new innovative wastewater treatment processes. So when the problem gets to the point in which it can be solved by treatment, we would like to see these two wastewater reclamation processes be considered as an alternative.

Also we offer our help -- and Don [Twogood], who was just speaking, apparently has land where he can put ponds and the type of development that we developed on, so I did ...

CHAIRMAN PEACE: Does the Santee Lakes technology concept have the possibility of being applicable to this situation that you seem to describe?

MR. ELKINS: Yes, I think in specific problem areas that both processes that we've developed have potential.

Briefly, one process is the use of natural systems, which is the use of artificial wetlands. We've been testing the artificial wetlands now for over four years. And we have been consistently getting very good wastewater treatment through them, starting off with just a screened, or primary-type water. We've also been testing them for the removal of heavy metals. We've removed copper, zinc, cadmium and mercury, so far with a 99% reduction; and I'm going in with some fairly high concentrations.

CHAIRMAN PEACE: How do you dispose of those solids as you remove them?

MR. ELKINS: The solid buildup will build up as a sludge, and we hope to run the process for a few more years to see how fast the sludges build up; and if there's any deterioration, of course. You don't get rid of heavy metals. You end up with a sludge of some sort. However, it is a way, inexpensively, to concentrate these heavy metals into a sludge. There's very little, or I'd say absolutely no energy required in the process. The water goes in one end of the wetlands and comes out the other end, with basically a trickling filter using aquatic plants to aid in the treatment of the water.

The other process that we've developed is called the CCBA project, which is actually a physical chemical process in

which we add clay to the water. And then we add alum and poly-acrylic acid to it, which causes a heavy precipitate to fall out in the bottom, and the clean water comes over the top. We are sure that this process will remove many heavy metals and toxics.

Dr. George Harrison, the inventor of the process, a corporate scientist with 3M Company, has done sufficient laboratory work to assure us that we can remove certain heavy metals; to what extent we don't know. We have a project going next year, at least it's before the Assembly now for funding, to look at the use of the CCBA process for removing heavy metals.

And we will be through that research work by July of 1985, which should be timely for being considered as an alternate system for water pollution problems.

Being a physical chemical process, it's not subject to toxic shocks. Even though we've shown in the wetlands that we can take a certain amount of toxics, we don't know to what degree. But with the CCBA process, there's no possible upsetting of the system due to toxics or heavy metals.

ASSEMBLYWOMAN BERGESON: Isn't it difficult for reclamation projects with high water table areas, such as you would find in Imperial County?

MR. ELKINS: I don't think I follow that. Difficulty in ...

ASSEMBLYWOMAN BERGESON: Well, the percolation effect into the water table, whether or not there would be a problem.

MR. ELKINS: Well, in the artificial wetlands, if you do not construct them in soils that are impervious, if you don't

construct them of that type, then you have to line them with an impervious liner to prevent the liquid from percolating down.

ASSEMBLYWOMAN BERGESON: I was wondering about the costing factor. You know, if it's realistic from an economic point of view.

MR. ELKINS: We think that at least -- you know, we didn't develop them to take 330 cubic feet per second, like the New River. We were looking at them for smaller systems; so the economics of handling it at an industrial plant is what we were looking at, as having source control using wetlands.

ASSEMBLYWOMAN BERGESON: That's why I'm concerned about the application of what you're talking about, as far as relating to the New River; whether there's an application that is comparable there.

MR. ELKINS: Well, unless you were looking at treatment of Mexico's wastes; however, from what I've seen today, your problem is not so much in treating 20 million gallons of wastewater from the community as it is to do something with the toxic materials that are being dumped into the side streams that are getting into New River. Whether ...

ASSEMBLYWOMAN BERGESON: But that would relate to Mexico, would it not?

MR. ELKINS: That's right.

ASSEMBLYWOMAN BERGESON: What you're referring to then is having those facilities in Mexico, not in ...

MR. ELKINS: Yes. If you're going to try and use a treatment process, I would think you would need to do it at the source; and from what I hear in testimony today, that seems ...

ASSEMBLYWOMAN BERGESON: I guess I'm a little confused, and maybe it's my own ignorance, as far as the technique that's used. But reclamation and treatment are not necessarily comparable, and that's where I was confused when you were talking about reclamation. And I was looking at that application, and I assume that there's a different way that you're interpreting it to mean treatment facilities.

MR. ELKINS: Treatment comes, of course, in the process of reclaiming wastewater. So any time we develop -- we like to think of it in San Diego as a reclamation process, because our goal is to use reclaimed wastewater as a supplemental water supply. That was one of the reasons for the Agency to be established: to look at new technology, to develop new technology for reclaiming wastewater. However, reclamation is not possible without a treatment process, so we're developing a treatment.

ASSEMBLYWOMAN BERGESON: See, my concern was the reclamation process, and getting back to the problem with the high water table and whether this would be a problem. I know this has happened in some areas where reclamation programs have been incorporated. They had difficulty getting down into the culinary water, and so forth.

CHAIRMAN PEACE: In terms of Imperial Valley's high water table, one of the things that is unique about that high water table is that it's not a potable water table; and so I would assume that that would be somewhat different. But I'm confused on the same point that you were asking about. Are you saying that your technology would have to be applied at the

source in Mexico, or could it be applied on the American side? Could we intercept the river utilizing the kinds of technology used in the Santee Lakes, somewhere out in the flat areas out there in Imperial Valley, and utilize these kinds of techniques for treatment?

MR. ELKINS: It can be applied; however, you're talking about a very large amount of land if you're talking about treating -- I believe the cubic feet ...

CHAIRMAN PEACE: What's a large amount of land? There's a lot of desert out there.

MR. ELKINS: It takes approximately 15 acres to treat a million gallons in the artificial wetlands. It has a 5½-day retention time. You heard one of the previous speakers speak of the 500 acres in Mexicali where it should have a retention time of 30 days. Well, in the wetlands, we've got it down to 5½ days; however, that's still a large amount of land.

CHAIRMAN PEACE: So you've got to spread it out, right?

MR. ELKINS: Right.

Now, the CCBA process lends itself to a very compact plan. And our cost estimate at this time is around $1 per gallon of treatment capacity. So if you were talking about treating 300 million gallons in the New River, you'd be talking about $300 million.

CHAIRMAN PEACE: That's operating costs?

MR. ELKINS: That's the capital cost. Of course, you get a by-product from that that pays for a portion of that. Out of the sludge we make a by-product, which is a lightweight concrete aggregate.

CHAIRMAN PEACE: Have you been marketing that?

MR. ELKINS: No, but we've taken it through the ASTM tests, and we have contractors that are interested in it. We're just a small research plant where we have a very small kiln. So if some community uses the technology, and uses it for 3 million up to 100 million gallons, then they would produce enough of the product in order to create a market for it.

CHAIRMAN PEACE: Thank you.

MR. ELKINS: Thank you.

CHAIRMAN PEACE: Imperial County Community Health Committee, Health System Agency, San Diego/Imperial Counties. Albert Baksh.

MR. ALBERT BAKSH: I'm mainly here as a representative of the Community Health Committee, which is part of the Health System Agency of San Diego and Imperial Counties. And I'm the Chairperson for Imperial County.

Our main concern for Imperial County was that at the first of the year we set out goals that we wanted to accomplish for the year. And the New River was one of our goals. We went about it by making up this paper -- that you have there in front of you -- of what we wanted to accomplish for the year 1984.

The goal was to provide more information and a clearer understanding regarding the New River issues and its effect on Imperial County.

Our objectives were to update all information regarding the New River obtained through the media and public hearings.

The activities were to keep a current library of all newspaper articles regarding the New River; request information from the Library of Congress regarding the New River; and compile all information obtained in order to publish a public report for the people of Imperial County to identify possible solutions and funding sources.

And that's the reason I'm here today: to take back all the information I can to my Committee.

CHAIRMAN PEACE: Good. We appreciate that. We need all the help we can get.

MR. BAKSH: Thank you.

CHAIRMAN PEACE: And now the gentleman who gets the award for patience, honor, diligence -- for being willing to volunteer to be the last person on the agenda: Bill Du Bois.

MR. WILLIAM DU BOIS: Thank you, Mr. Chairman. I'm Bill Du Bois with the California Farm Bureau Federation. I didn't volunteer to be last, but there's one thing ...

CHAIRMAN PEACE: I tried!

MR. DU BOIS: ... One thing I've learned, and that is you don't ever have to worry about preparing any testimony ahead of time, because there's always plenty of time for me to do it while I'm sitting in the hearing room waiting for my turn.

CHAIRMAN PEACE: That's because you're permanently ...

MR. DU BOIS: That's right.

CHAIRMAN PEACE: ... stuck up here. Like the rest of us.

MR. DU BOIS: Representing the taxpayers.

I have two primary purposes in being here. And one is to express the appreciation of the California Farm Bureau Federation for your leadership in doing what are the logical first steps, we think, in making this public menace well known to people who otherwise would perhaps not be concerned about it. And I want to assure you of the cooperation of the Farm Bureau in any way that we may be able to offer it in arriving at a solution. We think that the solution must come as a result of state and federal elected officials' efforts.

There are a few points that I think I might make. And in order to establish some portfolio for what I say, it would probably be well for me to explain that I spent the first 55 years of my life very close to the New River. And I learned to swim in it. And the New River didn't look anything then like it does now. It was mostly silt. As a matter of fact, I think there were only three bars in Mexicali that had flush toilets at that time; so there wasn't much of a problem in the New River as it came across the line at Calexico. Incidentally, those were big bars, though!

The rate of growth, though, in the City of Mexicali during my lifetime indicates to me that it isn't only the New River that's got a problem. It probably also is the Alamo, although the City just hasn't quite grown out there to that extent yet.

In 1972, the Brownell Commission explored the problem of salinity in the Mexicali Valley, which was the result of the Bureau of Reclamation establishing the Welton Mohawk Irrigation

District and delivering water to that District in Arizona. That District soon became saturated with groundwater, and as a result, something had to be done in order to drain the water that the Bureau of Reclamation was delivering to the Welton Mohawk Irrigation District.

And they put in deep wells as their solution. They pumped those deep wells out, thereby pumping a very, very highly saline water into the Colorado River above Mexico's supply. This made Mexico very "disappointed" in the United States, and they complained about it. And the President sent Attorney General Herbert Brownell down there to try to arrive at a solution.

The Farm Bureau wrote to the Attorney General at that time and warned him that this would be a problem of the very near future. And it hasn't reached anywhere near the proportions that it's going to reach before long, because the Mexicans are finding out that they have the same quality of water, or slightly less quality, to irrigate with that the farmers in Imperial do. And the farmers in Imperial long ago had to tile most of their ground. And there's only one place to put that tile water and that's downhill. And from even south of Mexicali, downhill means to the Salton Sea.

Now, I would have a question as to whether we had any right under International Law to prevent the Mexican people from draining their tile water along the natural drainage course. But when it comes to dumping their sewage into it, raw sewage, which is not in accordance with the technology of the times, I doubt very seriously whether International Law would be protective of

the Mexican's right to do that. And particularly some of the solid waste that comes through the river.

It makes me feel that one of the first things that ought to be done is a rather fine mesh screen ought to be inserted in the river at the border. And this would soon plug up. And when it plugged up, they would realize that they ought to keep the big stuff out if they want to continue to have a drain.

Now, this would not enhance the relationships between the two governments. I understand that. But while the United States State Department and the Mexicans are talking, we have self-preservation that is the first order of business, I think. And so I think it's up to California to act in self-defense. And of course, you and other legislators who are representing that district probably have the highest degree of responsibility for some of these solutions.

Now, in the rest of this testimony, I think it's necessary for me to disqualify myself from speaking for the organization that I work for. I would rather continue with a suggestion that I consider to be a practical suggestion, although it certainly is radical. And I do so on my own behalf. And that is ...

CHAIRMAN PEACE: You're well known as a radical.

MR. DU BOIS: Thank you.

In spite of the fact that I think Bob McElvany's efforts were imaginative and they should be highly appreciated by all people concerned, it is not a comprehensive solution. And I don't say that it isn't something that ought to be considered

very seriously, because I think it does have, as the gentleman from Santee explained, it does have some practical solutions. But you can't control the inputs. And that's something Santee can. They can tell people what they can and can't put in their sewers. And we can't do that to Mexico.

The solution that I would offer is that we continue to receive the effluent from the City of Mexicali and pipe it slightly uphill, not as far uphill as it would be if you took it east along the International Boundary back toward the City of Yuma, but to take it west and put it into Laguna Salada.

The map that you have, if you still have it on the wall, is not anywhere near descriptive of the conditions. The Laguna Salada, which is the large blue lake on the western part of the map, is actually a part of the Gulf of California. It's been connected there for some little time. I flew over it just not long ago on my way down to the southern part of Mexico and satisfied myself that that's the condition.

Now, this sewage water, it's natural repository is the Pacific Ocean. And I think we ought to short-circuit the route and simply put it in Laguna Salada. This would be costly. I don't think it would be anywhere near as costly as treating the sewage in order to continue to receive it in the Salton Sea.

I would like, too, to comment on Harry Schueller's statement about the predicament that the Mexicans find themselves in. And I think we can certainly be sympathetic with that. I doubt very much if there are very many Mexicans that are proud of the sewer system that they employ. But I think they are a victim

of circumstances. There are many aspects of that to look at, but their country is absolutely not as fortunate as ours is from many points of view. And so I do have sympathy with the predicament they're in. But we still have to watch out for ourselves, as long as we don't do undue damage to them in the process. And I don't believe flowing that stuff back into Laguna Salada would be that damaging.

Laguna Salada has been, in my lifetime, either dry or almost dry for many years. And it could be that when we reach a dry period, climatologically, that that would simply be an additional Salton Sea that would be the repository for Mexicali sewage.

The bad aspect of this is that it would be a continuing expense. But I can't see any kind of a solution that isn't going to result in a continuing expense.

CHAIRMAN PEACE: Has anyone addressed the issue of if we do divert and we go into Laguna Salada, how does that affect the need for continuing a fresh water supply to the Salton Sea?

MR. DU BOIS: I think that it would be beneficial, because the fresh water supplies that you need in the Salton Sea are not the kind of supplies that come across the International Boundary from Mexico.

CHAIRMAN PEACE: But is the volume from runoff -- I mean, all you'd have left is ag runoff, right?

MR. DU BOIS: Oh, the volume would certainly be beneficial to such people as the Elmores, who are trying to keep the Salton Sea from encroaching on their farming property.

CHAIRMAN PEACE: Oh, okay. Susan just indicated that by diverting at the border, you'd reduce the contribution to the Salton Sea by about 35%, so that may very well be beneficial.

MR. DU BOIS: Well, I think it depends entirely on the way we irrigate in Imperial Valley. And if the efforts are successful in making a deal with the Metropolitan Water District to pave some of those canals there in return for some of the water for a period of time, there will be less water flowing into the Salton Sea, because that's where the seepage goes.

CHAIRMAN PEACE: Right.

MR. DU BOIS: Thank you very much.

CHAIRMAN PEACE: Thank you, Bill. I appreciate it.

Before we close, I just wanted to ensure -- Senator Cranston's representative is here. Did you want to make any comments before we close?

Why don't you come on up to the mike here and identify yourself for the record and all the tape recorders and all that kind of official-type stuff?

MR. JIM O'BANION: Jim O'Banion, Field Consultant and Researcher for Senator Cranston.

You've heard described any number of possible solutions. That's the particular problem that has led, to some extent, to the difference between the Tijuana legislation and lack of legislation on the New River. We've asked repeatedly of folks in EPA and elsewhere, what project, what solution might be proposed, and we don't have one yet. I understand there will be a greater effort to produce one. At least, that's what we were told yesterday.

The Senator did speak before the Subcommittee on Appropriations. It was a hearing: there's no direct decision; no vote taken on that. And the discussion did include projects that might solve the New River. We need to come up with a specific project and a price tag to it before -- at least that's the response from Senator Garn, the Chairman of the Committee, in conversations with Senator Cranston.

We're also exploring particular ways that may attempt to encourage the Mexican government to join efforts. I've had the same sense of frustration that I think Alan has in discussions we've had of how to encourage our State Department to help argue for action on the part of the Mexican government. It appears this time that at least we're going to consider some legislative action that will eliminate some of the benefits of the Johnson Treaty as a possible move: all that hasn't been completed yet or put into operation. And if it's necessary to hold that up until there's some serious consideration given, then that's what it appears we'll have to do.

And that may start with a Senate resolution as a notification that there may not be funds to continue those particular constructions and operations that were involved in that particular Treaty.

CHAIRMAN PEACE: Thank you very much. I appreciate that.

Thank you all for participating. And we no doubt will meet again.

The meeting is adjourned.

Written Testimony Only

Assembly Select Committee
On
International Water Treatment and Reclamation

New River Border Pollution

May 9, 1984

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MISTER CHAIRMAN; MEMBERS OF THE COMMITTEE

THE INVOLVEMENT OF EPA IN BORDER SANITATION PROBLEMS IS DEFINED IN AN AGREEMENT SIGNED BY PRESIDENTS REAGAN AND DE LA MADRID ON AUGUST 14, 1983, IN LA PAZ. THAT AGREEMENT ESTABLISHED NATIONAL COORDINATORS FROM EACH COUNTRY TO FOCUS ON PROBLEMS THAT IMPACT PUBLIC HEALTH AND THE ENVIRONMENT OF BOTH NATIONS. THE EPA WAS DESIGNATED AS THE UNITED STATES LEAD AGENCY AND THE SECRETARIAT OF URBAN DEVELOPMENT AND ECOLOGY WAS NAMED AS ITS MEXICAN COUNTERPART. ANOTHER SECTION OF THE AGREEMENT STATED, HOWEVER, THAT NOTHING IN THE DOCUMENT SHOULD BE CONSTRUED SO AS TO AFFECT THE RESPONSIBILITIES OF THE INTERNATIONAL BOUNDARY AND WATER COMMISSION UNDER THE 1944 TREATY WITH MEXICO. IN EFFECT, THIS LANGUAGE IN THE AGREEMENT MAKE EPA AND IBWC PARTNERS IN DEALING WITH BORDER WATER POLLUTION PROBLEMS. BECAUSE OF THE EXPERIENCE OF IBWC IN DEALING WITH MEXICO AND ITS CONSIDERABLE TECHNICAL EXPERTISE, THIS PARTNERSHIP HAS BEEN, FROM EPA'S VIEW, BOTH PLEASANT AND PRODUCTIVE.

IN ITS ROLE OF NATIONAL COORDINATOR, THE RESPONSIBILITIES OF EPA ARE PARADOXICALLY STRAIGHT FORWARD AND COMPLEX. OUR JOB, SIMPLY PUT, IS TO COORDINATE THE ACTIVITIES OF GOVERNMENTAL AGENCIES AT LOCAL, STATE, REGIONAL AND FEDERAL LEVELS. THE OBJECT OF THIS COORDINATION IS TO ENSURE A CONSENSUS AMONG

THESE AGENCIES AS TO THE MAGNITUDE AND SEVERITY OF A GIVEN BORDER SANITATION PROBLEM AND ITS MOST FEASIBLE SOLUTION. AT THIS POINT, OUR TASK BECOMES MORE COMPLEX AND DIFFICULT SIMPLY BECAUSE OF THE NUMBER AND DIVERSITY OF AGENCIES WITH CONCERN FOR THE QUALITY OF THE BORDER ENVIRONMENT. IT IS HOWEVER, THAT NUMBER AND DIVERSITY THAT MAKES THE POTENTIAL FOR SOLUTIONS TO LONG-STANDING PROBLEMS APPEAR POSSIBLE. THE FOCUS OF INTEREST AND, EVENTUALLY, RESOURCES FROM A NUMBER OF LEVELS OF GOVERNMENT HOLDS THE ULTIMATE HOPE FOR THESE SOLUTIONS.

MOST OF THE COMMITTEE MEMBERS ARE AWARE THAT THE FIRST OFFICIAL MEETING WITH MEXICAN FEDERAL OFFICIALS CONDUCTED PURSUANT TO TERMS OF THE PRESIDENTIAL AGREEMENT WAS HELD IN MARCH IN TIJUANA AND SAN DIEGO. OFFICIALS FROM EPA'S COUNTERPART AGENCY, THE MEXICAN SECRETARIAT FOR URBAN DEVELOPMENT AND ECOLOGY ALONG WITH OTHER AGENCY REPRESENTATIVES FROM MEXICO CITY, MET WITH A U.S. CONTINGENT COMPOSED OF EPA, STATE DEPARTMENT, AND IBWC OFFICIALS. DISCUSSIONS AT THESE MEETINGS WERE CORDIAL BUT FRANK. ONE MIGHT EVEN CALL IT BLUNT. THE U.S. CHIEF COORDINATOR, FITZHUGH GREEN, REPEATEDLY TOLD THE MEXICAN DELEGATION THAT THE SITUATION RELATED TO SEWAGE FLOWS ACROSS THE BORDER WAS TOTALLY UNACCEPTABLE TO THIS COUNTRY, AND DEMANDED A TIMETABLE FOR A PERMANENT SOLUTION. BUT IN SPITE OF THIS

HARDLINE APPROACH, WE DID NOT COME AWAY FROM THE MEETINGS WITH A SOLUTION IN HAND OR EVEN IN VIEW. WE DID RECEIVE ASSURANCES THAT PUMPS ARE BEING INSTALLED AT PUMP STATION NO. 2 TO INCREASE CAPACITY AND TO UPGRADE IT. ALSO AERATORS HAVE BEEN INSTALLED AT THE MEXICALI SEWAGE TREATMENT SYSTEM LAGOONS AND MEXICO HAS COMMITTED TO PROVIDE POWER FOR THEIR OPERATION. CLEARLY THESE ACTIONS FALL FAR SHORT OF THE NEEDED ACTIONS TO ACHIEVE A CLEAN-UP OF THE NEW RIVER.

ONE FINAL ACCORD REACHED AT THE MEETING DOES BODE WELL FOR THE FUTURE, THOUGH. A COORDINATION TEAM COMPOSED OF BOTH U.S. AND MEXICAN FEDERAL OFFICIALS WAS ESTABLISHED FOR EACH OF THE AREAS OF WATER POLLUTION, AIR QUALITY CONTROL, AND HAZARDOUS WASTE MANAGEMENT. THE MEMBERS OF EACH COORDINATION TEAM WERE DESIGNATED BY THEIR RESPECTIVE COUNTRIES, AND WERE GIVEN THE ABILITY TO COMMUNICATE DIRECTLY WITH THEIR COUNTERPARTS WITHOUT USING THE FORMAL, CUMBERSOME DIPLOMATIC ROUTE. WHILE THE ESTABLISHMENT OF THIS NEW, AND WE HOPE EFFECTIVE COMMUNICATION BETWEEN THE TWO FEDERAL AGENCIES NAMED BY PRESIDENTS REAGAN AND DE LA MADRID AS NATIONAL COORDINATORS DOES NOT GUARANTEE SOLUTIONS TO BORDER PROBLEMS, IT DOES ESTABLISH A FORUM - AN EFFECTIVE FORUM - TO FORMULATE THOSE SOLUTIONS. THE WATER COORDINATION TEAM WILL BE MEETING LATER THIS MONTH IN SAN FRANCISCO TO DISCUSS THE FOLLOWING ACTION WHICH EPA THINKS MEXICO SHOULD IMPLEMENT:

Needed Actions by Mexico to Control All Pollutant Sources

(1) Improve existing Mexicali sewage treatment systems:

   (A) Dredge old lagoons and upgrade to provide secondary treatment.

   (B) Install aerators and pumps to upgrade pumping plants Nos. 1 and 2 of collection system.

   (C) Preventative maintenance program including replacement of deteriorating sewer pipelines along Mexicali's north and south collectors.

(2) Sewer remaining portions of Mexicali and segregate domestic and industrial wastewater flows.

(3) Construct interceptor at Drain 134 (which conveys industrial and domestic flows), and a separate collection system for treatment of toxic flows.

(4) Expand lagoon system to 50 MGD.

(5) INSTITUTE A SEPTIC TANK MAINTENANCE PROGRAM TO INCLUDE A REGULAR PUMPING SCHEDULE AND PROPER DISPOSAL OF SEPTIC WASTES.

(6) ELIMINATE ALL POINT DISCHARGES INCLUDING BUT NOT LIMITED TO:

(A) CONASUPO (TOTAL CONTAINMENT EVAPORATION PONDS);

(B) ACEITES DE MEXICO (CONTAINMENT POND); AND

(C) QUIMICA ORGANICA (CONTAINMENT POND).

(7) ELIMINATE NONPOINT SOURCE DISCHARGES INCLUDING, BUT NOT LIMITED TO:

(A) WASTES FROM SLAUGHTERHOUSES, RUNOFF FROM HOG FARMS, ANIMAL HOLDING PENS, FEEDLOTS, AND DAIRIES (RELOCATION AND PROHIBITION OF WASTE DISCHARGES RECOMMENDED);

(B) GEOTHERMAL WASTEWATERS; AND

(C) DRAINAGE FROM THE CITY DUMP (RELOCATION RECOMMENDED).

(3) IMPLEMENT PRETREATMENT; BUILD COLLECTION SYSTEMS AND TREAT INDUSTRIAL WASTE PRIOR TO DISCHARGE.

(3) REPAIR, OPERATE AND MAINTAIN COLLAPSING SEWERS AND BREAKS IN COLLECTOR SYSTEM WHICH CAUSE POINT DISCHARGES OF RAW SEWAGE TO THE RIVER.

(10) REPAIR, OPERATE AND MAINTAIN PUMP STATIONS AS THEIR FAILURES ALSO CAUSE UNTREATED SEWAGE TO FLOW INTO THE RIVER.

GIVEN THE UNCERTAINTY OF A MEXICAN COMMITMENT TO IMPLEMENT THESE NEEDED ACTIONS, EPA, THE STATE AND REGIONAL BOARD HAVE RECENTLY FORMED A TASK FORCE TO INDEPENDENTLY ANALYZE NEEDED ACTIONS ON THE U.S. SIDE OF THE BORDER. AS A FIRST STEP, A TEAM OF ENGINEERS FROM THE THREE AGENCIES WILL BE INITIATING FEASIBILITY STUDIES ALONG THE BORDER FOR A RANGE OF ALTERNATIVES FOR ACTIONS FOR CLEANUP ON THE U.S. SIDE LATER THIS MONTH.

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO
UNITED STATES SECTION

STATEMENT TO CALIFORNIA ASSEMBLY SELECT COMMITTEE
ON INTERNATIONAL WATER TREATMENT AND RECLAMATION
AT INFORMATIONAL HEARING ON NEW RIVER SANITATION PROBLEM

May 9, 1984

Joseph F. Friedkin, United States Commissioner
International Boundary and Water Commission
United States and Mexico

I am pleased to present information to the Select Committee regarding the role of the International Boundary and Water Commission (IBWC) in efforts to resolve the New River sanitation problem. This statement includes a brief review of the international problem, description of the Mexicali sewerage system, international agreements affecting the New River, the current situation, efforts to gain information on discharge of industrial toxics, and our view regarding additional improvements needed at Mexicali.

The Problem

The basic problem is that the sewage collection and treatment system in Mexicali is not adequate to serve the population. The result is that untreated and partially treated domestic and industrial wastewaters are discharged to New River which creates a serious health hazard in the United States.

The urban area of Mexicali currently has a population of about 780,000. About 50 to 60 percent of which are connected to the central sewer system. About 3 percent in the Gonzales-Ortega area,

about 4 miles southeast of Mexicali, are served by a separate small treatment plant. The remaining, about 40 percent, use septic tanks or privies, some of which are located on the banks of New River.

The estimated current load from the sewered area is about 25 mgd, about 21 mgd of which goes through the Mexicali lagoon treatment system and the remaining estimated 4 mgd of untreated sewage finds its way to New River.

New River is the drainage outlet for the westerly portion of the Mexicali Valley including the City of Mexicali. Most of its flow is irrigation return water. However, as it passes through the City of Mexicali, it picks up domestic and industrial waste discharges and as a result is heavily polluted as it enters the United States. A number of industries in Mexicali have no on-site treatment facilities and industrial wastewater including toxics is discharged to drains which reach the New River.

The average flow of New River at the international boundary in 1983 was 335 cfs, or 243,000 AF. The average effluent discharge from the Mexicali oxidation lagoons to New River in 1983 was about 30 cfs, or about 10 percent of the total flow of New River at the boundary.

The Alamo River, which enters the United States about 8 miles east of the New River, drains the easterly part of Mexicali. Sampling indicates that it is comprised mostly of irrigation return flow. The average flow of the Alamo River at the international boundary in 1983 was 2.6 cfs, or less than 1 percent of the New River flow in 1983.

Mexicali Sewerage System

The central Mexicali sewerage system consists of a collection system, two large pumping plants, capacity 37 mgd, 3 1/2 miles of pressure lines and 13 oxidation lagoons. Refer to Exhibit 1 attached.

The basic treatment system went into operation in 1976 with 8 lagoons. Because of earthquakes, hurricanes, overloading and lack of maintenance, the old system has been plagued with chronic breakdowns resulting in prolonged raw sewage discharges to New River. In 1981, 5 new lagoons were placed in operation. Four separate small aerated lagoons were constructed in 1980 to serve the Gonzales-Ortega area southeast of Mexicali.

Effectiveness of operation, or lack thereof, can best be judged by reference to Exhibit 2 attached, which shows mean fecal coliform concentrations in the New River at the boundary from 1973 through April 1984. The chart shows that there was a large reduction in pollution when the new lagoons were placed into operation in early 1981. In 1982 and 1983, pollution increased partly because some of the lagoons were pulled out of service and Mexico's economic situation prevented adequate maintenance. The chart shows that the river remains highly polluted and continues to present a serious health hazard.

Treaties and Agreements

The first official recognition by the two Governments of the importance of border sanitation problems was in the 1944 Water Treaty, which included a provision stating, "The two Governments hereby agree to give preferential attention to the solution of all border sanitation problems." Pursuant thereto, agreements were reached and solutions achieved for problems at Douglas, Arizona-Agua Prieta, Sonora, and at Nogales, Arizona-Nogales, Sonora.

In 1979, an umbrella type agreement, Minute No. 261, was reached to serve as a basis for identifying and resolving the increasing sanitation problems which have developed along the U.S.-Mexico border due to the rapid growth of the populations of the border cities, particularly those on the Mexican side. In 1980, agreement,

Minute No. 264, was reached for a solution of the Mexicali problem. The goal is a long-term solution of Mexico disposing of all sewage effluent away from the New River, with one alternative being the discharge into the Laguna Salada, southwest of Mexicali. For the interim solution, Mexico was to undertake certain measures by a certain time frame to achieve interim water quality standards in the New River at the boundary. A copy of the Minute No. 264 is attached.

The interim water quality standards in Minute No. 264 were developed in coordination with the California Regional Water Quality Control Board, Colorado River Region and E.P.A. Exhibit 3, attached, shows that Mexico currently is in compliance with all of the standards except Chemical Oxidation Demand (COD) in the lagoon discharge canal. Last month was the first time that there was compliance with the fecal coliform standard and that probably was due to the dilution provided by the very high flows in the river.

The following improvements have been completed to seek achievement of the interim standards in Minute 264:

1. Five new lagoons at Mexicali completed March 1981
2. Four new aerated lagoons completed at Gonzales-Ortega December 1980
3. Solids screen installed at slaughterhouse
4. Water spray installed to suppress foam from effluent canal
5. Solids screen installed at a dairy
6. Fourteen aerators purchased.

Improvements which have not been completed since essentially all work stopped in early 1982, include: .

1. Eight old lagoons not dredged
2. Standby pumps not installed

3. O&M program not improved

4. Remaining discharges of untreated domestic and industrial wastewater to New River not eliminated

5. Plans for permanent solution not submitted

On August 14, 1983, President Reagan and President de la Madrid signed an agreement for the Improvement of the Environment of the Border Areas, which entered into force on February 16, 1984. The agreement provides that the government of the U.S. and government of Mexico shall undertake, to the fullest extent practical, to adopt appropriate measures to reduce and eliminate sources of pollution in their respective territory which affect the border area of the other.

This agreement designates EPA as the National Coordinator for the United States and for Mexico the Secretaria de Desarollo Urbano y Ecologica (SEDUE).

The agreement signed by the Presidents acknowledges the work of IBWC and provides that "Nothing in the agreement shall prejudice or otherwise affect the functions entrusted to the IBWC, in accordance with the Water Treaty of 1944." Accordingly, the U.S. Section, IBWC will continue to serve as technical advisor to the Department of State and the U.S. Embassy and will assist EPA in reaching satisfactory solutions on border environmental problems. The Commission will continue its field collection and reporting of data and observations to detect and identify sources of pollution in the waters that cross the boundary.

Current Situation

In early April 1984, Mexico resumed work on improvements to the Mexicali treatment system, including:

1. Installation of an electrical power supply to the lagoon area, which will provide energy to run the 14 aerators which are floating on one of the old lagoons,

2. Draining of one of the old lagoons in preparation for sludge removal,

3. Construction of a laboratory building at the lagoon complex, and

4. Construction of a protective fence around the lagoons.

Installation of additional pumps at the major pumping plants has not started. No schedule for completion of the work has been provided.

U.S. Section Efforts Regarding Toxics

The U.S. Section is in the process of trying to determine whether chemicals exported from the United States are returning to the U.S. by way of discharges of industrial toxics to the New River.

U.S. Customs and Department of Commerce officials advise that declarations, called Shippers Export Declarations (SED's) are required by Federal law from exports from the United States to foreign countries where their value exceeds $500. But, the information in the declarations is not verified by U.S. Customs. Moreover, the information in the declaration is protected by law for public disclosure. The SED's are Department of Commerce forms and are solely for statistical purposes of the Bureau of the Census of that Department. However, monthly tabulations of the types of exports, volume, dollar value, Customs district of export and country of destination, are available to the public.

We were able to obtain copies of the monthly tabulations of exports declared through the U.S. Customs District of San Diego, California, which includes the port of Calexico, California for the first 11 months of 1983. In that period some 90,000 exports were declared. From those tabulations we were able to pick out 15 categories of exports that could be used in industry and possibly result in

chemical wastes of the type that the California water quality officials have detected in its monitoring in the New River near the boundary.

The next effort of this Section is to try to obtain more specific information to include specific industries receiving those 15 commodities and the exporting company as well as the specific substances within the general categories. However, since the Department of Commerce does not usually release such information, we are not certain it can be obtained.

In the event we are successful in identifying toxic substances exported to the Mexicali area as well as the exporters, we will report our findings to the Environmental Protection Agency for such action as it can take against such exports.

The Mexican Section has been provided the results of toxics sampling by the Regional Water Quality Control Board and urged to take corrective action. Mexico has adequate regulations to curb industrial discharges, but it is taking considerable time for implementation.

Additional Improvements Needed at Mexicali

The U.S. Section, working with EPA, has identified a number of measures that are needed to improve the effectiveness of the Mexicali treatment systems, including:

1. Completion of lagoon dredging and installation of additional pumps, at the main pumping plants.

2. Installation of industrial on-site treatment facilities for toxic wastes,

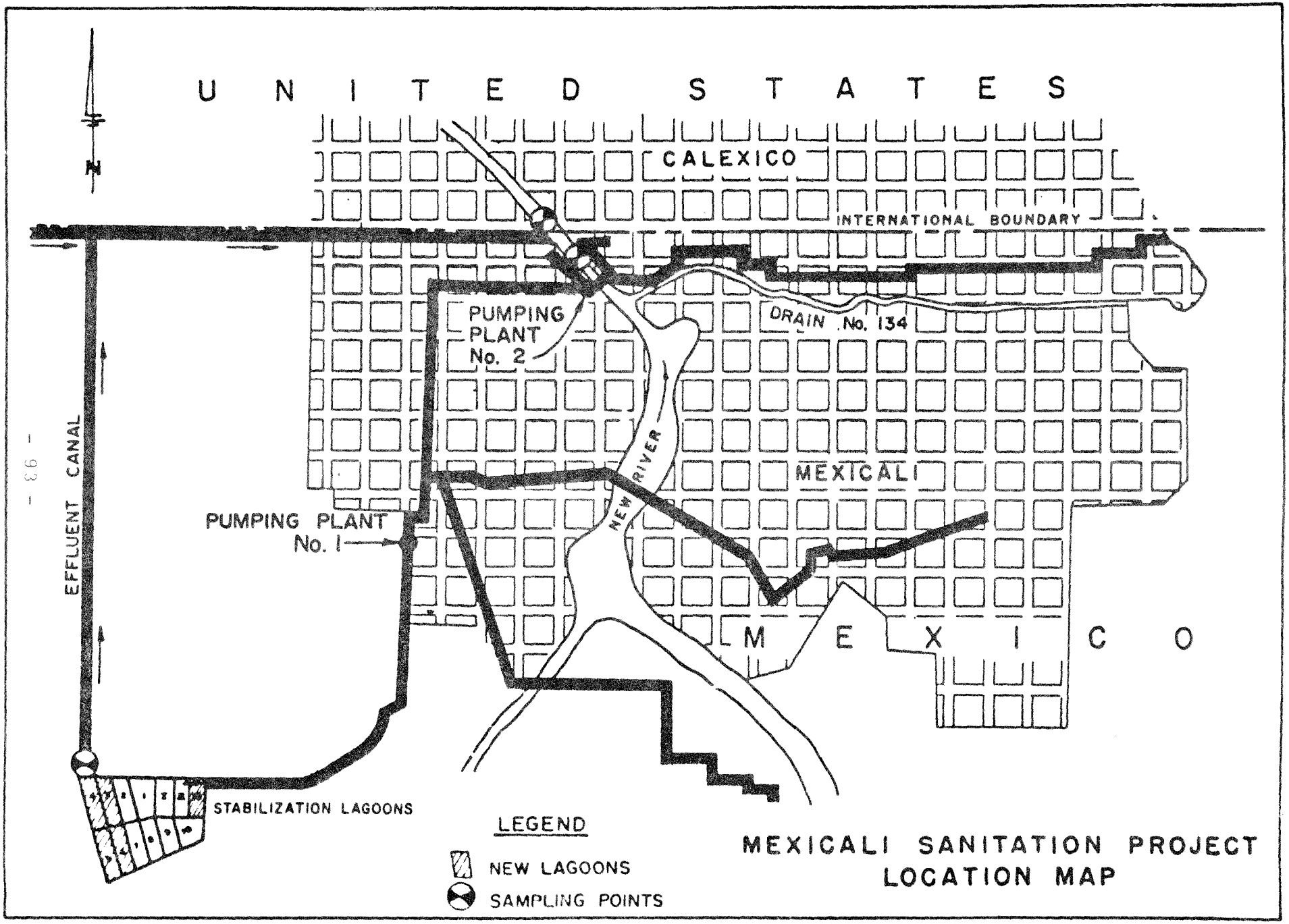
3. Removal of dumps, animal pens, and slaughterhouse from banks of New River,

4. Construction of interceptor along New River to capture domestic and industrial wastewater discharges which otherwise would go to New River,

5. Expansion of Mexicali collection and lagoon system, and

6. Facilities to enable reuse of effluent for irrigation and/or conveyance to Laguna Salada.

It is the view of the United States Section that since Mexico is creating the New River sanitation problem, Mexico must solve that problem. The U.S. Section is working with EPA to get Mexico to do that as quickly as possible.


U N I T E D S T A T E S
N
CALEXICO
INTERNATIONAL BOUNDARY
PUMPING PLANT No. 2
DRAIN No. 134
NEW RIVER
MEXICALI
EFFLUENT CANAL
PUMPING PLANT No. 1
M E X I C O
STABILIZATION LAGOONS
LEGEND
NEW LAGOONS
SAMPLING POINTS
MEXICALI SANITATION PROJECT
LOCATION MAP
4-7-81

WATER QUALITY MONITORING PROGRAM
IMPLEMENTATION OF MINUTE NO. 264 RECOMMENDATIONS FOR SOLUTION OF THE
NEW RIVER BORDER SANITATION PROBLEM

Parameter, Location, Standard, & Required Frequency of Monitoring	Value-As of	Recorded Values FEB'84/MAR'84/APR'84 Max.	Avg.	Min.	Comments
pH New River at Boundary - 6.0-9.0, Weekly	7.8 4/25/84	8.0	7.9	7.7	Currently Compliant
DO New River at Boundary - 5.0 mg/l Daily	6.2 4/25/84	7.8	6.2	4.6	Currently Compliant
BOD_5 Lagoon Discharge Canal - filtered 30 mg/l, Monthly	25.0 4/12/84	25	15.2	6.7	Currently Compliant
New River Upstream of Canal - unfiltered 30 mg/l, Monthly	5.7 4/12/84	12.0	9.9	5.7	Currently Compliant
COD Lagoon Discharge Canal - filtered 70 mg/l, Monthly	107 4/12/84	107	79.3	51	Non-Compliant
New River Upstream of Canal - unfiltered 100 mg/l, Monthly	62 4/12/84	118	81	62	Currently Compliant
FECAL COLIFORM New River Upstream of Canal - 30,000 col/100 ml, Weekly	21,000 4/12/84	180,000	67,000	21,000	Currently Compliant
New River at Boundary - None	21,000 4/12/84	146,000	43,500	5,000	High fecal coliform values due to bypassing.

Review of Water Quality Standards at 12-month intervals from effective date of Minute, December 4, 1980. (Agreed with California Regional Water Quality Control Board to postpone review until Mexico achieves compliance with interim standards).

U.S. Section

EXHIBIT 3

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

MINUTE NO. 264

Ciudad Juarez, Chihuahua
August 26, 1980

RECOMMENDATIONS FOR SOLUTION OF THE
NEW RIVER BORDER SANITATION PROBLEM
AT CALEXICO, CALIFORNIA - MEXICALI, BAJA CALIFORNIA NORTE

The Commission met in the offices of the Mexican Section in Ciudad Juarez, Chihuahua at 11:00 a.m. on August 26, 1980, to review studies made and to formulate recommendations for solution of the New River border sanitation problem at Calexico, California - Mexicali, Baja California Norte.

The Commission referred to President Carter's and President Lopez Portillo's joint statement released following their meeting on September 28-29, 1979, with special reference to the part which reads, "The Presidents recalled that last February they had instructed the International Boundary and Water Commission to recommend measures that might be adopted within the context of existing agreements to achieve further progress towards a permanent solution to border sanitation problems. The Presidents reviewed the recommendations submitted by the Commission and found them satisfactory as a basic agreement for solution of border sanitation problems. The Presidents asked the Commission to proceed as soon as possible to conclude the supplementary recommendations for completion of the works required to provide the good quality water which they had recognized in February to be so important for the health and well-being of the citizens of both countries living and traveling in the border area."

The Commission also referred to recommendation No. 4 of Minute No. 261 which provides: "That for each of the border sanitation problems, the Commission prepare a Minute for the approval of the two Governments, in which there would be included, identification of the problem, definition of conditions which require solution, specific quality standards that should be applied, the course of action that should be followed for its solution, and the specific time schedule for its implementation."

The Commission having studied each one of the existing border sanitation problems, agreed that the New River problem is the most urgent and should be the first to be resolved for the benefit of the health and well-being of the citizens of both countries.

The Commissioners noted that all of the waste waters from the rapidly growing city of Mexicali, including among these treated and untreated domestic waste waters as well as industrial waste waters, are discharged into the New River, which crosses the boundary from Mexico to the United States at Mexicali, B.C.N. and Calexico, California and flows northward to discharge into the Salton Sea. They studied the recent records of analyses of samples of the New River waters at the international boundary which attest to the serious threat that the waters of the New River pose to the health and well-being of the inhabitants on both sides of the border and which impair the beneficial uses of these waters.

The Commission referred to the joint engineering meeting held in the offices of the Mexican Section in Cd. Juarez, Chihuahua on May 30, 1980, in which, in addition to the Commissioners and Engineers of the two Sections, the following Technical Advisors participated:

For the United States Section: Engineer Clyde B. Eller, Director, Enforcement Division, Regional Office, San Francisco, California and Engineer Eloy R. Lozano, Assistant to the Regional Administrator, Dallas, Texas, both of the Environmental Protection Agency, and Consulting Engineer Dennis A. O'Leary of San Diego, California.

For the Mexican Section: Engineer Ignacio Villela Beltran, Subdirector for Potable Water and Sewerage Projects, Secretariat for Human Settlements and Public Works; Engineer Mario Solano Gonzalez, Director General for Sanitation of Waters, Sub-Secretariat for Environment Improvement, Secretariat of Health and Assistance; Engineer Jose Luis Calderon B., Subdirector for Engineering, and Engineer Francisco Bahamonde Torres, both of the General Directorate for Ecological Order and Protection, Secretariat of Agriculture and Hydraulic Resources; and Consulting Engineers, Dr. Ernesto Espino De la O. and Dr. Hector R. Mendoza of Mexico City, D.F.

The Commission then reviewed the studies made by the Mexican Technical Advisors and their proposals for a solution to the problem, as presented in the joint engineering meeting.

The Commission agreed with the proposal of the Mexican Technical Advisors that the permanent solution to the problem should have as its goal the elimination of domestic and industrial waste waters in the New River at the boundary and that this solution could be achieved through necessary action by Mexico to eliminate the discharge of such waste waters to the New River by construction of the necessary pumping facilities and pipelines to convey them southwestward, away from the border. The Commissioners agreed on the need for providing sufficient capacity in the proposed works and to take the necessary measures for their future expansion to meet the needs of the rapid growth of the city of Mexicali.

The Commission agreed that essential to an effective permanent solution would be the installation of adequate standby equipment for use at times of breakdowns as well as implementation of a comprehensive operation and maintenance program to include preventative maintenance measures.

The Commissioners noted the advice of the Mexican Technical Advisors that the design of the works for the permanent solution could be completed by the end of 1981 and that their construction could be completed in 1983, subject to the Mexican Government's appropriation of the needed funds.

Taking into account that the permanent solution to the New River problem cannot be immediate, the Commission reviewed the understandings resulting from the joint engineering meeting with reference to the water quality standards that could be met in the interim period until a permanent solution is achieved, and to the necessary works to be constructed, operated and maintained to meet those standards. The Commission agreed that the qualitative and quantitative standards for the New River acceptable to both countries in the interim period are as follows:

Qualitative Standards for the New River at the International Boundary-Interim Solution

1. The waters of the river shall be free of untreated domestic and industrial waste waters.

2. The waters shall be free from substances that may be discharged into the river as a result of human activity in concentrations which are toxic or harmful to human, animal or aquatic life or which may significantly impair the beneficial uses of such waters.

3. The waters of the river shall be essentially free from trash, oil, scum, or other floating materials resulting from human activity in amounts sufficient to be injurious, unsightly, or to cause adverse effects on human life, fish, and wildlife. Persistent foaming shall be avoided.

4. The waters of the river shall be free of pesticides in concentrations which could cause harmful effects to human life, fish, and wildlife.

5. The channel of the river shall be free of residual sludge deposits from domestic or industrial wastes.

Quantitative Standards
(Applicable at indicated sampling location)

	Monthly Average Values		
Time For Achievement:	Immediately	Within 3 Months	Within 20 Months
Sampling Location:	1 (New River at Boundary)	2 (Lagoon Discharge Canal)	3 (New River Upstream of Discharge Canal)
Parameters			
BOD_5	—	30 mg/l filtered	30 mg/l unfiltered
COD	--	70 mg/l filtered	100 mg/l unfiltered
pH	6.0 to 9.0	--	--
DO	5.0 mg/l*	--	--
Fecal Coliform Organisms	--	--	30,000 colonies per 100 ml, with no single sample to exceed 60,000 colonies per 100 ml

* Dissolved Oxygen of 5 mg/l considered as an objective for first 20 months and thereafter as a standard.

The Commission agreed to review the water quality standards for the interim period at 12-month intervals from the date of approval of this Minute and to recommend to the two Governments such modifications as appear warranted.

The Commission reviewed the measures proposed by the Technical Advisors of Mexico to achieve compliance with the quality standards in the interim period and the schedule for their completion. The Commission agreed that the major part of the necessary works are now under construction and the necessary actions and schedule to complete them and the remaining parts are as follows:

a. Complete construction of five additional oxidation lagoons at the site of the existing lagoons by September 1980.

b. Dredging of the existing lagoons by the middle of 1981.

c. Complete construction of new aerated oxidation lagoons southeast of Mexicali to treat domestic and industrial waste waters from the industrial area of Mexicali by the end of 1980.

d. Elimination of all remaining discharges to the New River of untreated domestic and industrial waste waters, including those from feed lots, by expanding the collection system as needed as soon as possible and not later than July 1982.

e. Installation of pumping equipment with adequate capacity and related works to include standby units at each of the two existing pumping plants, to guard against discharges of untreated waste waters to the New River, as soon as possible and not later than June 1981.

The Commission agreed that to prevent the discharge of untreated waste waters into the New River, it is essential for the interim solution that in addition to the installation of standby pumping equipment, there be adopted and implemented a comprehensive preventative maintenance program that includes availability of necessary spare parts.

The Commission then studied the joint program of monitoring that the two Sections put into practice to establish a record to enable review and evaluation of the results of the operation and maintenance of the works constructed for the interim and permanent solutions.

For the interim period, samples should be taken and analyzed in the following manner:

Location and Frequency of Sampling
For Interim Period

Parameters	New River at Boundary	Discharge Canal from Lagoons	New River Upstream of Discharge Canal
BOD_5	--	Monthly grab sample	Monthly 12-hour composite sample*
COD	--	Monthly grab sample	Monthly 12-hour composite sample*
pH	Weekly grab sample	--	--
DO	Daily grab sample	--	--
Fecal Coliform Organisms	--	--	Weekly grab sample

* Twelve consecutive hourly samples once a month (24-hour composite to be taken as needed to establish correlation with 12-hour composite).

It was agreed that for the permanent solution, samples should be taken of the New River waters at the international boundary monthly or more frequently if necessary, and these should be analyzed for BOD_5, COD, pH, DO, and fecal coliform organisms.

The Commission adopted the following recommendations for the approval of the two Governments:

1. That the studies and plans now being prepared by the competent Mexican authorities for the permanent and definitive solution of the border sanitation problem of the New River at Calexico-Mexicali, with the goal of elimination of domestic and industrial waste water discharges in the New River at the international boundary, proceed as promptly as possible and that the results of these studies and plans be presented to the Commission by late 1981 for its consideration and approval, together with the corresponding schedules for carrying out the works found to be necessary.

2. That for the interim period before implementation of the permanent solution, water quality standards be adopted as specified in this Minute and the works required to achieve compliance with these standards, as proposed by the Technical Advisors and described hereinabove, be constructed as soon as possible and not later than the dates stated hereinabove.

3. That the works for the interim solution as well as the permanent solution be operated and maintained by Mexico with adequate standby facilities and through implementation of a comprehensive preventative maintenance program to prevent breakdowns which could

result in the discharge of untreated domestic or industrial waste waters into the New River.

4. That the water quality standards for the interim solution be reviewed by the Commission at 12-month intervals from the date of this Minute and that the Commission recommend to the two Governments modifications as it considers warranted.

5. That the results of the operation and maintenance of the works during the interim period and of the permanent works, be monitored as proposed hereinabove, and the records be reviewed by the Commission to verify compliance with the water quality standards during the interim period and the permanent solution goal of eliminating domestic and industrial waste water discharges at the boundary.

6. That the Commission supervise the construction, operation and maintenance of the works required for the interim period as well as for the permanent solution in accordance with Articles 2 and 24 of the 1944 Water Treaty, and that the Mexican Section have jurisdiction over the works undertaken for this purpose in its country, including their construction, operation and maintenance, in conformance with Article 24 of the 1944 Water Treaty and with recommendation No. 7 of Minute No. 261 of September 24, 1979, approved by the two Governments.

7. That this Minute requires the specific approval of the two Governments.

The meeting was adjourned.

J. F. Friedkin
Commissioner for the United States

Joaquín Bustamante R.
Commissioner for Mexico

M. R. Ybarra
Secretary for the United States Section

Lorenzo Padilla, S.P.
Secretary for the Mexican Section

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May 1, 1984

California Legislature
Assemblyman Steve Peace
International Water Treatment & Reclamation
State Capitol
Sacramento, Ca 95814

RE: NEW RIVER POLUTION.

Dear Steve:

Unfortunately some minor health problems prohibits me from attending your most important water hearing on New River Polution.

My original plan of cleaning sewage from the River by ponding and using local Equatic Plants (Tules, Bullrush) etc. no longer seems the prudent solution. The plants would cleanse the water of sewage, but now we are faced with the introduction, from Mexico, of Toxic Chemicals, Slaughter House waste, Pesticides, etc. create additional hazards of which my Tules cannot cope.

The only feasible permanent solution is to stop the flow of the River at the Border. With the population of Mexicali 3/4 of a million at present, and forecast to double in the next ten years, the situation is daily becoming more critical.

It is interesting to note, the U. S. Government is spending hundreds of millions of dollars to clean salt from Colorado River water going into Mexicali Valley and in return Mexicali uses New River as their waste disposal. The Federal Government is cognesent of this, and by doing nothing, seem to condone it. Isn't there Federal Statute prohibiting the introduction of Toxic contamination into our Country? If so, what can be done to get it enforced?

Mexicali could divert the Mexican Portion of New River water to their Laguna Salada, Duarte Dike, or lower Colorado where it would empty into their Gulf of Baja, California.

It would require only a ditch and a few pump stations. It is their sewage, their carcinogens, their water, so should stay there.

As Mexico appears at present to be economically insolvent, it would be prudent for us to supply the cash, but with enough strings on it to cut down on the frills, graft, and mismanagement.

The longer we wait, the more costly it will be. In my opinion, an excellent investment.

Sincerely,

R. M. (BOB) McELVANY

RMM/nwm