UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C.

---oOo---

PUBLIC MEETING

on

MODIFICATION OF SECONDARY TREATMENT REQUIREMENT

FEBRUARY 22, 1978
9:40 a.m.

CONFERENCE ROOMS A-H
Environmental Protection Agency
Region IX
215 Fremont Street
San Francisco, California 94105

Reported by:

THOMAS R. WILSON, CSR, CM
(CSR No. 2052)

I N D E X

PUBLIC PARTICIPATION:

I N D E X

I N D E X

---oOo---

1

2 HEARING PANEL

3

4 THOMAS C. JORLING, Assistant Administrator,
for Water and Hazardous Materials,
5 United States Environmental Protection
Agency, Washington, D.C., Chairman
6

7 LISA FRIEDMAN, United States Environmental
Protection Agency, Office of the General
Counsel, Water Quality Division,
8 Washington, D.C.

9 PAUL DE FALCO, JR., Regional Administrator,
United States Environmental Protection
10 Agency, Region IX, 215 Fremont Street,
San Francisco, California 94105
11

12 DONALD DUBOIS, Regional Administrator,
United States Environmental Protection
Agency, Region X, Seattle, Washington
13

---oOo---

14

15

16

17

18

19

20

21

22

23

24

25

1 CHAIRMAN THOMAS C. JORLING: Good morning.

2 I guess the first order of business is to

3 check whether the microphones are working and the level

4 of audibility in the back of the room. Are we in good

5 shape? Okay.

6 I would like to welcome everyone here to

7 the Offices of Region IX which Paul has so generously

8 made available. We always like it when Paul makes his

9 offices available.

10 And to introduce the other panelists at the

11 table with me, Paul De Falco, the Regional Administra-

12 tor from Region IX;

13 Don Dubois, the Regional Administrator from

14 Region X; and

15 Lisa Friedman, who is a representative of

16 the General Counsel's Office from headquarters and

17 has been handling the implementation of this program.

18 In addition, we have several staff people

19 who have worked on the work group, including Tom

20 O'Farrell, who serves as the Cochairperson of the

21 work group implementing 301(h). And Don Baumgartner

22 and Bob Bastion also have been putting in long and

23 hard hours on this provision.

24 I have a short statement to set the tone for

25 the hearing, and then we will have a procedure, which

I will articulate at the end of that, to follow.

The subject of this public meeting is the implementation of Section 301(h) of the Federal Water Pollution Control Act as amended in December of 1977. Section 301(h) which authorizes EPA to modify the requirement of secondary treatment for biochemical oxygen demand, suspended solids and pH in an existing discharge from a publicly owned treatment works into marine waters if certain criteria are met.

The Federal Water Pollution Control Act of '72 required publicly owned treatment works to provide secondary treatment of their wastewaters by July 1 of 1977. Publicly owned treatment works on the West Coast who discharge their wastewater through ocean outfalls have argued that the reduction of BOD, suspended solids and pH resulting from secondary treatment is not necessary to protect the marine environment because of the dilution achieved in some deep marine waters.

The Congress determined that there should be a mechanism by which communities making this argument can test their case before the public in an administrative process. Under the amendments adopted by Congress in 1977, those publicly owned treatment works which can show that an existing deep marine discharge requires less than secondary treatment for BOD, suspended solids

1 and pH may be eligible, after a case-by-case review,
2 for modification of the requirement to provide secondary
3 treatment.
4 The purpose of this meeting is to receive
5 public views on the interpretation of the criteria in
6 Section 301(h), including three particular questions:
7 First, criteria to apply for modification to
8 the requirement for secondary treatment.
9 Second, the administrative procedures for
10 approving or disapproving an application; and,
11 Third, the criteria for determining whether
12 the applicant has made a satisfactory demonstration of
13 compliance with the statutory criteria.
14 The implementation of Section 301(h) is not
15 an easy job. I hope your testimony will help us to
16 better understand the issues and their implications.
17 The statutory criteria in Section 301(h)
18 provide that a modification of BOD, suspended solids
19 or pH may be granted only where there is a state water
20 quality standard applicable to the pollutant for which
21 a modification is requested. Where applicable water
22 quality standards exist for a pollutant in the dis-
23 charge, the municipal source can apply for a modifica-
24 tion from the secondary treatment requirement for that
25 pollutant if a showing is made that the applicable

1 water quality standards will be maintained.

2 The criteria require that the modification
3 will not interfere with the attainment and maintenance
4 of that water quality which assures the protection of
5 public water supplies and the protection and propagation
6 of a balanced, indigenous population of fish, shellfish
7 and wildlife, and allows recreational activities in
8 and on the water.

9 The criteria further provide that the appli-
10 cant demonstrate that he has an enforceable pretreatment
11 program; that no other point or nonpoint source will be
12 required to meet additional requirements because of a
13 modification of the secondary treatment requirement;
14 and that the volume of discharge of the pollutant will
15 not increase beyond that specified in the modified
16 permit for the period during which the modification is
17 ganted.

18 Section 301(h) applies only to marine
19 discharges. The term "marine" is defined in the
20 statute as follows:

21 " . . . a discharge into deep waters of the
22 territorial sea or the waters of the contiguous
23 zone, or into saline estuarine waters where there
24 is strong tidal movement and other hydrological
25 and geological characteristics which the

1 Administrator determines necessary to allow
2 compliance with Paragraph (2) of this subsection,
3 and Section 101(a)(2) of this Act."
4 Section 101(a)(2) of the Act calls for
5 achievement by 1983 of water quality which provides
6 for the protection and propagation of fish, shellfish,
7 and wildlife and provides for recreation in and on the
8 water wherever attainable.
9 Congress plced the burden of demonstrating
10 eligibility for a modification of the secondary treat-
11 ment requirement solely on the applicant. To be
12 eligible for a modification, all applications must be
13 made by September 24, 1978; and to be approved, they
14 must, on their face, provide sufficient justification
15 for granting the application.
16 The burden of proof to show compliance with
17 the criteria means that before applying, applicants
18 must know, among other things, the composition of their
19 wastes, what industrial and non-industrial sources are
20 contributing to their wastes, what happens to the
21 wastes after they are discharged, and the impacts upon
22 water quality and the biota in the coastal zone.
23 As we consider how to evaluate compliance
24 with the statutory criteria in Section 301(h), it is
25 important to keep in mind some of the basic

1 environmental policies established by Congress in 1972
2 and reaffirmed in 1977.
3 The stringent criteria of Section 301(h)
4 reaffirm the basic policy of the Federal Water Pollution
5 Control Act to restore and maintain the chemical,
6 physical and biological integrity of the nation's
7 waters.
8 Congress has determined the continued
9 release of pollutants into the nation's waters, includ-
10 ing the coastal waters of the oceans, to be inconsistent
11 with this basic objective of restoring and maintaining
12 the integrity of the nation's waters. Thus, the policy
13 of the Act is to move progressively toward eliminating
14 the discharge of the pollutants.
15 The program of regulation under the Act,
16 including Section 301(h), anticipates moving our urban
17 industrial society to recycling of water and nutrients
18 and confining and containing the disposal of pollutants.
19 This policy is becoming more compelling with the
20 growing shortages of fresh water that are occurring
21 not just in the arid West, but in what had previously
22 been thought of as water-rich coastal areas of the
23 nation. The elimination of the discharge of pollutant
24 policy established by the 1972 Act reinforces the
25 growing concern over the availability of high quality

1 fresh water. As we implement the law, these two
2 imperatives must reinforce each other wherever possible.
3 The most important resource of the coastal
4 zone is the biota. Congress recognized this in
5 establishing the stringent criteria in Section 301(h).
6 Many of the constituents of both municipal and
7 industrial waste are persistent organic and inorganic
8 chemicals; chemicals about which we know very little,
9 especially upon their entrance into the ocean and
10 their uptake into biogeochemical cycles. Many of the
11 biota are extremely sensitive to small changes in
12 the chemistry of their environment and have the ability
13 to bioaccumulate these materials.
14 The importance of the biota, their sensitivity
15 and their ability to bioaccumulate toxicants raises
16 two issues in regulating ocean outfalls: the concept
17 of thresholds and of assimilative capacity.
18 The assumption is made that there are
19 concentrations of any substance below which effects
20 are either nonexistent or small enough to be negligible.
21 This concentration becomes the, quote, threshold for
22 effects.
23 A second tenet is that aquatic systems have
24 a capacity for absorbing wastes, including toxicants,
25 and for rendering them innocuous. This capacity is

1 often referred to as assimilative capacity and is often
2 assumed to be a general property of natural systems.
3 The important point is that these two charac-
4 teristics assigned to natural systems may not be
5 intrinsic properties of the systems; they have, in
6 fact, been assigned to them for convenience in the
7 disposal of wastes.
8 As Congress recognized in Section 301(h),
9 an assumption that there is an assimilative capacity
10 in deep ocean waters for naturally occurring organic
11 matter may have some justification. However, Congress
12 also recognized that in our complex society, municipal
13 waste, especially the suspended solids, are often
14 contaminated with persistent as well as bioaccumulative
15 industrial toxicants for which the assimilative
16 capacity is nonexistent.
17 Experience with ionizing radiation, pesticides
18 and other toxicants shows that there is no objective
19 basis for assigning a threshold concentration for
20 such substances in nature for several reasons. The
21 most important reason is the capacity of living
22 systems for concentrating such substances in unpre-
23 dictable ways.
24 The solubility of DDT in water is approxi-
25 mately one part per billion, yet many organisms in

1 nature contain concentrations in excess of parts per
2 million and, under certain circumstances, much higher
3 concentrations.
4 Most of the chlorinated hydrocarbons behave
5 in this way, simply on the basis of solubility alone.
6 A regulatory policy based on the assumption of a
7 threshold for effects or an assimilative capacity for
8 toxic pollutants, especially over time, is bound to
9 fail. The Federal Water Pollution Control Act clearly
10 recognizes this flaw.
11 While Congress recognized that evidence may
12 exist to support a modification to the secondary
13 treatment requirements from BOD, suspended solids and
14 pH, it emphasized through the Section 301(h) criteria
15 that the modification should not allow the discharge
16 of additional amounts of toxic pollutants, such as
17 heavy metals, synthetic organic compounds and other
18 toxicants listed under Section 307(a).
19 Since less than secondary treatment of waste-
20 water provides very limited removal of these toxic
21 pollutants which are included within the suspended
22 solids, publicly owned treatment works handling
23 domestic wastes may have a lesser burden of proof to
24 demonstrate compliance with 301(h) criteria.
25 Highlighting the concern of toxicants,

1 Senator Muskie said in Senate debate on Section 301(h),
2 and I quote as follows:
3 "This provision for modification would be
4 available only to systems which are providing
5 waste treatment services to users which contribute
6 primarily domestic-type wastes or which have
7 sufficient control over industrial input so as
8 to prohibit any 307-type pollutants from entering
9 the system.
10 "Any complex system which is treating wastes
11 for a myriad of industrial and commercial
12 establishments within a metropolitan area could
13 never meet the requirements of this modification
14 procedure unless the control of industrial
15 input was thorough enough to assure that no
16 toxics or other incompatible pollutants pass
17 directly into the ocean environment.
18 "Primary treatment does not deal with these
19 kinds of constituents. Therefore, their presence
20 as an input into municipal waste streams is a
21 prima facie indication that the secondary treat-
22 ment modification provision is not applicable,"
23 end of quote.
24 While we know little about the effect of
25 continued release of persistent pollutants to the

1 oceans, we do know that oceans are vital to the
2 biosphere that supports all life now and for future
3 generations. Under Section 403 of the Federal Water
4 Pollution Control Act, EPA must promulgate guidelines
5 to protect the basic integrity of these ocean systems.
6 Congress included Section 403 in 1972 in
7 order to provide greater safeguards in coastal waters.
8 The 1977 amendments retained Section 403. Revised
9 Section 403 guidelines are scheduled to be proposed
10 in March of this year.
11 Consistent with the Congressional concern
12 for toxicants and Senator Muskie's statements during
13 the Senate debate, EPA will assure that the guidelines
14 developed under Section 403 are, quote, met as a
15 condition of granting of a modification, end of quote,
16 to the secondary treatment modification requirement.
17 In deciding upon a modification, the decision would be
18 made on the basis of long-term effects, even though
19 any modification would be limited to a five-year
20 period since chronic effects are of greatest concern
21 in protecting the integrity of the oceans.
22 In opening this public meeting, I have
23 purposely attempted to place the issues before us in
24 the broader context of Congressional and national
25 intent to protect the integrity of the oceans. With

1 this context in mind, we would like to begin hearing
2 your thoughts on implementation of Section 301(h),
3 including your comments on the questions posed in the
4 February 3rd announcement of this public meeting. To
5 the extent possible, EPA will consider public comments
6 made at the meeting as well as written comments sub-
7 mitted prior to the meeting in developing proposed
8 regulations. I expect to propose regulations in mid-
9 March, and those proposed regulations will include the
10 application forms so that interested marine dischargers
11 can begin preparing to meet the September 24 statutory
12 deadline for submitting an application. Any comments
13 which are not considered prior to proposal will, of
14 course, be considered in developing the final regula-
15 tions. Final regulations will be promulgated in early
16 June in order to give applicants the greatest amount of
17 time possible in advance of the September application
18 deadline.
19 We will first be hearing comments from any
20 elected public officials. All other speakers who have
21 registered have been divided into four groups, consis-
22 tent with the Region IX policy in effect for many
23 years: unaffiliated private citizens, representatives
24 of public agencies; representatives of special interest
25 groups and associations, and representatives of

1 business, commercial or industrial firms. We will
2 rotate among the four groups, hearing comments from
3 one person in each group -- And I might add that we
4 are going to adjust that slightly because there is an
5 overwhelming majority in one of those groups, and we
6 will try and adjust that -- comments from persons in
7 each group, starting with those who registered earliest.
8 I would also like to add that, in keeping
9 with the desire to generate the greatest amount of
10 information during the course of the hearing, anyone
11 who would like to submit a question that they would
12 like asked of another witness can do so by writing
13 that question down and submitting it to Lorraine or
14 Joanne in the back of the room, and we will try and
15 ask those questions to the extent possible to avoid
16 redundancy and other time factors during the course of
17 the hearing so that we can get as much into the forum
18 as is possible.
19 Now, with that, I would like to make a few
20 other announcements.
21 Copies of the statement that I have delivered
22 are available now in the back of the room for anyone
23 who would like a copy of that.
24 We would like for each person who does speak
25 to give their name and to identify themselves with an

1 affiliated organization if they are representing that
2 organization before each statement.
3 And because we have over 40 people to make
4 statements, we ask each of you to limit your comments,
5 your prepared comments, to approximately five to seven
6 minutes, with a dialogue for a few additional moments.
7 That will get us through this meeting sometime before
8 the dinner hour if we are able to stick to that
9 schedule.
10 The entire statement of anyone who has
11 prepared statements will be included in the record.
12 We do have a Court Reporter taking a verbatim transcript,
13 and we will then supplement it with prepared remarks.
14 So copies should be made available to the Court
15 Reporter to assist us in that effort.
16 The record following the hearing will be
17 open for 15 days. Following that, we hope to be close
18 to publication of proposed rules, and then we will
19 commence the formal rule making process at that time.
20 We will take a break approximately at noon,
21 resuming at 1:30 and going to completion, so that
22 everybody has an opportunity to provide their comments.
23 We do have two elected officials who have
24 registered to testify. I believe the pronunciation
25 is Palmtag, Charles Palmtag, a Councilman from

1 Watsonville, California, and Don Saltarelli from
2 Tustin, California. If they would both come to the
3 podium. Or, I think it would be easier for one.
4 Charles, if you would come first, and then Don.
5 MR. CHARLES PALMTAG: My name is Charles
6 Palmtag. I am a Watsonville City Council Member and
7 Chairman of Watsonville's Washwater Study Board of
8 Control.
9 Before we start any recommendations, I would
10 like to just give a very brief background.
11 The City of Watsonville discharges primary
12 treated sewage to the ocean through a 39-inch outfall
13 line. We discharge our sewage into the ocean through
14 a 39-inch outfall extending approximately 4,000 feet
15 into Monterey Bay. The City is currently studying
16 alternatives to meet the EPA standards for secondary
17 treatment.
18 It has been the City's position for years
19 that the EPA's level of treatment is not normally
20 necessary to protect the ocean waters. The City
21 supports the State of California criteria for ocean
22 dischargers. The City has never been allowed to study
23 alternatives other than to meet the EPA standards for
24 secondary treatment.
25 Pursuant to the above, the City of Watsonville

1 has written to the Regional Water Quality Control
2 Board and to the EPA requesting a waiver of its require-
3 ment for secondary treatment. Therefore, the City is
4 very concerned about establishing logical guidelines
5 for the eight criteria being considered at today's
6 hearing, and we offer the following comments.
7 One. The September 24th, '78, deadline, we
8 feel, for submitting data to support a waiver applica-
9 tion is unrealistic. To date, most cities have not
10 been allowed to study alternatives other than those
11 that would meet EPA's definition of secondary treatment.
12 The kind of ocean work necessary to document informa-
13 tion to support a waiver would take in excess of 12
14 months' time.
15 Two. It is the City's position that there
16 need not be a substitute effluent standard for a given
17 pollutant. The recent work in California in the State's
18 revised Ocean Plan documents the fact that BOD limita-
19 tion is not an important criterion. We feel that
20 other important parameters, such as turbidity, toxicity
21 and so forth, should be examined.
22 Three. The criteria stating "protection and
23 propagation of indigenous population" should not be
24 interpreted to be a specific criteria. In our opinion,
25 no specific level should be established for species

1 diversity index, or a minimum density required for
2 any specific species. Data collected for our area of
3 Monterey Bay by several marine laboratories indicates
4 that it would not be possible to establish specific
5 limitations on a uniform basis. The indigenous popu-
6 lation in areas of the ocean is constantly changing.
7 A period of five years may see major changes in the
8 indigenous population in a given area. We feel that
9 ongoing monitoring studies should be used to document
10 the water quality maintenance.
11 Four. It is the City's position that a
12 monitoring system and/or a source control program
13 need not be implemented within the 270-day time limita-
14 tion for a waiver application. The City's monitoring
15 program is a part of its NPDES discharge permit and
16 should be done on a case-by-case basis. The require-
17 ment that this be accomplished within a 270-day time
18 limitation does not seem to make sense to us.
19 Five. The City is adamant in stating that
20 the criteria regarding no new or substantially increased
21 discharges should not prohibit reasonable growth within
22 the community. It is our position that a reasonable
23 population growth should be defined in terms of per
24 cent per year over the 20-year planning period. In
25 Watsonville, even a two to three per cent growth factor

1 per year will result in a fifty per cent flow increase
2 over the twent-year planning period.
3 Six. It is the City's position that the law
4 not be interpreted to require that the concentration
5 of toxic pollutants in the discharge granted a modifica-
6 tion be any greater than the concentration which would
7 occur with secondary effluent. The monitoring of
8 toxic pollutants has always been the responsibility of
9 the Regional Water Quality Control Board. These
10 limits should be based on the California Ocean Plan,
11 which contains water quality standards, rather than
12 effluent standards. A case-by-case decision should be
13 made on effluent levels. The key to enforcement should
14 be the water quality in the outfall area.
15 Seven. The City would like to make a
16 particular point about the term "industrial wastes."
17 Our City's total waste has domestic characteristics,
18 even though 50 per cent of the flow is called indus-
19 trial. The City has 20 food processing industries
20 discharging to its plant, and few of these have toxic
21 chemicals and heavy metals. Food industries do have
22 a high BOD; however, it is the one thing proven in
23 California that is not a justifiable parameter to
24 regulate in terms of effluent quality. We do not
25 believe that, because industry is present in a city,

1 its discharge should be evaluated differently. We
2 believe that what must be protected is the water qual-
3 ity, and each discharger must be regulated individually
4 to accomplish this end.
5 And, eight, it is our belief that the area
6 of the outfall should not necessarily be evaluated as
7 a recreation area. The areas of many outfall lines
8 could never be considered recreational, even without
9 the outfall line being present. For example, the
10 Watsonville outfall is located in an area of high wave
11 and tidal action. Swimming, boating or fishing would
12 be most difficult, regardless of the water quality
13 or presence of an outfall line.
14 In closing, many of us have traveled to other
15 areas of the country and have seen what can happen to
16 the water quality. We don't want that to happen
17 around Watsonville. But we also think there is more
18 than one way to accomplish our mutual goals of pro-
19 tecting the environment. For this reason, we ask you
20 to give serious consideration to these recommendations.
21 And, finally, we would offer to participate
22 on any advisory committee the EPA might establish to
23 further assist in the development of regulations for
24 the issuance of secondary treatment waivers.
25 Thank you.

1 CHAIRMAN JORLING: Thank you very much.

2 Other members of the panel may want to ask
3 questions, so you may want to stay up at the podium
4 for a moment, if you would, Councilman.

5 I do have one question, and that is your
6 reference to the California Plan. Are you referring
7 there to the '72 version of the California Plan or to
8 the Proposed '78 version?

9 MR. PALMTAG: Okay. In order to avoid any
10 problems, let me call on my consultant, Christine Carr
11 from Montgomery and Associates, to answer some of
12 these specific questions.

13 MS. CHRISTINE CARR: Mr. Jorling, my name
14 is Christine Carr, and I am representing Montgomery
15 Engineers from Walnut Creek.

16 And to answer your question, the reference
17 in Mr. Palmtag's address was made for the proposed '78
18 Ocean Plan as revised.

19 CHAIRMAN JORLING: Thank you.

20 MS. FRIEDMAN: I have one.

21 CHAIRMAN JORLING: Lisa?

22 MS. FRIEDMAN: I believe you mentioned a
23 study which was being performed which addressed the
24 question of establishing uniform criteria for balanced
25 indigenous population.

1 MS. CARR: I think what Mr. Palmtag was
2 referring to was a number of studies that are being
3 done in the Monterey Bay specifically, some information
4 that was received by the city the other day from the
5 Marine Laboratory at Moss Landing, and they have been
6 studying a number of populations on the floor of the
7 ocean in the vicinity of the Watsonville outfall and
8 have determined that it's very difficult to determine
9 exactly what an indigenous population is in that area.
10 MS. FRIEDMAN: Could you submit whatever
11 written studies they have prepared for the record?
12 MS. CARR: We would be pleased to submit any
13 written copies that are available. However, a lot of
14 this is ongoing work, and the final data is not yet
15 available.
16 MR. PALMTAG: One other comment that they
17 made on that is that they had run studies in other
18 areas that were not in the area of an outfall line,
19 and in a couple of -- Well, I guess several areas,
20 they found that, in these ongoing studies that were
21 taking place every five years, that the indigenous
22 population of these areas, which are in no way related
23 to the outfall lines, are changing to the point where
24 they are radically different over that period.
25 MR. De FALCO: Councilman, could you tell me

1 what is, in general, the depth of the water in the area
2 of the outfall and the area of the bay that you dis-
3 charge into?
4 MS. CARR: The existing outfall -- And a
5 modification of that outfall is proposed, but the
6 existing outfall discharges at the 40-foot depth
7 contour approximately off the mouth of the Pajaro River.
8 MR. De FALCO: What is the depth of the bay
9 in that general area, or the proposed area that you
10 are going to --
11 MS. CARR: Well, the outfall, as I mentioned,
12 it's approximately 4,000 feet long and discharges at
13 the 40-foot depth contour. Now, an extension of that
14 outfall is proposed to approximately the 80-foot depth
15 contour.
16 MR. De FALCO: Thank you.
17 CHAIRMAN JORLING: Thank you very much.
18 MR. PALMTAG: Thank you.
19 CHAIRMAN JORLING: The next official is Don
20 Saltarelli, representing the Orange County Sanitation
21 District.
22 MR. DONALD J. SALTARELLI: Good morning. My
23 name is Don Saltarelli. I am a locally elected
24 official in Orange County, and I am serving as the
25 Joint Chairman of the County Sanitation Districts of

1 Orange County, California.

2 We appreciate that your agency is seeking
3 public comment relative to the promulgation of EPA
4 regulations to implement the 1977 amendments to the
5 Federal Water Pollution Control Act and, specifically,
6 the modification of secondary treatment for municipal
7 deep-ocean discharges.

8 We have all been concerned for many years
9 that a blanket secondary treatment requirement for all
10 municipalities, regardless of receiving waters, is not
11 only wasteful of public funds and limited energy
12 resources but, in some cases, creates additional
13 environmental problems.

14 Our agency discharges its treated wastes
15 five miles at sea at a depth of approximately 195 feet
16 through a 6,000-foot long diffuser. Our current flow
17 averages 180 mgd. We are presently committed to the
18 construction of 125 mgd of secondary treatment facili-
19 ties. When completed, our combined flow will meet the
20 adopted California Ocean Plan requirements.

21 If we are required to go to full secondary
22 treatment, another $50 million in capital construction
23 will be required, plus the attendant annual operating
24 and maintenance costs which will be borne by the local
25 taxpayer without any measurable improvement to the

1 environment.

2 In June of last year, the California State
3 Water Resources Control Board estimated that capital
4 costs to construct marine waste disposal treatment
5 systems in California to meet their Ocean Plan would
6 be $454 million and would increase to $899 million
7 under the Federal BOD requirement for major California
8 municipal discharges. While this information has been
9 documented in the 1977 Senate and House hearings, I
10 believe it is important that this be considered in the
11 development of EPA regs concerning the waiver provisions
12 of the secondary treatment requirement.

13 We support the approach taken by the
14 California State Water Resources Control Board since
15 its adopted Ocean Plan emphasizes controlling those
16 waste constituents -- toxics -- which almost always
17 result in adverse impacts on the aquatic environment.
18 We recommend that EPA's regulations concerning require-
19 ments for a waiver of secondary treatment would
20 encompass many of the provisions of the California
21 Plan.

22 With regard to the eight statutory criteria
23 and the accompanying questions outlined in EPA's public
24 meeting notice, our agency would have the following
25 comments.

1 Criteria 1. There is an applicable water
2 quality standard specific to the pollutant for which
3 the modification is requested, which has been identified
4 under Section 304(a)(6) of this Act.
5 Since substantial quantities of BOD have
6 been discharged through deep-water outfalls for many
7 years without measurable effects on the dissolved
8 oxygen content of the coastal waters, it appears
9 logical that EPA regulations should be written to
10 accept state water quality standards which regulate
11 related parameters such as dissolved oxygen and
12 turbidity with regard to BOD and suspended solids.
13 Requirement 2.
14 To save time, I will not read what the
15 requirements are. I assume everyone has them in front
16 of them.
17 We believe the evaluation of water quality
18 for this criteria should compare the impact of the
19 discharge, if a modification is approved, to the
20 impact which would have resulted from secondary treat-
21 ment.
22 For example, our agency has committed to the
23 construction of secondary treatment for 60 per cent of
24 our discharge. We would expect that the evaluation
25 concerning our request for waiver would address the

1 impact of the 60 per cent secondary treatment versus
2 100 per cent.
3 With regard to how should a balanced
4 indigenous population be defined, we support the method
5 used by the Southern California Coastal Water Research
6 Project which developed what they call a faunal index
7 based on numerous criteria.
8 Criteria 3. Particularly here in California,
9 the major agencies have established considerable
10 background over the years for determining representative
11 aquatic biota existing in the adjacent marine waters.
12 Current NPDES permits issued in California require
13 extensive marine monitoring systems. We have those.
14 Criteria 4. Such modified requirements will
15 not result in any additional requirement on any other
16 point or nonpoint source.
17 This requirement will not affect dischargers
18 in California, assuming compliance with the California
19 adopted State Ocean Plan.
20 Criteria 5. All applicable pretreatment
21 requirements for sources introducing waste into such
22 treatment works will be enforced.
23 We suggest that EPA's regulations provide
24 that a publicly owned treatment works should have an
25 enforceable pretreatment program at the time the waiver

1 application is approved rather than an enforceable
2 pretreatment program at the time of the application.
3 We believe this is consistent with the fact that many
4 agencies throughout the United States are still develop-
5 ing their pretreatment programs.
6 Criteria 6. This provision will require
7 the development of a public education program to
8 eliminate domestic discharge of certain pollutants.
9 We believe that EPA regulations should interpret this
10 criteria to mean that the applicant will have adopted
11 at the time the waiver is granted, a schedule of
12 activities designed to eliminate the entrance of toxic
13 pollutants from non-industrial sources into such
14 treatment works.
15 Criteria 7. Since the provision for modifica-
16 tion of secondary treatment requires review each five
17 years, we assume that the modification is part of the
18 NPDES permit which does enumerate the allowable flow.
19 For instance, our agency's average daily flow
20 is approximately 180 mgd, while our NPDES permit
21 authorizes a flow of 227. Therefore, during the
22 current five-year permit period, there will be no
23 new or substantially increased discharges unless we
24 exceed the NPDES permit allowable of 227 mgd.
25 We request that the EPA's regulations

1 concerning Statutory Criteria 7 be consistent with
2 the NPDES permit conditions.
3 Eight. We look upon this criteria to mean
4 utilizing grant funds for water reclamation, water
5 reuse and conservation projects.
6 The question has been raised should the law
7 be interpreted to require that the concentration of
8 toxic pollutants -- heavy metals, chlorinated hydro-
9 carbons, etc. -- in the discharge be no greater than
10 the concentration that would occur in secondary treat-
11 ment. It would appear to make more sense that EPA
12 interpret the concentration of toxic pollutants as
13 contained in the restrictive California Ocean Plan.
14 We believe this position would be defensible by the
15 Environmental Protection Agency and well accepted by
16 conservation groups.
17 Another question. Should the law be inter-
18 preted to require publicly owned treatment works which
19 treat only domestic wastes to be evaluated differently
20 than publicly owned treatment works that treat large
21 amounts of industrial wastes?
22 If it is EPA's intention to reduce the
23 amount of red tape in reporting and monitoring require-
24 ments for publicly owned treatment works treating
25 domestic wastes only, our agency would support that

1 position.

2 In conclusion, we recognize that EPA's
3 regulations must be restrictive since this provision
4 was adopted by the Congress on the basis that marine
5 dischargers should be permitted waivers of secondary
6 treatment requirements where conditions are such that
7 reasonable limits can be set to provide for treatment
8 which is something less than secondary treatment and
9 still protect the marine environment. We understand
10 that the waiver provision is not a blanket authority
11 covering all marine discharges. However, we must
12 insist that the regulations be promulgated to permit
13 responsible agencies to present their cases for waivers
14 without punitive administrative red tape.

15 It seems to me that the procedures established
16 for the 401 process, the NPDES permit, could be an
17 administrative process to be used for the application
18 and granting of the waivers. We can tie the waiver
19 into the NPDES permit.

20 A final personal comment. The waiver process
21 is also a political and an economic issue. Congress
22 has told us so. Taxpayers of our nation and in the
23 State of California, and in Orange County, California,
24 are on the verge of a revolt. And I believe that it
25 is imperative that the available resources for

1 controlling environmental pollution be allocated where
2 the need is the greatest. It would be foolish for us
3 to be required, or for any other agency to be required,
4 to spend money on the magnitude of $25 to $50 million
5 or a hundred million dollars where there can be no
6 measurable increase in the results.
7 I would be happy to answer any questions
8 that I can.
9 CHAIRMAN JORLING: Thank you, Don. I have
10 one question.
11 Your reference to the permit provision for
12 a flow of 227 million gallons per day, is that based
13 on in-place design capacity?
14 MR. SALTARELLI: Yes.
15 CHAIRMAN JORLING: Any others?
16 MR. De FALCO: Yes.
17 You mentioned the present monitoring program.
18 Could you give us some idea of what your present
19 monitoring program is costing?
20 MR. SALTARELLI: At our agency, it's about
21 two hundred fifty-three hundred thousand dollars a
22 year, but it's a joint project with some other agency,
23 and I think the cost is over a million dollars a
24 year or somewhere in that neighborhood, is it? A
25 quarter of a million dollars a year.

1 MR. DUBOIS: Following up on that point, I
2 believe you said, sir, that you would favor using the
3 NPDES monitoring requirements as the requirements that
4 apply for the waiver. Are you monitoring the biota in
5 the in-place water quality under your NPDES permit,
6 or are you only monitoring the effluent quality?
7 MR. SALTARELLI: We are monitoring it under
8 the permit; very definitely under the permit.
9 One of the things that concerns me is can
10 and will the state get together with the EPA in regard
11 to any problem regarding definition of BOD, or can that
12 be something that's worked out. I hate to see hundreds
13 of millions, of billions of dollars spent on the
14 difference of the word "or" or "of" or something of
15 that nature in these regulations. And, believe me,
16 that's the way some of these things can be written.
17 We are concerned about that.
18 CHAIRMAN JORLING: The existing outfall, does
19 it meet the '72 California Ocean Plan, or would it
20 meet, if the answer to that is no, the '77 or '78
21 proposed California Plan?
22 MR. SALTARELLI: It will meet the '78.
23 CHAIRMAN JORLING: It will meet the '78 but
24 not the '72. Would it have met?
25 MR. SALTARELLI: Correct.

1 CHAIRMAN JORLING: I guess that completes it.
2 Thank you very much.
3 What I am going to do is to read the next
4 block of witnesses so we can get a little bit of an
5 idea of the planning of this activity and others can
6 know when they are going to appear. And I will read
7 them in sort of groups of six or seven.
8 The next witness will be Dennis Hardy,
9 representing the Alaska District of the Corps of
10 Engineers as a public agency, followed by Richard King
11 from the City of San Diego Water Utilities Department;
12 Larry Walker, representing the California State Water
13 Resources Control Board, who will be followed by Ken
14 Kamlet, representing the National Wildlife Federation;
15 then James Perry from the Watsonville Food Processors,
16 representing the business and commercial interests;
17 and John Spencer, representing the Washington State
18 Department of Ecology.
19 And that takes us through the first eight,
20 and then I will go to the next block following that.a
21 So if Dennis would come forward.
22 MR. DENNIS HARDY: My name is Dennis Hardy.
23 I'm an engineer representing the Alaska District, Corps
24 of Engineers, and the Alaskan Air Command, US Air Force,
25 as their design agent. Both agencies are located in

1 Anchorage, Alaska.

2 The passage of the Federal Water Quality
3 Act of 1965 and the resulting formulation of new
4 Alaska state water quality standards dictated a need
5 for more efficient waste treatment facilities through-
6 out Alaska. The President, by Executive Order 11288
7 directed the federal sector to assume a leading role
8 in the nationwide effort to achieve pollution control.

9 In response, the Alaskan Air Command
10 initiated and funded a program for research and
11 development of aerated lagoons through the Arctic
12 Health research center, US Public Health Service and
13 the Alaska District Corps of Engineers. These efforts
14 succeeded in advancing cold climate aerated lagoon
15 technology to a state of the art.

16 There are now 12 full-scale aerated lagoons
17 serving Air Force installations throughout Alaska,
18 with capacities varying from 7,000 gallons per day to
19 one million gallons per day. All of these lagoons
20 were designed and constructed in strict conformance
21 with waste treatment requirements of that period.

22 Subsequent to enactment of the Federal Water
23 Pollution Control Act amendments of 1972, secondary
24 treatment has been redefined numerous times by EPA,
25 resulting in more stringent treatment requirements.

1 Again in response, the Air Force has funded
2 additional research and development concerned with
3 upgrading facilities which are not in compliance with
4 the recent legislation. Construction is presently
5 underway to upgrade the one mgd Eilson Air Force Base
6 lagoon near Fairbanks, Alaska. This facility alone
7 treats approximately two-thirds of the wastes treated
8 by Air Force lagoons in Alaska.
9 The record shows that the Air Force has taken
10 every effort to comply with the letter and intent of
11 the law.
12 The Clean Water Act of 1977, which includes
13 a modification of secondary treatment requirements for
14 publicly owned facilities, including federal facilities
15 discharging into marine waters, provides a mechanism
16 whereby the regulatory agencies may apply reason and
17 logic to the otherwise inflexible discharge limitations.
18 Of particular interest is the aerated lagoon
19 at Shemya Air Force Base. Shemya is an Alaskan Air
20 Command base located at the tip of the Aleutian Island
21 chain. The island is relatively small, measuring about
22 one and a half miles wide and three and a half miles
23 long. The Bering Sea borders on the north and the
24 Pacific Ocean on the south. As an indication of its
25 remoteness, Shemya is located 1100 miles south of the

1 mainland of Russian and 2,000 miles west of the mainland
2 of Alaska.
3 The aerated lagoon at Shemya treats about a
4 quarter of a million gallons a day of domestic waste.
5 The lagoon discharges to the ocean through a submerged
6 outfall.
7 A recent study prepared by the Alaska
8 District, a copy of which I would like to submit for
9 the record, shows that even though the effluent BOD_5
10 is only 18 milligrams/liter, well under the 30 milli-
11 grams/liter requirement, it does not meet the 85 per
12 cent removal criteria because of its dilute nature.
13 The efficiency of the lagoon has been adversely
14 affected by the fact that about a quarter of the waste
15 flow is infiltration/inflow. Elimination of the infil-
16 tration/inflow is not economically feasible.
17 The cost of upgrading the lagoon to also
18 effect 85 per cent BOD_5 removal is high, at least
19 relatively high to us, over one million dollars, or
20 about $90,000 for each additional pound per day of
21 BOD_5 removal. The benefit is neglibible. There is
22 no use of the marine waters for water supply, recreation
23 or shellfish.
24 In addition, the strong ocean currents in
25 the vicinity of the outfall preclude violation of water

1 quality standards. Thus, it would not be in the best
2 interest of the government or the taxpayer to upgrade
3 the lagoon. The facility has been granted a disinfec-
4 tion waiver by EPA and the State of Alaska based on
5 this same premise.
6 The Alaskan Air Command, through the Alaska
7 District, has requested a waiver of the secondary
8 treatment requirement for Shemya. Under this waiver,
9 the lagoon would continue to discharge effluent of a
10 quality which is extremely close to EPA's definition
11 of secondary treatment.
12 The Air Force and Alaska District look
13 forward to working closely with EPA and the State of
14 Alaska in providing the Administrator with the infor-
15 mation required to satisfy him that the eight conditions
16 specified in the law can be met at Shemya.
17 If there are any questions, I would be glad
18 to answer them.
19 CHAIRMAN JORLING: One of the things that
20 we are going to have to continually remind ourselves
21 during the course of the hearing is that the purpose
22 of this hearing is to assist us in developing the
23 regulations, and those regulations will then be the
24 framework in which individual case-by-case decisions
25 will be made. And it's at that time when the particular

1 case will be discussed and considered on its own merits.
2 There is one issue here that you raise which
3 is going to require our interpretation. You have
4 suggested that federal facilities are, for purposes of
5 this provision, publicly owned treatment systems. As
6 a matter of law, I don't think the agency has made that
7 determination. I would invite the state representatives
8 especially that are going to be appearing to give us
9 their views on that issue.
10 For instance, federal facilities such as
11 those you have been describing do not qualify for
12 assistance under Title II of the Water Pollution Con-
13 trol Act. And there is some question as to whether we
14 should use that measure, namely, eligibility as an
15 applicant under Title II for grant assistance as the
16 determination of a publicly owned facility for purposes
17 of 301(h).
18 So any of the witnesses that would like to
19 speak to that issue, we are inviting specific comments
20 on it.
21 Obviously, you have stated that you, in your
22 view, believe that federal facilities should be
23 considered as publicly owned treatment works for this
24 provision but, as a matter of law, we haven't made
25 that determination yet.

1 MR. HARDY: I would like to respond to that.
2 The Office of the Chief of Engineers in
3 Washington, D. C., has indicated that federal facilities
4 have traditionally been required to meet the same
5 effluent limitations as a publicly owned facility; in
6 essence, have been defined as a publicly owned facility
7 in a compliance since. Therefore, we feel that we
8 should also be given the same consideration for grants
9 of waivers.
10 CHAIRMAN JORLING: Has the Chief done that
11 in some kind of a memorandum and, if so, would you
12 supply that to us?
13 MR. HARDY: I just received this information
14 on the plane, and it was from a phone call. A memoran-
15 dum of the phone call can be made available.
16 CHAIRMAN JORLING: Well, I'm not so much
17 interested in a memorandum of the phone call; but if
18 either the Counsel's office or the Chief have issued
19 their formal view of this matter, it would be helpful
20 to have it for the record.
21 MR. DUBOIS: Mr. Hardy, have you checked
22 with the Alaska Department of Environmental Conserva-
23 tion to see whether such a waiver could be consistent
24 with state law?
25 MR. HARDY: Yes, we have. And they have no

1 strong feelings against it.

2 MR. DUBOIS: If there has not been a written

3 determination made, this was an oral discussion kind

4 of thing?

5 MR. HARDY: Yes, oral.

6 CHAIRMAN JORLING: Thank you, Dennis.

7 The next witness is Richard King from the

8 City of San Diego Water Utilities Department.

9 MR. RICHARD W. KING: Thank you, Mr. Jorling,

10 members of the committee.

11 My name is Dick King, the Director of the

12 Water Utilities Department for the City of San Diego.

13 We appreciate the opportunity to make this input into

14 your session and thank you for this opportunity to do

15 so.

16 Our prepared comments take about 30 minutes;

17 so, in the interest of your time frame, why, we will

18 excerpt them and try to hold to your five-minute

19 requirement.

20 Just briefly as an overview, the City of

21 San Diego is a metropolitan sewerage system comprising

22 some 16 communities. We serve a population of about

23 a million and a quarter people in the surrounding area,

24 and on an emergency basis, we also serve the City of

25 Tijuana, Mexico, as well.

1 We have a primary treatment facility, a basic
2 facility, that is sized for a normal capacity of 240
3 million gallons a day, and the present sedimentation
4 capacity is 120.
5 Our sludge that is digested, it's mixed with
6 sand and seaweed from our beach-cleaning operation and
7 brought back into the soil as a soil amendment for the
8 golf courses and public parks and private lots.
9 And our monitoring program has been in
10 existence for 17 years, including a year prior to the
11 time that the outfall was installed. So our outfall
12 is out in the ocean about two and a half miles at 220
13 feet deep, and it's been well researched and examined
14 since that time.
15 As an overview to my comments, I would like
16 to read into the record that direction in our presenta-
17 tion taken from Mayor Wilson's testimony, Mayor of the
18 City of San Diego, on June 22nd to Senator Muskie,
19 as well as we have gone through a Congressional Record
20 that's relevant to this matter and excerpted direction
21 also from the Congressman and we have attempted, using
22 those parameters, to be the framework and the guidance
23 for our comments on how this law, this complex subject
24 could be administered.
25 And we stress very strongly that San Diego's

1 interest is not in building a secondary treatment
2 needlessly. We are presently on a committed course
3 to spend $427 million for secondary treatment facilities.
4 We feel that we are down in the area where water supply
5 is critical. We are at the end of the line. We are
6 anxious for a total resource recovery, recycle and
7 reclamation.
8 We agree with Senator Muskie and the
9 Congressional Record of the 15th.
10 "The conference agreement emphasizes the
11 need to use alternative technologies instead of
12 conventional secondary treatment plants and
13 encourages the development of new and innovative
14 systems."
15 And the concept here of taking these systems
16 and to recycle and reclaim simply to use the nutrients
17 in the wastewater is the course that San Diego was on.
18 We have experimented with reverse osmosis. We have
19 had a facility now for seven years. We have a grant
20 application of almost a year ago for the use of
21 hyacinths in wastewater recovery, the research of
22 which was done by NASA. And we submit that this is
23 the type of thing that San Diego would like to move to
24 in the future.
25 Moving along now to the exact criteria, on

1 Specification No. 1 about the definition of a water
2 quality standard, we would argue for the State of
3 California's Ocean Plan. We would submit respectfully
4 that the absence of a state not having the BOD is not
5 an oversight. We submit that it's a correct standard
6 by not needlessly regulating something that has no
7 meaning. In other words, not stipulating BOD as a
8 standard, and we would stipulate that this is adequate.
9 Beyond that, we would support your comments
10 that were attached to your invitation to come here
11 today that surrogate parameters, such as dissolved
12 oxygen or turbidity or along those lines, could be
13 used, and then we would think, too, that there isn't
14 a -- We would have scientific judgment and opinion
15 available which could not only respond to the definition
16 of water quality but could answer Condition No. 2, also
17 which relates to the indigenous population, the pro-
18 tection of shellfish, fish and so on.
19 We have observed that in our case, San Diego
20 does have a wealth of sea life activity going on right
21 out over the outfall. Seals and whales are in migration.
22 There is kelp harvesting right out over the outfall,
23 fishing, surfing and this type of thing.
24 So we would argue our position here on No. 2
25 would be the scientific opinion that suggested in the

1 first place to Congress that waivers could be given,
2 would be data that would be -- that's already in
3 existence and abundant, and we would submit that such
4 opinion as that would be adequate.
5 On Condition 3 on monitoring, we follow the
6 State Plan. It's been in existence for 17 years, and
7 we follow that program of monitoring. And scientists
8 who have used it apparently feel that it's adequate.
9 The effect on others, on Item 4, we do not
10 believe it would impact others if San Diego were given
11 a waiver.
12 I might mention the City of Tijuana. They
13 discharge about 25 million gallons a day. It's raw
14 sewage. It goes right into the ocean. There is no
15 outfall or anything else. And the current at the ocean
16 at that point is north, so we get it all. And if we
17 had a waiver from secondary treatment, I don't believe
18 we would be adversely impacting other dischargers.
19 On Item 5, the source control program, San
20 Diego has an ordinance in force under the permit. We
21 feel we comply with that.
22 And Item 6, we would prepare such a schedule
23 to eliminate the toxic pollutants.
24 On 7 relative to the flow, we are concerned
25 and going to recycle, reclamation and reuse. To do

1 that, we think it would take about ten years. Obvi-
2 ously, we are running into a practical matter here,
3 the present capacity of the plant being exceeded in
4 that period of time.
5 We find ourselves comfortable with the
6 language that would consider flow to be considered as
7 another item of the NPDES requirement and treated
8 similar to that. And I would observe that the flows
9 are to be used for anticipated -- anticipated capacity.
10 Finally, on Criteria 8 with respect to
11 reclamation and reuse, as we have said, it's San Diego's
12 position to move in this direction. We think it is
13 environmentally sound. We think it is cost effective
14 in all the studies that we have done. We think it's
15 superior to all other forms of technology, particularly
16 that which involves aqua culture.
17 And so this is pretty much our position at
18 this point in time, and I believe I am in a position
19 to answer any questions that any of you might have.
20 CHAIRMAN JORLING: Could you elaborate
21 somewhat on the evolution of your 17 years of monitor-
22 ing? The concern is, or the specific reference is for
23 the 17-year period. Have you had the full range of
24 monitoring of pollutants, or did it begin with the
25 concern with the conventional pollutants and has

1 broadened over time to include monitoring for toxic
2 pollutants and whether or not the City of San Diego
3 has included within its management an identification
4 of the origin of toxic pollutants which are entering
5 the system?
6 MR. KING: I'm not sure I'm all that familiar
7 on that point. And I certainly will reply to you when
8 I get a chance to check it out.
9 But just for the moment, I'm quite satisfied
10 that the monitoring program has gone through a stage
11 of evolution, and it's been refined and improved as
12 time has gone on, not only for the toxic pollutants,
13 but all forms of animal life that's in the -- in
14 existence.
15 As far as our sources, where the toxics come
16 from, the City of San Diego is pretty much a bedroom
17 community. We have virtually no industry. Our
18 industrial load is, by definition, seven per cent. And
19 the industry that we have is largely fish and food
20 processing. We virtually have no toxic problem in the
21 City of San Diego's effluent.
22 CHAIRMAN JORLING: Now, the second point is
23 with respect to Paragraph (7), (h)(7), the condition
24 on the no or new substantial increased discharges.
25 You are basically urging that that provision be

1 interpreted to provide for at least ten years of
2 growth in your community?
3 MR. KING: Yes, sir.
4 CHAIRMAN JORLING: How would you specifically
5 propose that a regulation be written in the face of
6 that language that would provide such anticipated
7 growth?
8 MR. KING: I would use, under the NPDES
9 permit provision, considering that the flow, like any
10 other parameter, would be evaluated and considered at
11 that time.
12 CHAIRMAN JORLING: At which time?
13 MR. KING: At the time that you would -- the
14 permit would be up for review.
15 CHAIRMAN JORLING: In the period of your
16 anticipated growth, you are suggesting back on earlier
17 pages, Page 2 of your testimony, that San Diego is
18 moving towards a recycling system, but the value for
19 a modification is to permit you to devote your resources
20 to that. Does that mean that you expect to go through
21 the general grant process through the State of
22 California priority scheme to get Step 1 funding to
23 achieve recycling within that 10-year period?
24 MR. KING: Yes, sir. And we have our grant
25 in there at the present time to do just that.

1 CHAIRMAN JORLING: Anyone else? Paul?
2 MR. De FALCO: Yes.
3 Mr. King, I find it difficult to believe --
4 And maybe I misunderstood -- that with a city of over
5 a million, there are no toxic materials at all being
6 discharged to the city system.
7 MR. KING: I didn't mean to say there are
8 no toxics. I mean the pilot, it's controlled, and
9 that the level of our heavy metals that are in our
10 effluent is well within the NPDES requirements.
11 MR. De FALCO: But there are presently
12 control mechanisms --
13 MR. KING: Yes, sir.
14 MR. De FALCO: -- in the city. I see. Thank
15 you.
16 CHAIRMAN JORLING: Thank you.
17 MR. KING: Thank you, sir.
18 CHAIRMAN JORLING: The next witness is Larry
19 Walker from the State of California Water Resources
20 Control Board.
21 MR. LARRY F. WALKER: Thank you, Mr. Jorling,
22 members of the panel.
23 My name is Larry Walker, and I am Executive
24 Director with the California State Water Resources
25 Control Board.

1 Our Board is supportive of Section 301(h) of
2 the Clean Water Act, and we agree with the intent of
3 Congress in passing this particular amendment. But we
4 just can't afford in today's situation to spend hundreds
5 of millions of dollars, and perhaps even billions of
6 dollars, to development treatment systems that do not
7 achieve environmental benefits.
8 At the same time, we agree with concerns
9 expressed by EPA that this new provision of the Act
10 must be carefully administered to prevent substantial
11 weakening of the entire federal water pollution control
12 program.
13 We concur with EPA and with the Congressional
14 language that the burden or proof for waiver must be
15 placed on the applying discharger.
16 We also believe that the final decision on
17 the waivers, at least initially, should rest with the
18 Administrator rather than with the Regional Administra-
19 tors or with states which have been delegated the
20 permit program.
21 I think we would like to be in a position to
22 make a recommendation to the Regional Administrator
23 and the Administrator, but we think from the standpoint
24 of consistency that the final determination should be
25 made by the Administrator.

1 While I have stated that are supportive of
2 the new amendments, the eight conditions in the law
3 under which a waiver can be granted are somewhat
4 confusing and certainly subject to differing interpre-
5 tation. And because of this, I think we are apprecia-
6 tive that EPA has held this particular hearing prior to
7 promulgating regulations.
8 Moving to the conditions now, we would like
9 to state our interpretation of how each of these
10 conditions should be incorporated into the regulations.
11 Regarding Condition No. 1, we think the
12 proper interpretation is that federally approved state
13 water quality standards must be in existence at the
14 time the waiver is granted and that those standards
15 must contain specific requirements related to the water
16 quality effects of the discharge, BOD and suspended
17 solids and acidic materials. In other words, we are
18 saying that, from a practical standpoint, the water
19 quality standard should contain surrogate parameters
20 such as dissolved oxygen, turbidity and light trans-
21 mittance as opposed to specific water quality parameters
22 related to BOD concentrations or suspended solids
23 concentration.
24 As a point of information, California
25 currently has EPA-approved water quality standards for

1 ocean dischargers and has recently adopted -- our Board
2 adopted at its January board meeting revisions to those
3 standards. And those revisions, the revised California
4 Ocean Plan, is in the Regional EPA office for considera-
5 tion at the present time. The revised California
6 Ocean standards require a level of treatment midway
7 between primary treatment and secondary treatment in
8 terms of suspended solids removal, and they require
9 the control of toxic discharges to levels that the
10 literature conservatively states will not result in
11 long-term adverse impacts upon the marine biota.
12 The second condition relating to the demon-
13 stration of the protection of indigenous populations
14 is a fairly complex condition and does not yield a
15 simple interpretation. On the one hand, a demonstra-
16 tion of compliance with federally approved state water
17 quality standards should suffice since such standards
18 are designed to provide for the protection or to provide
19 the protection indicated in this particular condition.
20 In the case of large ocean dischargers,
21 however, we favor a more restrictive approach which
22 requires the development of detailed information
23 regarding water quality and sediment quality and
24 extensive analysis of the marine biota in the vicinity
25 of the discharge and in the surrounding areas to

1 determine the actual impact of the discharge.

2 So our position would be that, in terms of

3 the smaller dischargers -- And this might vary from

4 location to location -- that demonstration of compliance

5 with the federally approved water quality standards

6 should meet this condition.

7 In the case of the larger dischargers,

8 certainly those such as the major cities in this state,

9 far more extensive water quality information should

10 be developed through monitoring programs. We would

11 point out that, in some cases, the historical impacts

12 that have been identified through these monitoring

13 programs will have to be projected to determine the

14 impacts that will result from compliance with, in our

15 case, the California Ocean Plan.

16 For example, compliance with the California

17 Ocean Plan will require that major Southern California

18 dischargers reduce the amount of suspended solids

19 currently discharged in half and that we have simillar

20 reductions for some of the toxic materials.

21 I'd like to, in relation to this Condition

22 No. 2, refer to a couple of the questions contained

23 in your hearing notice. The first of these questions

24 is, "Should the law be interpreted to require that the

25 concentration of toxic pollutants in the discharge

1 granted a modification be no greater than the concen-
2 tration which would occur with secondary treatment?"
3 California does not favor such an interpreta-
4 tion for a couple of reasons.
5 First, we do not see the basis for such an
6 interpretation within the statute. Rather, the law
7 states that we should establish controls that will
8 protect the water quality against -- for the beneficial
9 uses which have been established or to protect the
10 indigenous populations in existence.
11 And the law, or other provisions of the law,
12 provide for the establishment of toxic levels that
13 will protect marine waters.
14 This is included in the Section 303 water
15 quality standards, Section 307, toxic and pretreatment
16 standards, and then the Section 403, Ocean Discharge
17 Criteria.
18 So we believe that, rather than using
19 secondary treatment as the basis for determining
20 necessary toxic levels, we should look toward those
21 toxic levels which the literature demonstrates are
22 necessary to protect the marine biota. In some cases,
23 it may be more stringent than would be required by
24 secondary treatment, or would be produced by secondary
25 treatment. In other cases, it may be less.

1 And, in addition, we think that heavy
2 reliance has to be placed on the EPA pretreatment
3 standards and the ocean discharge criteria that will
4 soon be developed, again with the purpose of controlling
5 toxics.
6 The second question related to this condition
7 was how a balanced indigenous population should be
8 defined. In this case, we believe that Administrator
9 Costle's decision on Seabrook nuclear station provides
10 some valuable guidance. The language regarding
11 indigenous populations in Condition 2 is identical to
12 the language contained in Section 316(a) of the Act
13 relative to thermal discharges. And in making his
14 decision on the Seabrook Nuclear Station, Mr. Costle
15 dealt with the interpretation of this language, and
16 his conclusions there should provide a sound and
17 consistent approach in this particular situation.
18 The third condition requires that the appli-
19 cant demonstrate that he's established a system for
20 monitoring the impact of discharge upon a representative
21 sample of the aquatic biota. We think that this is a
22 very important item and that the applicant should be
23 required to lay out a monitoring program in the appli-
24 cation that would get the information desired under
25 this particular condition and that collection of that

1 information should be a condition of the permit.

2 We do not believe -- Even though in California

3 I think you will find that this is probably the case,

4 we do not believe that the monitoring program neces-

5 sarily has to be underway at the time of application.

6 We think the monitoring program has to be identified

7 and it has to be agreeable to EPA and to the state,

8 but it does not necessarily have to be underway.

9 I think the fourth condition I'm going to

10 skip over because it's not quite so critical, and that

11 will be referred to in our written statement.

12 The fifth condition requires that all

13 applicable pretreatment standards will be enforced,

14 and the interpretation of this condition is made some-

15 what difficult by the absence of a codified federal

16 pretreatment standards program. However, any applicant

17 should be required to provide a demonstration that they

18 have the legal and technical capacity to conduct a

19 pretreatment program and that such a program is

20 adaptable to the requirements of Section 307 as

21 amended.

22 In June of 1976, the California Water

23 Resources Control Board adopted guidelines for

24 determining the effectiveness of local source control

25 programs, and we suggest that such guidelines would

1 represent a good criteria for appraising compliance
2 with this condition for modification, and I will submit
3 several copies of these guidelines for your use.
4 Our recommendations here in relation to pre-
5 treatment standards is that the applicant be required
6 to submit with his application a description of the
7 proposed program he intends to use to provide effective
8 source control and to enforce the applicable pretreat-
9 ment standards; and then as a condition of the permit,
10 the applicant should be required to implement the
11 source control program and enforce the pretreatment
12 standards.
13 I think the sixth condition I will skip over,
14 too, and that will be referred to in the written state-
15 ment.
16 The seventh condition requires the applicant
17 to demonstrate that there will be no new or substan-
18 tially increased discharges from the point source of
19 the pollutant to which the modification applies above
20 that volume of discharge specified in the permit.
21 While this language is not totally clear, we believe
22 the Senate and House reports clarify that the intent
23 here is to limit the waiver to that flow which would
24 normally be included in the permit.
25 We are also aware that EPA has at times

1 interpreted this condition to mean that the waiver
2 should be restricted to the flow existing at the time
3 the modification is granted. And philosophically, here
4 in California, we support EPA's approach in making a
5 strict interpretation in that a strict interpretation
6 would certainly provide a great deal of encouragement
7 to wastewater reclamation, which we are trying to
8 encourage at the present time. However, from a prac-
9 tical standpoint, this approach presents some problems
10 because, if we were to limit the flow to that in
11 existence at the time the permit is granted with the
12 idea that reclamation would have to make up for any
13 growth, there is just no way that practically we could
14 implement reclamation projects immediately, and so
15 there would, in effect, have to be a building ban until
16 reclamation projects could be implemented.
17 So we have a suggestion that alternatively
18 might meet the desires of EPA, and certainly our
19 desires, too, in concert with the granting of a
20 modification to, at the same time, encourage reclama-
21 tion, and we would suggest that EPA include as a permit
22 condition where it appears that reclamation projects
23 have some potential:
24 One. A requirement that a detailed Step 1
25 facilities plan evaluating potential reclamation

1 projects be implemented, again as a condition of the
2 permit.
3 And, further, that reclamation projects that
4 are identified as a part of the facilities planning
5 effort be implemented where they are found to be cost
6 effective and where federal funds are available for
7 such implementation.
8 We also think it would be desirable for EPA
9 to state in the permit its intent upon renewal of the
10 permit five years hence to reduce the allowable flows
11 in the permit by the amount of flows which can be
12 reclaimed.
13 I would note, again, for the record that,
14 in California, we already have Step 1 facilities
15 planning work underway specifically aimed at identi-
16 fying cost-effective reclamation projects in most of
17 our major coastal communities. I think Mr. King indi-
18 cated that we have a reclamation study underway in
19 the San Diego County area. We have a very large one
20 underway in the Los Angeles/Orange County area. We
21 have a large one underway in the San Francisco Bay
22 Area, and we also have one underway in the Monterey
23 area.
24 The eighth condition states that the appli-
25 cant must demonstrate that any available funds under

1 Title II will be used to achieve the degree of effluent
2 reduction required by Section 201(b) and (g)(2)(A) or
3 to carry out the requirements of Section 301(h).
4 Our interpretation of this language is that
5 future federal funds otherwise required for full
6 implementation of the secondary treatment should be
7 used to construct reclamation facilities that are
8 identified as cost effective.
9 While this section is, I think, one of the
10 most difficult ones to interpret for us, we believe
11 that the interpretation that we have suggested is
12 logical and that it would result in an expenditure
13 of available grant funds in a manner which would best
14 serve the public interest.
15 I think one of the other speakers has indi-
16 cated that it's a far better expenditure of public
17 funds to first identify reclamation projects that are
18 feasible and then use the available public funds to
19 provide the necessary treatment and the transmission
20 facilities to implement those reclamation projects
21 rather than to provide an unnecessary degree of treat-
22 ment for an entire flow which probably can't be totally
23 reclaimed within the near future.
24 At this point I would like to address a
25 couple of other questions that were contained in the

1 public hearing notice.

2 The first regards whether facilities treating
3 solely domestic waste should be treated differently
4 than facilities discharging combined domestic and
5 industrial waste. We don't feel that the differential
6 should be made. It's not really made in the statute.
7 Certainly the statute language points out that it will
8 be far more difficult for a municipality with a great
9 deal of industrial waste to comply with the standards,
10 and we certainly think that a municipality with a
11 degree of industrial waste will have to have an
12 extremely aggressive pretreatment control program in
13 order to comply, but they should not be precluded from
14 attempting that.

15 Somewhat related to this, the legislation
16 cites certain factors related to outfall depth, distance
17 from shore, tidal movements and geologic features as
18 potential criteria for eligibility for modification of
19 the requirement for secondary treatment. It can be
20 argued that each of these factors may represent a
21 single and necessary criteria. However, in actuality,
22 each of these variables are interdependent and only on
23 the whole do they fairly represent the ability of the
24 ocean to provide sufficient elimination of the tradi-
25 tional pollutants.

1 We are hopeful that your regulations will
2 not include rigid factors such as depth or distance
3 from shores criterion of eligibility. We suggest that
4 applicants should be required to submit detailed infor-
5 mation regarding their discharge in terms of flow,
6 pollutant loading, outfall consideration, current and
7 tidal patterns initial dilution capabilities, and this
8 information would permit an appraisal of eligibility
9 for modification of their requirements based on the
10 probability that the factors associated with the dis-
11 charge is such that secondary treatment may not be
12 necessary.
13 In other words, we are saying that we ought
14 to ask for a great deal of information; that we ought
15 to test that information against the water quality
16 standards that have been developed, and we ought to
17 further, in the case of the larger discharger, look
18 at the detailed ocean studies that have been conducted
19 to insure ourselves that the indigenous population
20 will not be harmed by granting of a waiver.
21 Our last comment does not relate to a
22 question raised in your notice.
23 We do have a concern regarding the applica-
24 bility of the modification process to municipal sludge
25 dischargers. We suggest EPA make it clear in its

1 regulations that this modification process does not
2 apply to the discharge of sewage sludge. Sludge
3 discharges have the unique ability of concentrating
4 the most undesirable constituents contained in munici-
5 pal waste. Available information indicates that such
6 discharges can and do have profound and longer term
7 environmental effects.
8 Therefore, any consideration of modifying
9 the requirement for sludge discharge would be inappro-
10 priate and would merely serve to delay much needed
11 solutions to the environmental problems posed by such
12 discharges.
13 That completes my statement, and I would
14 entertain any questions that you might have.
15 CHAIRMAN JORLING: Thank you, Larry.
16 I have a couple of questions, and I will
17 start with your last point.
18 The agency is not considering in any way,
19 shape or form including sludge under the provisions
20 of this modification provision, so that there should be
21 no doubt on that, and we should start with that at
22 the outset.
23 MR. WALKER: I think it would be helpful to
24 specifically spell that out in the regulations.
25 CHAIRMAN JORLING: You mentioned at the

1 outset some procedural recommendations, and you men-
2 tioned also a little later on the reference to the
3 Seabrook decision. And although on grounds other than
4 those that you incorporated in your reference to
5 Seabrook, that decision has been vacated by the First
6 Circuit Court of Appeals and has been sent back to the
7 Administrator for a new process. The grounds for the
8 appellate decision were procedural, and we have been
9 spending a considerable amount of time in implementing
10 Section 301(h) on procedures, and we are trying to
11 establish one that is basically an expeditious pro-
12 cedure, one that has the fewest numbers of internal
13 or administrative appeals within it and reaches finality
14 at least as far as the administrative process, as soon
15 as possible.
16 One thing that we do have in Section 301(h)
17 is the requirement in the very first sentence that our
18 decisions, the Administrator's decision, must be with
19 the concurrence of the state. Would you, representing
20 the State of California -- And perhaps this would
21 require additional thought -- think that that is
22 satisfied if we simply incorporate Section 401,
23 Certification Process, into these procedures so that
24 we could not act unless the state certified that our
25 decision was one that they were willing to concur in

1 but utilize the 401 process?

2 MR. WALKER: Offhand, I would say that that

3 would be a desirable way to go.

4 Harry -- I have Harry Schuler with our

5 office here. Do you have any comments on that, Harry?

6 MR. HARRY SCHULER: I think we would prefer

7 just to issue a letter of concurrence. We have a

8 rather complicated administrative procedure whereby

9 we issue the certificates. We also charge for them

10 because they represent a substantial work load. That

11 charge for major dischargers would be a thousand

12 dollars. That's to offset our administrative overhead.

13 So we prefer to issue a letter rather than

14 go through that administrative procedure, I think.

15 CHAIRMAN JORLING: A second one, Larry, has

16 the state run any kind of analysis with respect to

17 the cost comparison of compliance with the ocean plan

18 by the coastal communities of California, presumably

19 under the newly adopted revision in '78, versus the

20 cost of secondary treatment; and, if so, could you

21 supply that for the record?

22 Another issue that I'd like to ask would be

23 would the state recommend -- And perhaps other agencies

24 of the state should be asked this same question, but

25 it's a generic one -- would the state like to

1 recommend that certain areas, either because they are
2 biologically stressed areas or because of other
3 determinations made by the state, have certain values
4 with respect to coastal zones or coastal regions, be
5 disqualified from consideration of any modification
6 for secondary treatment?
7 MR. WALKER: This is a basic feature of our
8 existence, of both the past Ocean Plan and our proposed
9 revision. The Ocean Plan does provide the setting
10 aside of areas of special biological significance into
11 which no discharge is allowed, and that particular
12 program has been being administered for some time now.
13 So we would concur in that approach.
14 CHAIRMAN JORLING: One question that I'd
15 like to address -- And, again, it's something that
16 you might want to spend more time on and prepare a
17 more detailed response for the record -- how does the
18 state propose to deal with the TICH, which is the total
19 identifiable chlorinated hydrocarbon standard, in light
20 of the SCCWRP data, Southern California Coastal Water
21 Research Project data, chlorinated benzenes and other
22 chlorinated hydrocarbons exceeding the TICH standard
23 by orders of magnitude?
24 MR. WALKER: I think that rather than attempt
25 to answer that, I will call -- if you would like an

1 answer now --

2 CHAIRMAN JORLING: No, I think that's --

3 MR. WALKER: Okay.

4 CHAIRMAN JORLING: -- a toughie to do a quick

5 one on.

6 Paul or Don, do you have some questions?

7 MR. DUBOIS: One of the issues I believe,

8 is what constitutes an existing outfall. How would you

9 propose to handle that one in California?

10 MR. WALKER: We think in situations like this

11 that what you have to do is go back to the intent of

12 Congress. The intent of Congress was not to expend

13 funds needlessly, not to spend a lot of money for a

14 level of treatment that really doesn't give us any

15 environmental returns.

16 So we would choose to take a fairly liberal

17 interpretation, if the choice was ours, of our particu-

18 lar requirement. In other words, I think the people

19 from Watsonville got up and talked about an outfall

20 that currently was short. They have a proposal to

21 extend it. I think we would recognize their proposal.

22 In terms of, you know, from a practical sense,

23 I think most of the communities that will be applying

24 for this waiver do, in fact, have existing discharges,

25 so I don't really anticipate that as a serious problem.

1 But, again, I think we have got to go back
2 to the intent of the law whenever questions like this
3 come up.
4 MR. De FALCO: Larry, would the state be
5 proposing any specific monitoring requirements on a
6 blanket basis for these kinds of waivers?
7 MR. WALKER: We have for some time now re-
8 quired rather extensive monitoring requirements through
9 the permit process. In other words, not only do
10 agencies have a permanent program, they have an
11 extensive monitoring program. And I think, in general,
12 it's our feeling that the data that is currently being
13 collected, at least insofar as the half a dozen or so
14 major dischargers in this state, is adequate to provide
15 the information that we need in relation to Condition
16 No. 2.
17 And some of the other dischargers, where
18 waiver is found to be otherwise acceptable, I think we
19 may want to require some more extensive monitoring
20 programs.
21 Another point that I might make is that, in
22 order to insure some consistency in the monitoring
23 programs that are developed, the ocean monitoring
24 programs that are developed throughout the state, we
25 have put together a Bays and Estuaries Technical

1 Advisory Committee within the State Water Resources
2 Control Board, and that committee reviews, that small
3 group of people reviews, all of the monitoring programs
4 that have been developed throughout the state.
5 So it could be through the mechanism of that
6 committee. And in light of this particular amendment,
7 they may want to impose additional monitoring require-
8 ments.
9 CHAIRMAN JORLING: Thank you very much, Larry.
10 MR. WALKER: Okay.
11 CHAIRMAN JORLING: The next witness is Ken
12 Kamlet, representing the National Wildlife Federation,
13 and I believe some other environmental organizations.
14 Ken?
15 MR. KENNETH S. KAMLET: I will be taking
16 about 20 seconds for each of our state affiliates,
17 so I guess in that sense, I am representing other groups.
18 I would like to begin by noting that, of the
19 secondary treatment parameters, the only one -- let's
20 say the one of clearly greatest concern in the deep
21 ocean environment is suspended solids, for a large
22 number of reasons. Sixty to ninety per cent of most
23 heavy metals in Southern California primary effluents
24 is associated with the suspended solids. Secondary
25 treatment with associated suspended solids reduction

1 reduces the toxicity of typical sewage effluent by
2 40 to 45 per cent compared to only 10 per cent for
3 primary treatment alone. And suspended solids removal
4 is a good measure of -- for expected removals of oil,
5 grease and floatables.
6 Two or three other factors are also deserving
7 of note. First, that the suspended solids phase of
8 sewage is a major factor in sewage-induced dilutions
9 in dissolved oxygen levels in bottom sediment with
10 associated adverse effects on benthic marine life.
11 And, second, that absent secondary treatment,
12 the high suspended solids concentration remaining after
13 primary treatment makes disinfection of primary effluent
14 very costly and relatively ineffective by preventing
15 contact of the disinfectant with any pathogens con-
16 tained in the solids.
17 It should also be pointed out that chemical
18 and microbial contaminants associated with sewage
19 particulates are likely to be far more biologically
20 available in that form than when present in solution
21 under deep ocean conditions.
22 So for all those reasons, total suspended
23 solids continue to be of concern in connection with
24 deep ocean discharges.
25 I'd like next to make some general comments

1 about the overall environmental impacts of ocean dis-
2 charges.
3 It must be remembered after all that the
4 effects of no single discharge or pollution source may
5 be viewed in isolation. These effects will tend to be
6 cumulative and may manifest themselves only over many
7 years of continued pollutant introduction. In this
8 regard, the following facts must be borne in mind.
9 Well over 12.3 billion gallons a day of
10 wastewater are discharged daily into ocean waters,
11 including two and a third billion gallons a day of
12 sewage alone. And these figures cover only the
13 continental United States.
14 The 1976 flow of sewage wastewater into the
15 Southern California Bight from just the five major
16 dischargers averaged one billion, twenty-seven million
17 gallons per day.
18 In terms of total emission rates for individu-
19 al constituents from these five major plants, 2,760
20 metric tons of ten toxic heavy metals; 4,136 kilograms
21 of DDT and PSB's, and nearly 60,000 metric tons of
22 oil and grease were discharged into the Southern
23 California Bight in 1976.
24 In terms of relative inputs to the Southern
25 California Bight, municipal wastewater contributes each

1 of the following pollutants to an extent greater,
2 and often much greater, than all other major point and
3 nonpoint sources combined: total suspended solids,
4 BOD, COD, oil and grease, cyanide, phenol, arsenic,
5 silver, cadmium, chromium, nickel and DDT.
6 In terms of readily observable environmental
7 impacts, as summarized on Page 35 of my statement,
8 each of the following effects is attributable, at
9 least in part, to Southern California sewage wastewater
10 discharges:
11 Detectable changes in bottom fauna and their
12 ecological relationships over some 145 kilometers of
13 the Southern California mainland shelf;
14 A depression in echinoderm abundance down the
15 slope from Palos Verdes, even at depths well in excess
16 of 200 meters;
17 Fin erosion in the Dover sole and other
18 soft bottom fish;
19 A possible role in the etiology of nonmalig-
20 nant skin tumors in the Dover sole and the white
21 croaker;
22 Bone deformities in three species of fish;
23 Levels of DDT exceeding FDA seafood limits
24 in several species of fish caught on the Palos Verdes
25 shelf;

1 Increased levels of DDT and heavy metals in
2 mussels;
3 Reproductive failures in several species of
4 Southern California sea birds, including at least two
5 endangered species, and the California sea lion;
6 A possible contributing role in the decline
7 of the kelp beds along the Palos Verdes Peninsula;
8 Two to threefold increases in the level of
9 cadmium, copper, silver and mercury in scallops;
10 A tenfold increase in chromium in abalone and
11 scallop mussels;
12 The death of a collection of gulls and
13 cormorants at the Los Angeles Zoo which were fed on
14 queen fish caught in the Palos Verdes area;
15 Inputs of chlorinated benzenes which act as
16 mitotic poisons at levels tenfold those of the better
17 studied PCB's;
18 And, finally, enlarged and structural
19 abnormal livers in Dover sole and other fish off
20 Southern California and Washington in areas where fin
21 erosion is prevalent.
22 In short, the National Wildlife Federation
23 is persuaded that ocean discharges off Southern
24 California constitute a clear and present danger to
25 the marine environment and associated ecosystems,

1 including man.

2 Our concern for the well-being of human
3 seafood eaters is reinforced by the fact that about
4 one-third of Southern California's entire sport fishing
5 catch of 3.7 million fish was taken from the three per
6 cent of the Bight that adjacent to waste outfalls, and
7 that over 80 per cent of the commercial seafood catch
8 was landed off Los Angeles. We regard it as unfor-
9 tunate, therefore, that there are still those who
10 contend that the ocean's capacity for assimilating
11 and utilizing pollutants far exceeds the capacity of
12 man to pollute it.

13 We regard it as especially unfortunate when
14 such statements emanate from such influential bodies
15 as the Southern California Coastal Water Research
16 Project, whose own data contradict these assertions.

17 I turn now to a brief summary of the key
18 principles established by the legislative history of
19 Section 44, presented in greater detail on Pages 19
20 through 27 of my statement.

21 First, Section 44 leaves entirely unaffected
22 the ocean discharge criteria promulgated by the
23 Administrator under Section 403 of the FWPCA.

24 Second, in the words of the conference
25 report, quote, there are, of course, constituents such

1 as polychlorinated biphenols which, irrespective of
2 the assimilative properties of the ocean waters,
3 cannot be adequately dispersed because of their
4 persistence, close quote.
5 Presumably, this means that sewage wastewaters
6 containing significant levels of such constituents were
7 not intended to qualify for a Section 44 waiver from
8 the need for secondary treatment.
9 Third, the eight criteria enumerated in
10 Section 44 as preconditions to a waiver were intended
11 to be, quote, stringent, close quote, in the language
12 of the conference report, with the burden of proof that
13 less than secondary treatment is sufficient resting
14 squarely on the applicant.
15 Fourth, only outfalls on the coast of the
16 western US, on the coast of Hawaii, Puerto Rico,
17 American Samoa, the Virgin Islands and in portions of
18 an even smaller number of estuarine waters such as
19 Cook Inlet near Anchorage, Alaska, were, by Congress,
20 to be considered to be potential candidates for a
21 Section 44 waiver.
22 Section 44 should be regarded as totally
23 inapplicable to ocean outfall on the East and Gulf
24 Coast.
25 And, fifth, Section 44 was designed

1 principally to avoid the expenditure of funds on
2 treatment for treatment's sake, with little or no
3 resulting environmental benefits. It was not intended
4 to do away with environmentally beneficial secondary
5 treatment practices.
6 Before addressing the questions posed by
7 EPA, it is important to emphasize that, in addition
8 to the Federal Government's investigations under the
9 Water Act, EPA's implementation of Section 44 should
10 be guided by the United States' responsibility to the
11 world community. Thus, in establishing the stringent
12 ocean discharge requirements of Section 403, Congress
13 sought to have the US exercise a leadership role in
14 the protection of the oceans, a role which it was
15 hoped would serve as the model for other nations and
16 as the framework for international agreement over the
17 protection of the oceans.
18 In large part, as a result of US initiatives,
19 the London Ocean Dumping Convention was agreed to by
20 the representatives of 92 nations in late 1972. The
21 very first article of this convention committed the
22 contracting parties, including the United States,
23 quote, to promote the effective control of all sources
24 of pollution to the marine environment, close quotes,
25 with a specific call for the use of the best practicable

1 means to control discharges through outfalls and
2 pipelines, among other pollution sources.
3 Moreover, since the London Convention defines
4 dumping to mean, quote, any deliberate disposal at
5 sea of wastes from manmade structures at sea, close
6 quotes, a strong argument can be made that ocean
7 outfall discharges are directly subject to the sub-
8 stantive provisions of the Convention, the standards
9 and criteria of which were made binding on the United
10 States in 1974 by the terms of Public Law 93-254.
11 In short as indicated by Senator Howard
12 Baker, a member of the National Commission on Water
13 Quality, quote, "We have by treaty an international
14 duty to keep the oceans clean," close quote. EPA
15 should keep this duty in mind, in our view, in applying
16 Section 44 and the Water Act's other applicable pro-
17 visions.
18 Having said all of this, I turn now to the
19 EPA questions. A fuller discussion of these questions
20 can be found on Pages 27 through 42 of my statement.
21 The first and fourth questions both concern
22 interpretation of the phrase "Applicable water quality
23 standards" as used in Section 301(h)(1). I will,
24 therefore, address these two questions first.
25 With respect to the first question, we don't

1 see much problem with applying surrogate parameters
2 for BOD and total suspended solids as long as the
3 surrogates provide an adequate measure of the waste
4 characteristics previously discussed, such as absorbed
5 persistent chemicals and benthic oxygen demand likely
6 to impact the environment.
7 Question 4 is a much more important one. We
8 believe the answer to it is that the concentration of
9 toxic pollutants in discharges granted a modification
10 under Section 44 must be no greater than the concen-
11 tration which would occur with secondary treatment.
12 That such an evaluation is possible is demonstrated,
13 for example, by Table GS-1 on Page GS-13 of the Draft
14 EIS of the City of LA's wastewater facilities plan,
15 which I would like to ask be incorporated into the
16 record of this proceeding in its entirety. It's a
17 useful document. The reference table compares
18 predicted wastewater concentrations of 30 constituents
19 discharged by the five-mile Hyperion outfall with
20 partial and full secondary treatment.
21 That such an approach comports with the
22 intent of Congress is demonstrated by the legislative
23 history of Section 44. This history shows that Congress
24 meant to relax treatment requirements only for the
25 conventional pollutants directly addressed by secondary

1 treatment as to which such treatment of a marine
2 discharge might be considered wasteful and unavailing.
3 Congress did not mean to allow any diminished effluent
4 reduction for those persistent constituents which
5 cannot be adequately dispersed by ocean discharge.
6 In Senator Muskie's words, quote, modifica-
7 tion under Section 44 must be limited to pollutants
8 covered by the parameters which define secondary
9 treatment, close quote.
10 In accord with this interpretation is that
11 of Mr. Jorling, as communicated to Senator Muskie and
12 made part of Senator Muskie's explanation of the
13 conference agreement. Mr. Jorling stated that EPA
14 would permit relaxation only if, quote, standards for
15 the discharge of conventional pollutants regulated by
16 the secondary treatment definition, close quote, with
17 the continued application of vigorous controls on other
18 pollutants, especially toxics. In this regard, in
19 addition to any other clarifying regulations which
20 EPA may issue, we would urge EPA in meeting the publica-
21 tion requirement of Sections 301(h)(1) and 304(b) to
22 take advantage of the opportunity to articulate minimum
23 effluent limitations for all relevant persistent sewage
24 constituents which must be met before an ocean discharge
25 can be deemed eligible for a Section 44 waiver.

1 We would also urge EPA to specify marine
2 water quality standards for dissolved oxygen at least
3 with respect to benthic oxygen demand.
4 EPA's second and third questions concerning
5 interpretation of the phrase "balanced indigenous
6 population" as used in Section 301(h)(2), in terms of
7 the second question, we believe EPA's proper focus
8 under this criterion is the incremental impact caused
9 by a waiver relative to that associated with full
10 secondary treatment.
11 Of course, in enforcing Section 201 in the
12 context of the Section 301(h)(8) criteria, EPA must be
13 concerned with the relative environmental harms
14 associated with land-based recycling and reclamation
15 measures versus those associated with ocean discharge
16 at whatever level of treatment.
17 We answered Question 3 by providing a working
18 definition of "balanced" and "indigenous" which
19 required the direct comparisons of ecosystems in the
20 areas of outfalls with ecosystems in comparable unpol-
21 luted environments. Any statistically significant
22 difference in the two environments would then be
23 regarded as flunking the indigenous criterion.
24 Such an approach is directly supported by
25 remarks of Senator Muskie, reinforced by Mr. Jorling's

1 letter as quoted on Pages 34 through 36 of my state-
2 ment. None of the remarks on the House side contradict
3 the basic thrust of such an implementation strategy.
4 I would like to point out that EPA has
5 already in another context, as mentioned by the last
6 speaker, namely thermal discharges under Section 316(a)
7 of the FWPCA, defined what is meant by a balanced
8 indigenous population. This definition can be found
9 in 40 CFR, Section 122.9(b).
10 Of the several parts of this definition, we
11 would not object too strenuously to the representative,
12 important species approach of Section 122.9(b)(2) where
13 full comparative ecosystem evaluations were not
14 available, if one important modification were made.
15 The thermal discharge regs look only at impacts outside
16 of so-called mixing zones. While this may be appro-
17 priate for thermal discharges, since hot water dissi-
18 pates readily in the marine environment, it is decided-
19 ly not appropriate for persistent toxic chemicals which
20 are not assimilated in any meaningful sense.
21 So if the Section 122.9(b)(2) approach is
22 used, it should be used without regard to spurious
23 mixing zones.
24 Question 5 concerns the pretreatment
25 requirement of Section 301(h)(5). Although the statute

1 arguably doesn't specifically require that pretreatment
2 requirements must exist at the time a Section 44 waiver
3 is granted, the answer already provided to the fourth
4 question greatly diminishes the practical impact of
5 Question 5.
6 With respect to toxic constituents of sewage
7 wastewater, they may not be discharged with or without
8 pretreatment at levels which exceed those in a secondary
9 treated discharge or which would violate applicable
10 water quality standards. If pretreatment can convert
11 an unacceptable discharge into an acceptable one, all
12 well and good. If not, it can't be discharged without
13 full secondary treatment.
14 Moreover, once pretreatment requirements have
15 been established at the local level, which I suspect
16 is the case for most dischargers potentially covered
17 by Section 44, it is clear that they must be both
18 enforceable and enforced before a waiver may issue.
19 EPA's final question, Question 6, asks
20 whether POTW's treating only domestic waste must be
21 evaluated differently than those treating large amounts
22 of industrial waste.
23 Our answer is that the criterion to be
24 applied to all POTW's should be the same, although
25 naturally plants with major industrial inputs will

1 require closer EPA scrutiny and will have more diffi-
2 culty in meeting their burden of proof under Section
3 44 than will be the case for a purely domestic POTW.
4 I commend to the panel's careful considera-
5 tion the additional recommendations outlined on Pages
6 42 through 44 of my statement.
7 I will conclude by emphasizing that EPA
8 should take pain to ensure, regardless of the environ-
9 mental impacts of a given ocean discharge, both in
10 implementing Section 301(h)(8) and in developing ocean
11 discharge guidelines under Section 403(c), that adequate
12 attention is given to the recycling and reclamation
13 requirements of Sections 201(b) and (g)(2)(a), par-
14 ticularly as incorporated in Administrator Costle's
15 October 3rd, 1977, policy statement on land treatment
16 of municipal wastewater. In Mr. Costle's words, EPA,
17 quote, must exert maximum effort to insure that its
18 actions reflect clearly visible encouragement of waste-
19 water reclamation and recycling of pollutants through
20 land treatment processes in order to move toward the
21 national goals of conserving water and eliminating the
22 discharge of pollutants in navigable waters by 1985,
23 close quotes.
24 Thank you. We appreciate the opportunity to
25 present these views. I would be happy to answer any

1 questions.

2 CHAIRMAN JORLING: Thank you very much, Ken.

3 Paul, do you want to start?

4 MR. De FALCO: Yes.

5 Ken, one of the questions that's been asked

6 before and keeps coming up is what should be considered

7 an existing municipal discharge into marine waters.

8 Can you give us your thoughts in this area?

9 MR. KAMLET: Well, I don't have any hard-and-

10 fast answer to that. It seems to me pretty clear that

11 there are certain things that are not existing discharge

12 sources for purposes of that provision. Anything that

13 would be considered a new source for purposes of

14 issuing an NPDES permit, in my view, is clearly not

15 an existing discharge within the meaning of that

16 provision.

17 It strikes me that any expansion of a

18 facility, an existing facility, where construction of

19 a brand new outfall pipe, a new discharge source, was

20 involved, would not be an existing source.

21 Now, whether or not in a situation where an

22 existing short outfall pipe were extended so that it

23 was made longer and the discharge that comes out of it

24 is essentially the same as came out of the shorter

25 pipe would be considered an existing source, I really

1 can't say one way or the other.

2 CHAIRMAN JORLING: Don, do you have anything?

3 MR. DUBOIS: Go ahead.

4 CHAIRMAN JORLING: Lisa, do you have anything?

5 MS. FRIEDMAN: We have talked earlier about

6 using the concept of stress biological areas or biolog-

7 ically sensitive areas as a possible line for granting

8 or denying modifications under 301(h). What do you

9 think of this concept?

10 MR. KAMLET: Well, I think it makes some

11 sense. It would tie in with the need to avoid impacts

12 on indigenous populations; it would tie into other

13 of the provisions of 301(h) as well. I think it's

14 a good idea, along with the other things that have

15 been talked about, not by itself, but in conjunction

16 with the other provisions of 301(h).

17 MS. FRIEDMAN: A second question which we

18 are looking at may be sort of related. How do you

19 think we should handle the problem of the cumulative

20 effects of granting modification to several dischargers

21 which discharge into a single body of water?

22 MR. KAMLET: Well, I think you definitely

23 do need to address that and cannot piecemeal the whole

24 process by looking solely at individual impacts. I

25 think that's going to take some looking at ecosystems

1 in the receiving waters and projecting impacts as a
2 result of the cumulative discharges on those indigenous
3 ecosystems.
4 I think it's going to take looking at the
5 receiving water and projecting impacts as a result of
6 the combined individual discharges on those receiving
7 waters.
8 MR. De FALCO: I have an additional question,
9 Ken.
10 Let's look beyond the issuance of a waiver,
11 and can you give any thoughts as to what might be
12 grounds for withdrawal of that modification from your
13 perception?
14 MR. KAMLET: Well, I suppose any of the
15 criteria that served as -- that were applied in
16 deciding the waiver was appropriate, if it turned out
17 once a waiver had been issued that something changes,
18 there is a change in circumstances which renders
19 suspect the discharger's continued compliance with
20 that precondition for a waiver, that certainly ought
21 to be a ground for revocation of the waiver.
22 If the plant expands -- Let's say it's
23 determined that, where you have the same outfall pipe
24 and through population growth or whatever, there is an
25 increase in the volume of material discharged through

1 that outfall and it's determined that fits within the
2 definition of an existing discharge under the statute,
3 it might be determined, based on the additional
4 pollutant inputs that come in with that volume increase,
5 that conditions have sufficiently changed such that
6 withdrawal of the waiver is appropriate.
7 And I'd like to see specific permit conditions
8 spelled out in the permits and specific provision in
9 any regulations that EPA issues laying out the possibil-
10 ity of withdrawing approval of a waiver on those bases
11 and perhaps others.
12 CHAIRMAN JORLING: Ken, I would just like to
13 follow with one question and sort of explain to the
14 audience that we have violated my time rule in part
15 because yours is a consolidated appearance, representing
16 several groups, rather than a whole series of witnesses.
17 And the question deals with procedure.
18 I had mentioned earlier our desire to have
19 an expeditious process, but obviously it has to be a
20 process with full public participation. I would lead
21 the witness a little bit.
22 Presumably, you would insist on a public
23 hearing being incorporated in that process, or do you
24 think there are some situations where we should provide,
25 in effect, for public hearing to be only upon

1 demonstration of sufficient interest, or do you have
2 any views?
3 MR. KAMLET: Well, the approach required
4 under the ocean dumping law, for example, which I cite
5 by analogy rather than the cause of any direct applica-
6 tion, is to provide the opportunity for a public
7 hearing rather than insuring that a hearing is held
8 in every individual case and perhaps the concerns you
9 expressed could be reconciled by providing that hearings
10 were availalbe upon request and a showing within that
11 request, any request that's received, justifying the
12 convening of such a hearing, any legitimate issues of
13 public concern that are raised in the request for a
14 hearing, then a hearing would virtually be automatically
15 granted in response to such request.
16 If it's a straightforward application, it's
17 clear that 301(h) requirements aren't met, I don't see
18 any problem with EPA turning down the waiver request
19 without the need to convene a hearing unless somebody
20 asks for a hearing.
21 CHAIRMAN JORLING: Thank you very much.
22 Before I call James Perry, let me give
23 another advance notice here. Jim is followed by John
24 Spencer, as I have already mentioned. Then John
25 Stratford from Eureka, California, representing

1 Humboldt Bay Wastewater Authority; David Phillips,
2 representing the District, the Sewage District, from
3 Salem Massachusetts; and then Lori Adams, representing
4 the Environmental Defense Fund.
5 That presumably will get us to the lunch
6 hour. And before the lunch hour, I will give another
7 program of appearance.
8 Jim Perry?
9 MR. JAMES F. PERRY: Good morning. My name
10 is Jim Perry, and I represent the Food Processing
11 Industry in Watsonville. Actually I represent some
12 20 food processors; but in the interest of mercy, I
13 promise not to take five minutes for each one.
14 Four and a half years ago, some 20 food
15 processors in Watsonville met to discuss water and
16 energy requirements for future years. The Watsonville
17 Food Processors Water and Energy Conservation Associa-
18 tion was formed to study the problem, and at that time,
19 our intent was to fully reclaim our washwater by using
20 it to grow crops.
21 And the processors, in the last four, four or
22 so years, have spent some $75,000 of their own capital
23 with private consultants, plus some state Title II
24 funds, for a study in conjunction with the City of
25 Watsonville. Unfortunately, this reclamation project

1 did not prove to be economically feasible. But,
2 despite this setback, one processor is now engaged in
3 a pilot program on 45 acres to explore the possibility
4 of utilizing plant washwater.
5 For the record, as a group, we still feel
6 that our processing plant washwater is of sufficient
7 high quality for use in crop irrigation without pre-
8 treatment other than on-site quality control.
9 Our dilemma is only partially economic. We
10 are concerned, of course, with the high cost of water
11 and the high cost of effluent disposal, and right now,
12 the run-away cost of electrical energy. Every plant
13 in Watsonville has seen the cost of fuel and power
14 accelerate more than a hundred per cent in the past
15 two years. Our main worry, though, is the downstream
16 supply of sufficient water and sufficient energy.
17 The food processing industry in Watsonville
18 is still committed to saving its washwater -- to the
19 growing of crops with washwater.
20 In the meantime, we readily acknowledge our
21 environmental responsibilities to the entire California
22 community. There is no question that heavy metals,
23 toxic materials, etc., are injurious to marine life.
24 This, however, is not the character of our processing
25 washwater. We feel that we can utilize deep water

1 ocean outfall with higher BOD levels than present
2 EPA standards without any damage to marine life systems.
3 Oxygen demand is not a problem in Monterey
4 Bay with out relatively small outfall, which is in an
5 area of extremely high turbulence and wave action. And
6 our data suggests further that the ocean can remove
7 BOD more efficiently than electrical energy at the
8 secondary treatment level.
9 We would respectfully request that EPA
10 review its present criteria of 30 milligrams per liter
11 of BOD for ocean discharge. The cost of electrical
12 energy to provide secondary treatment which meets EPA
13 standards of 30 milligrams per liter for ocean discharge
14 is our main problem. Many processors use large
15 quantities of water for washing and blanching fruits
16 and vegetables, and we are concerned that we will be
17 unable to pass these heavy costs on to the consumer.
18 We are in a very low-margin industry, par-
19 ticularly with reference to certain vegetable items.
20 Some products and some companies may be priced out of
21 the marketplace.
22 Now, our effluent disposal disposal situation
23 is unique in that we have a significant quantity of
24 industrial wastes, but they are not industrial wastes
25 in the sense that we have talked about here just

1 recently a minute ago. The overall effluent quality of
2 our sewage treatment plant water is like domestic
3 waste since our industrial wastewater is almost
4 entirely from food processing industries. Our community
5 is easily the biggest single frozen vegetable producer
6 on the West Coast, if not the world, plus a significant
7 factor in the freezing and canning of fruit.
8 It is important here to make a point that
9 Watsonville is in a very unique situation on the
10 Central Coast. The total economic balance of the
11 Pajaro River basin is centered around the washwater
12 of some 15 of the 20 processors I represent. Each and
13 every processor is presently engaged in developing an
14 on-site monitoring and control system to determine
15 point source problems and to cure them before the
16 effluent leaves the processing plant premises.
17 And I would like to conclude with a little
18 simile if you want to call it.
19 Everyone eats soup. It's a staple item on
20 every menu in every culture. And our washwater is
21 essentially of the same character. A processor's
22 blancher is basically a very short-term soup pot since
23 frozen food processors partially cook the product before
24 they freeze it.
25 Our effluent is not mine tailings, industrial

1 or chemical residues, asbestos fibers or carcinogenic
2 wastes. It is a mixture of low-strength fruit and
3 vegetable washes and rinses. There is no substantive
4 pollution in our cook water other than nutrients.
5 Our past studies have proven that we do not
6 vent chlorinated hydrocarbons or other toxic materials
7 to the present sewer plant. The quality of our wash-
8 water can be further improved with presently available
9 on-site equipment. If Watsonville could qualify for
10 an ocean discharge waiver, oceanographic studies in the
11 area of the present outfall support the fact that BOD
12 standards are not the answer. Our data suggests that
13 parameters other than BOD are of much greater importance
14 when assessing deep-water ocean discharge.
15 And as we understand the purpose of this
16 meeting, we have been asked to share our views on how
17 EPA should interpret and apply the statutory criteria
18 which the applicant must meet in order to obtain a
19 modification waiver. And we feel that any waiver,
20 doesn't matter who gets it, should stand on its own
21 merits as to location, the nature of the effluent and
22 the specific marine geography and currents at the point
23 of the discharge.
24 We feel that the important yardstick is the
25 quality of the water. The requirements and/or paramete

1 should be set up to provide this specific result.
2 Thank you.
3 CHAIRMAN JORLING: Thank you.
4 Let me ask a couple of questions briefly.
5 Do you and your members monitor for the full
6 range of pesticide residues before these materials are
7 discharged to the waste treatment plant?
8 MR. PERRY: Well, since the relatively recent
9 restrictions over the past few years on what we can
10 do with pesticides and herbicides in the field, the
11 vegetables are, in effect, monitored before they ever
12 get to the plant. We can't run them. We have had to
13 change our pesticide and herbicide control programs
14 radically in order to comply.
15 CHAIRMAN JORLING: But with respect to the
16 specific monitoring, you do not perform monitoring
17 of pesticide residues before they are discharged into
18 the plant?
19 MR. PERRY: Now, what do you mean? Do we
20 monitor the vegetable when we bring it in, what the
21 count is?
22 CHAIRMAN JORLING: The washwater, before
23 it enters the treatment system, the publicly owned
24 treatment system?
25 MR. PERRY: Well, we have data which we can

1 give you. We don't monitor for it on a continual
2 basis, but the city is preparing a monitoring and
3 point source ordinance at the present time.
4 CHAIRMAN JORLING: Now, this obviously is
5 a question directed at you and your members, does not
6 create the negative side of the answer or would lead
7 to the negative answer, but one of the reasons uniform
8 technological standards were adopted for both industries
9 and municipalities was the uniformity and the desire
10 to avoid economic advantage as a result of different
11 pollution control requirements. Would your industry
12 or members of your industry be concerned if there was
13 relaxation of pollution control requirements in other
14 areas with consequent major and signiciant reductions
15 in user charges when competitors in adjacent areas
16 would not take advantage of such reductions. Does that
17 concern you?
18 MR. PERRY: Perhaps it was a rather lengthy
19 question. Are you suggesting that we would not take
20 advantage of an economic situation as food processors
21 if we were given the opportunity to?
22 CHAIRMAN JORLING: In the particular situation
23 in Watsonville, you obviously will. As a representative
24 of industry, does that cause you concern?
25 MR. PERRY: Oh, yes, it causes us great

1 concern. There have been small food operations close
2 all over the country because of inability to comply.
3 It's odd in one respect that Watsonville
4 produces a massive amount of the California frozen
5 food and vegetable market. And the economic impact
6 would be felt in one specific area severely. If you
7 close down the 20 food processors in Watsonville --
8 CHAIRMAN JORLING: I'm not suggesting that.
9 I'm suggesting that food processors in the Central
10 Valley will not be able to take advantage of these
11 reductions in user charges and your members will; that
12 there is a potential for distortion there that's bad
13 public policy. That's the question.
14 MR. PERRY: Well, some of the food processors
15 in the Central Valley have access to more sophisticated
16 sewage systems which were built when things were cheaper
17 already. Modesto, for example.
18 CHAIRMAN JORLING: Any other questions?
19 MR. De FALCO: Let me take that one step
20 further, and let's talk about the adjoining area in
21 San Jose where they, in all probability, will not be
22 eligible for this kind of a relief. Is there a poten-
23 tial for an adverse economic effect in those two areas,
24 or a possibility even of the movement of some food
25 processors to the Watsonville area?

1 MR. PERRY: Well, the adverse economic
2 effect in San Jose has already been felt because there
3 are several people making arrangements to terminate
4 food processing in San Jose for that reason.
5 Of course, the San Jose economy is a tremen-
6 dously diverse thing. Food processing is no longer
7 a major portion of their economy at all.
8 CHAIRMAN JORLING: Don?
9 MR. DUBOIS: No.
10 CHAIRMAN JORLING: Lisa?
11 MS. FRIEDMAN: I have one question, also
12 about economics.
13 Has your group done any study on the relative
14 costs of pretreatment in order to meet these criteria
15 versus secondary treatment?
16 MR. PERRY: Yes, we have. In fact, I will
17 send you a copy. It's a rather extensive report.
18 MS. FRIEDMAN: We would appreciate it if you
19 would submit that for the record.
20 MR. PERRY: We had attempted to totally
21 reclaim all our washwater and put it on the lands. We
22 found at the present time it wasn't economically
23 feasible because of the tremendous costs involved. But
24 I still think that that's -- our long-term ambition
25 is to not put any water -- not waste any water. But

1 that's not attainable right now.

2 CHAIRMAN JORLING: Thank you.

3 John Spencer, representing the Department of

4 Ecology for the State of Washington.

5 MR. JOHN F. SPENCER: I'm John Spencer with

6 the Washington State Department of Ecology.

7 A little background. The Department of

8 Ecology is a comprehensive environmental organization

9 responsible for water pollution control, air pollution

10 control, solid waste management, water rights adminis-

11 tration, shoreline management and other environmental

12 programs.

13 I'm going to offer a few comments today in

14 a general way and only dealing with the statutory

15 criteria that was laid down by Congress in passage of

16 Section 301(h).

17 To begin with, let me say it is our view that

18 Puget Sound and the Straits and the associated coastal

19 bodies are areas where applications for modifications

20 on secondary treatment by municipalities should be

21 considered by the Administrator of EPA. However, very

22 general criteria can and should be established which

23 would obviously limit those areas in Puget Sound where

24 a modification might be granted. The state is prepared

25 to work with the Regional Administrator or the

1 Administrator of EPA to establish such criteria.

2 EPA regulations implementing this amendment

3 should provide for the use of such general criteria

4 which would establish these kinds of limitations.

5 Specific interpretations of how EPA should

6 interpret the eight statutory criteria should provide

7 guidance to modification applicants so that adequate

8 information will be provided the Administrator for his

9 deliberations. The interpretations should not attempt

10 to cover every conceivable case where a modification

11 may be requested. Each request should be evaluated

12 individually on the scientific evidence presented and

13 not be categorically decided upon in advance.

14 Now, with regard to the eight criteria and

15 questions raised in your meeting announcement, I offer

16 the following comments.

17 One. Should utilize water quality standards

18 contained in state regulations which are surrogate

19 standards or related to BOD, suspended solids and pH.

20 These standards are set by the state to protect bene-

21 ficial uses and, therefore, provide the link between

22 a waste constituent, such as BOD, and various uses of

23 the marine receiving waters.

24 Two. The Administrator should evaluate

25 modification requests as a comparison between the impact

1 of not requiring secondary treatment and the impact of
2 requiring secondary treatment in the marine receiving
3 water. The benefits of secondary treatment in reducing
4 BOD, pH, suspended solids and other waste constituents
5 should be the, quote, bottom line condition against
6 which a modification is compared. Secondary treatment
7 is the national standard for POTW's and should remain
8 the cornerstone of this program.
9 Three. It is nearly impossible to define
10 a "balanced indigenous population" in terms specific
11 enough to be meaningful to the variety of marine
12 situations that will be the subject of modification
13 requests. Long-term cycles of population growth, as
14 well as specific geographical anomalies, must be taken
15 into account. And, therefore, we feel greater reliance
16 should be placed on the water quality standards in
17 deciding to grant a modification with future biological
18 monitoring of populations done to assess the effects
19 of a modification.
20 Four. Toxic pollutants should not be allowed
21 to increase in concentration above that level normally
22 achieved with secondary treatment. Removal of toxics
23 achieved in secondary treatment should not be lost due
24 to a modification. Toxic removal is a benefit of
25 secondary treatment for which a modification is not

1 provided by the amendments.

2 And let me depart for a minute here. I think

3 we would also endorse the comments by the State of

4 California that the toxics should be controlled through

5 the other portions of the Act, and it should not be

6 considered a constituent of domestic waste that would

7 be given a modification or result in an allowance for

8 discharge because of a modification.

9 Number five. Pretreatment programs must be

10 employed by the publicly owned treatment works in

11 order to achieve the benefits of secondary treatment

12 rather than BOD, suspended solids and pH. However,

13 it would be inequitable to require that enforceable

14 pretreatment programs be in place at the time of

15 application. State law should be adequate at the time

16 of application to enable POTW's to establish enforceable

17 pretreatment programs. Should a publicly owned treat-

18 ment not have such a program, EPA should require one

19 as a condition of modification action, if necessary.

20 Six. Publicly owned treatment works with

21 domestic waste only should not be treated categorically

22 different from those with domestic and industrial

23 wastes. Consideration should be given to the differ-

24 ences in waste constituents of each modification request

25 and the merits of a modification measured against the

1 benefits of requiring secondary treatment. Special
2 conditions for treatment may be necessary for large
3 industrial impacted publicly owned treatment works.
4 Now, a few other comments that are not
5 specific to the questions asked in your public announce-
6 ment. I would like to go on for a moment.
7 It is our view that EPA should place heavy
8 emphasis on the irreversibility of any decision to
9 grant a permit modification. While marine waters may
10 be capable of cleansing themselves should a modifica-
11 tion be found to be a mistake five or more years from
12 now, this may not be a practicable accomplishment in
13 many generations. Moreover, decisions as to the
14 publicly owned treatment works plant design, location
15 and siting area will become more and more difficult
16 to adjust in the future as decisions are made on
17 construction in the next few years. The impact of a
18 modification on these construction decisions and the
19 ability to adjust to secondary treatment in the future,
20 should it become necessary, must be considered in the
21 Administrator's decision.
22 I would like to request EPA to provide for
23 small communities to be reimbursed from the construc-
24 tion grant program for the expense of preparing a
25 modification application. And I feel that this probably

1 can be done in the drafting of regulations dealing
2 with the set-aside for small communities in a state
3 such as Washington that is eligible for that set-aside.
4 Many small communities may receive great monetary
5 relief from a legitimate modification but may be unable
6 to apply for application because of application cost.
7 We are prepared to offer technical assistance
8 to these small cities and towns, but feel it would be
9 more appropriate for qualified consultants to assist
10 in this process rather than a state or the EPA, who
11 must also judge the application.
12 Finally, your regulations should clarify the
13 relationship between EPA's authority to issue a permit
14 under Section 402 which modifies secondary treatment
15 requirements and the authority of states issuing NPDES
16 permits. Specifically, are we correct to assume that
17 a state such as Washington with authority to issue
18 NPDES permits would grant its concurrence to the
19 issuance of an NPDES permit modification?
20 Your courtesy in hearing my remarks today is
21 very appreciated. Thank you.
22 CHAIRMAN JORLING: Thank you, John.
23 I have one or two questions.
24 First, your statement on Page 4 regarding the
25 irreversibility of any decision. The implementation

1 of 301(h) it's clear must include the application of
2 the criteria under Section 403. And in Section 403
3 there is the requirement that -- And I will read the
4 provision:
5 "In any event, where insufficient information
6 exists on any proposed discharge to make a
7 reasoned judgment on any guidelines established
8 pursuant to this subsection, no permit shall be
9 issued under 402."
10 Do I read your comment basically as saying
11 that the agency should err on the side of caution
12 because of your concern over the irreversibility of
13 the decision?
14 MR. SPENCER: I believe so.
15 CHAIRMAN JORLING: The second -- Well, there
16 is one question that I think we can pursue at a later
17 time concerning the availability or the eligibility
18 of grant monies for preparing modification applications.
19 MR. SPENCER: Let me add that my thought
20 there is that it be specific to the smaller communities.
21 We believe that there is capability among your medium
22 to large sized cities to do this, but there are many
23 small, very small towns in the Puget Sound area that
24 might be eligible for this and that do not have the
25 capability to prepare an application.

1 CHAIRMAN JORLING: And then on the last
2 point, your concluding question on the role of the
3 states in this process, we do not view this as a 402-
4 type process and, therefore, the state with NPDES
5 authority executing it, that that is authority that is
6 granted to the Administrator acting with the concurrence,
7 and we believe that either a 401 process -- And the
8 discussion I had with members of the staff of the
9 board of California, that either the 401 certification
10 or a separate process for concurrence will be developed,
11 but that the concurrence will not include the state
12 issuing the modification decision.
13 MR. SPENCER: Well, let me add, then, that
14 this confuses us because the amendment provides for
15 a modification of an NPDES permit, secondary treatment
16 requirements of that, and this will leave the NPDES
17 permit which has been issued by the state in a very
18 uncertain status if it's not modified. And I'm again
19 questioning. We would like to have that clarified as
20 to once a modification is granted, is then the state
21 responsible to follow up with at least an amendment
22 after concurrence of the state-issued NPDES permit?
23 CHAIRMAN JORLING: I think these questions
24 will be addressed and hopefully the answer will be
25 clear in the regulations.

1 MR. SPENCER: Thank you.
2 CHAIRMAN JORLING: Thank you.
3 John?
4 MR. DUBOIS: Yes, John, I have just a couple
5 of questions.
6 Under Washington state law, can you now
7 approve a permit for something less than secondary
8 treatment, or would you have to make your rules and
9 regulations on the law?
10 MR. SPENCER: We can issue a permit for
11 something less than secondary treatment under our
12 existing law. The law is general enough that it
13 provides for that.
14 MR. DUBOIS: I see. I would wonder, you
15 mentioned this small communities issue relative to
16 financing. Would you favor some differentiation based
17 on size of the application requirements, the level of
18 detail and so on from small communities versus larger
19 ones? Could that be a partial solution to the problem
20 that you pose?
21 MR. SPENCER: I suppose it could be. But,
22 on the other hand, we are dealing with something that
23 requires, it seems to me, a minimum level of information
24 which, to use a term which we used earlier, requires
25 a certain threshold of information and documentation

1 which I think would be very difficult to combine. I
2 think I would provide a cut-off line for assistance
3 to the small communities to prepare an application.
4 MR. DUBOIS: But the same application?
5 MR. SPENCER: I think so.
6 CHAIRMAN JORLING: Thanks very much.
7 John Stratford, Humboldt Bay Wastewater
8 Authority.
9 MR. JOHN STRATFORD: Mr. Jorling, my name is
10 John Stratford, General Manager and Chief Engineer of
11 the Humboldt Bay Wastewater Authority.
12 I don't have a written statement to submit,
13 but I did want to make a few comments and try to keep
14 from taking too much of your time.
15 In the essence of that -- in the interest of
16 that, I would state that we essentially agree with the
17 very first two statements that were made by Watsonville
18 and Orange County, and I think we will just go on the
19 record to that effect and quickly indicate to you one
20 of the basic kinds of problems that we have to deal
21 with in our own circumstances.
22 Humboldt Bay Wastewater Authority is a joint
23 powers agency which was recently created to provide
24 the required level of treatment and disposal on a
25 regional basis. We have moved forward rapidly to design

1 a system which is in compliance with federal require-
2 ments of the 1972 Act and the state requirements under
3 the Porter-Cologne Act. We really are, in essence,
4 a mini metropolitan area.
5 The authority is a contractual creation of
6 two small cities, a county and two local service
7 districts. Our design population is 70,000, of which
8 something over 93 per cent is served by existing
9 collection systems and recently constructed collection
10 systems and about seven per cent or less is served by
11 on-site disposal systems, being a septic tank leach
12 field.
13 We are a high rainfall area. We are water
14 long, not water short, and therefore we have interesting
15 problems with the reclamation situation.
16 We also have problems on anything that talks
17 about land disposal because of very high water tables
18 and so we have had that problem to deal with. So being
19 controlled by the State's Bay and Estuaries policy,
20 which is designed to protect and restore the water
21 quality of the streams and valuable ecological
22 resources, we, in our regional systems, have designed
23 it to eliminate eight existing small municipal
24 dischargers to Humboldt Bay by conveyance to a single
25 secondary treatment discharge to the ocean. We have

1 an existing NPDES permit for this ocean discharge to
2 substitute for all those existing small discharges
3 to the bay.
4 And, therefore, we believe that our type of
5 situation should be considered an existing ocean
6 discharge for purposes of ocean discharge treatment
7 modification.
8 We happen to be at the point where we have
9 completed our design something over a year ago. And
10 except for the fact that we ran into some local
11 opposition, which isn't all that uncommon, it has
12 delayed us for the past year in going to construction.
13 We have had legal opposition which has prevented our
14 bond issue from moving forward. And due to that, we
15 have not yet gotten under construction.
16 The opposition has been in large part focused
17 on the fact of the high cost of secondary treatment
18 under just the effluent standards and not only the
19 cost from a dollar standpoint, but from an energy
20 standpoint to meet that for all conditions of flow.
21 And we actually view this particular change in the
22 law as the opportunity at this time when we are still
23 being held up by litigation which will probably go on
24 for at least a few more months to really look at the
25 possibilities of some relatively limited reductions in

1 treatment, primarily dealing with our high winter
2 flow situation, which are very dilute flows of
3 concentration, and to maintain what we would consider
4 full secondary treatment requirements under most
5 conditions, but be able to cut back on just those
6 limiting kinds of circumstances.
7 We are not talking about industrial waste.
8 We have essentially no industrial discharges. We are
9 primarily and almost exclusively a normal domestic-
10 type waste situation. We have already performed three-
11 quarters of a million dollars in ocean studies as
12 part of our design process, or predesign information
13 and for baseline information for further monitoring.
14 We are prepared to do whatever is necessary
15 and required under the very terms we are talking about
16 here controlling. We just do think that, in the
17 interest of all parties, EPA, the state and our local
18 agency, that there could be significant savings not
19 only in first cost, but in long-term operation if there
20 were a reasonable degree of flexibility allowed and
21 to be able to perform under the state's proposed
22 receiving water standards and without long, very long
23 processing of the situation, be able to move forward
24 rapidly to this. And we would have at least a fair
25 opportunity to solve some of the local opposition

1 problems which has been holding up this very vital
2 project and one which now has cease and desist orders
3 and connection bans on virtually the complete area.
4 As I say, at the moment, it's at a dead
5 stop in large part because of the local perceptions
6 of the extremely high cost to gain a very, very tiny
7 amount of additional benefit.
8 So we basically look to that as a basis for
9 coming up with rational solutions that would seem
10 rational to anyone, we believe. So a key question is
11 existing discharge. We do have an existing NPDES
12 permit.
13 Another is the question of definition of
14 deep ocean outfall. We happen to be on a remote
15 location of the coast with a relatively small discharge
16 compared to the big metropolitan areas with very
17 turbulent mixing action, and we are designed to get a
18 hundred to one initial dilution. The same situation
19 would apply to length of any other such criteria.
20 We do have a design one-mile long outfall,
21 but I don't know why one mile in any respect should
22 be a specific criteria.
23 There is one other item that we would bring
24 up, and that is the whole question of using a per cent
25 removal requirement. We do not think there should be

1 a criteria for arbitrary percentage removal since,
2 as indicated in our case, we have very high winter
3 flows, much above our average dry weather flows, and
4 we have, therefore, a very weak sewage during that
5 period of the year.
6 So anything that would require an 85 per
7 cent removal is not a cost-effective situation for
8 anyone in that kind of condition. So we would request
9 that there be flexibility and reasonability to interpret
10 this kind of situation and not just some fixed
11 arbitrary type of requirement.
12 I would be ready to respond to any questions
13 that you may have.
14 CHAIRMAN JORLING: Thank you very much.
15 I don't have any questions, nor do any of the
16 panelists.
17 I would like to try and move on to David
18 Phillips before we take a lunch break, representing the
19 South Essex Sewerage District from Massachusetts.
20 MR. DAVID L. PHILLIPS: Thank you, Mr.
21 Jorling.
22 I realize the time is getting late. My
23 remarks will be very brief. They will be followed up
24 with a written statement that will be forwarded on to
25 you.

1 I am here because I was referred by our
2 EPA Regional Office, Region I, in Boston, Massachusetts.
3 We at the South Essex Sewerage District
4 represent a population of approximately 200,000 people.
5 We have a primary treatment plant capable of handling
6 41 million gallons per day. We are located north of
7 Boston. The plant itself is in the City of Salem,
8 Massachusetts.
9 Last summer, when Senator Muskie's bill 1952
10 started to go through the Congress and the House-Senate
11 conference committees, we were very concerned about
12 the so-called deep ocean outfall provisions, and we
13 followed it very closely all the way through until
14 final passage.
15 In the December 6, 1977, Congressional
16 Record, I do note that there are a couple of passages
17 that depth is a key factor determining the amount of
18 circulation, but circulation is also a factor. And
19 further on, they make reference to rip currents and
20 strong tidal movements as being able to contribute
21 and also the distance off shore for location of outfall.
22 My only point that I would like to make here
23 this morning is that unfortunately on the East Coast,
24 we do not have deep ocean outfalls. However, we lie
25 in the very northeast portion of the country, and we

1 do have a number of other factors, which I will detail
2 in my written statement. I just this morning would
3 like to make brief mention of them.
4 We have tidal currents. We have a rise in
5 our tide ranging between ten and fifteen feet average
6 per day. Our tidal currents average somewhere between
7 two and four knots moving out of the Salem-Marblehead-
8 Beverly-Peabody area. We have prevailing winds from
9 the west that average fifteen miles per hour blowing
10 out to see, and we sit at the mouth of the Danvers
11 River in an estuary area.
12 Currently, our outfall pipe lies some two
13 miles out to sea. And we have begun with our
14 consulting engineers to conduct very serious and
15 extensive monitoring tests of the effluent standards
16 throughout the area that we are located. We are pre-
17 pared, if necessary, to extend our outfall an addition-
18 al three miles to sea, which would get it to a depth
19 that exceeded a hundred feet.
20 At the present time, we lie in approximately
21 40 feet of water.
22 At this point in summarizing, we feel that
23 our primary facilities meet the state standards. We
24 are compiling a great deal of data to show that they
25 do. And we are mostly concerned that, when we get into

1 the procedures and the application for secondary, that
2 we are at least allowed to present our case to the
3 EPA. And at this time we are asking for really no
4 more than that.
5 And that would conclude my remarks. If you
6 have any questions . . .
7 CHAIRMAN JORLING: Dave, are you familiar
8 with the California Ocean Plan?
9 MR. PHILLIPS: I was briefed on it by Mr.
10 Harper from Orange County, but I am not that -- I have
11 copies of it now, and I am not that much familiar with
12 it in detail.
13 CHAIRMAN JORLING: Based on that very initial
14 review, is it your understanding that the State of
15 Massachusetts has anything to the equivalent?
16 MR. PHILLIPS: Yes. Massachusetts does not
17 have the BOD standard. However, they do have the
18 dissolved oxygen, turbidity and color.
19 CHAIRMAN JORLING: Are there any requirements
20 on any of the toxic pollutants in the waters in which
21 you presently discharge --
22 MR. PHILLIPS: There are standards --
23 CHAIRMAN JORLING: -- under Massachusetts --
24 MR. PHILLIPS: There are standards for that,
25 yes.

1 CHAIRMAN JORLING: Okay.

2 MR. PHILLIPS: Thank you.

3 CHAIRMAN JORLING: Let's try Lauri Adams

4 representing the Environmental Defense Fund.

5 MS. LAURI ADAMS: My name is Lauri Adams.

6 I'd like to make just a few very, very brief statements

7 on behalf of Mr. James Tripp of the Environmental

8 Defense Fund.

9 In general, our concern with ocean discharges

10 of municipal wastewater is not with traditional

11 pollutants such as BOD or suspended solids. Indeed,

12 we recognize that marine waters typically contain

13 sufficient oxygen, unlike many of our inland rivers,

14 to handle tremendous quantities of BOD. Our concern,

15 instead, is with heavy metals, pathogenic material,

16 toxic organics and, in some cases, nutrients. Since

17 secondary treatment, relative to primary treatment,

18 does not treate any of these pollutants efficiently

19 or effectively, neither level of treatment may be

20 adequate to protect the marine waters and the oceans.

21 From this limited perspective, the modification

22 requirement is largely irrelevant.

23 However, the modification criteria of

24 Section 301(h) can and should be utilized as tools to

25 utilize -- to achieve important water management

1 objectives. And EDF would support their use for these
2 purposes.
3 First, the elimination of municipal discharges
4 of toxic pollutants to marine waters.
5 Second, reclamation and reuse of wastewater.
6 Third, controlled recycling of mineral
7 nutrients, and
8 Fourth, cost-effective implementation of
9 Section 208 programs for controlling nonpoint as well
10 as point sources of pollution in coastal communities.
11 Congress introduced the concept of effluent-
12 based standards into the Federal Water Pollution
13 Control Act as a result of the frustrating experience
14 of basing effluent limitations solely on water quality
15 standards as required under the 1965 Federal Water
16 Pollution Control Act. Congress adopted this point of
17 view because of the technical, administrative and
18 enforcement difficulties in dealing with water quality
19 based effluent limitations and because of an expressed
20 need for rational uniformity. The specific standard
21 of secondary treatment was chosen by Congress because
22 it was thought to be generally needed nationwide to
23 achieve the water quality goals of the Federal Water
24 Pollution Control Act amendments and was technically
25 achievable.

1 Section 301(h), Modification Provision, of
2 the 1977 Clean Water Act recognizes that uniform
3 effluent standards require the secondary treatment
4 condition in some circumstances be justified based on
5 the water quality objectives they were designed to
6 serve. Yet if the new Section 301(h) allows modifica-
7 tion of secondary treatment requirements based on the
8 nature of the receiving medium, the Environmental
9 Defense Fund believes that it is entirely appropriate
10 to consider in conjunction with the Section 301(h)
11 modification what water quality objectives should be
12 sought for coastal waters. Our analysis suggests that
13 secondary treatment is not especially meaningful for
14 ocean dischargers of municipal wastes. On the one
15 hand, treatment of BOD, suspended solids and pH is not
16 appreciably better served by secondary treatment than
17 primary treatment. But other pollutants, such as
18 heavy metals and toxic pollutants, should not be
19 discharged into a dispersal medium at all. Breakdown
20 of the discharged materials by chemical and biological
21 decomposition, remineralization and/or a recycling of
22 essential nutrients are actually slowed down consider-
23 ably under highly dilute conditions such as are found
24 in the oceans.
25 Toxicants may disrupt biological stability

1 by causing both lethal and sublethal effects on
2 sensitive marine organisms. These impacts are often
3 very extraordinarily difficult and expensive to measure.
4 The impacts from these materials are magnified because
5 of the ability of marine organisms to concentrate or
6 bioaccumulate these materials in their tissue. Bio-
7 logical accumulation is further intensified by movement
8 of these materials up the food chain, impacting high-
9 level organisms, including both shellfish and fin fish.
10 As a practical matter, more stringent control
11 of toxic pollutants can be achieved only if the coastal
12 community implements a stringent toxic pollutant pre-
13 treatment program, a comprehensive program in the
14 context -- in the context of Section 208 planning to
15 control point and nonpoint sources of toxic pollutants
16 into the marine waters or moves in accordance with an
17 improved schedule to a wastewater recycling and
18 reclamation system.
19 All of these measures are important because,
20 without imposing protective conditions on modifications
21 of secondary treatment requirements, there is a strong
22 incentive for municipalities to continue discharging
23 wastewater into the ocean and avoid much expensive,
24 although more effective, land treatment and recycling
25 alternatives.

1 The Environmental Defense Fund sees
2 modification as a means for ultimately moving communi-
3 ties away from total reliance on ocean discharge. To
4 this end, Section 301(h), in effect introduces an
5 important funding tool which EPA and coastal communi-
6 ties should use to achieve critical water quality
7 objectives which sole reliance on the secondary
8 treatment requirement cannot possibly achieve for the
9 same expenditures of funds.
10 That's the end of my prepared comments. In
11 the interest of lunch and also because Mr. Tripp is
12 vastly more informed on this than I am, if it would
13 be acceptable to you, I would just as soon refer all
14 your specific questions to him. He has submitted a
15 prepared statement. I assume you have that. And we
16 will be happy to elaborate on any specific points in it.
17 CHAIRMAN JORLING: Thank you very much.
18 Before we do break for lunch, let me read
19 the next five off and then during lunch, we will have
20 the list typed up and post it; and upon your return,
21 we will have the rest of remaining order available for
22 you.
23 And the next block of five:
24 William Anderson from Kennedy Engineers.
25 Arthur Henzell from the Goleta Sanitary

1 District.

2 Ivan Day from the Lakehaven Sewer District.

3 Lester Evans from the Encina Joint Powers

4 Sewerage Agency, and

5 Fred Harper representing AMSA.

6 We will post the remaining list at lunch.

7 (Noon recess.)

8 CHAIRMAN JORLING: We have a long afternoon

9 ahead of us, so I'd like to get started. We have

10 approximately 20-plus more witnesses that want to speak.

11 In the interest of trying to expedite that, where

12 statements have been made already and a witness wants

13 to repeat those, I think a cross-reference to them

14 and an endorsement might be more helpful than restating

15 the same point over and over again.

16 We will try and break, oh, somewhere around

17 3:00 to 3:15 for a little relief and then go on to

18 completion.

19 And so we will try to adhere to a time rule

20 of five to seven minutes with the remaining witnesses.

21 And the first one this afternoon is William Anderson

22 from Kennedy Engineers.

23 MR. WILLIAM A. ANDERSON: The Congress and

24 the EPA are to be complimented in recognizing that

25 there may be potential assimilation capacity in

1 certain receiving waters rather than continuing to
2 mandate a uniform and arbitrary treatment level where
3 there is no proven need. The use of assimilation
4 capacity where appropriate will allow a conservation
5 a scarce resources, such as building materials, energy
6 and chemicals. However, it may require a great amount
7 of effort to take advantage of this option.
8 If the burden of proof is placed solely on
9 the discharger, waivers only may be within the reach
10 of a few large agencies. We feel that the amount of
11 evidence should be commensurate with the magnitude
12 of the discharge and perhaps that obtaining of such
13 evidence should be grant eligible because 75 per cent
14 of the capital cost savings would be on a savings to
15 the government.
16 Consideration should also be given to pro-
17 visions to relax existing secondary treatment require-
18 ments on request in order to monitor effects of
19 primary effluent to form a basis for considering a
20 waiver.
21 This brought up an interesting question at
22 lunch, and the question is: Will EPA consider a
23 waiving for a discharger who presently has secondary
24 treatment facilities just in order that he may save
25 annual O&M costs, or would it be limited to ones who

1 have not yet constructed secondary treatment facilities?
2 EPA has been quoted as saying that waivers
3 will apply only when existing outfalls are used. We
4 believe there is no technical merit to such a limit --
5 limitation to the waiver and, further, that an outfall
6 extension might have considerable benefit, both
7 monetary and environmental.
8 Further, we understand that waivers may only
9 be allowed where there is no substantial increase in
10 flow. Again, we see no technical merit to such a
11 limitation if it can be demonstrated that some growth
12 within a reasonable planning period would have no
13 adverse effect on the environment.
14 Thank you.
15 In case I didn't say my name first, it's
16 Bill Anderson from Kennedy Engineers in San Francisco.
17 CHAIRMAN JORLING: Bill, the statute speaks
18 with the terms "existing discharges," and you are
19 saying that -- Well, maybe it would be best to have
20 you restate your views on what the regulations might
21 say about that, about that requirement.
22 MR. ANDERSON: An existing discharger is
23 one thing. An existing discharge through an existing
24 outfall is another. We are suggesting that an
25 allowance be made so that the point of discharge

1 perhaps could be relocated, which is one issue.

2 The second -- And I believe this was touched

3 upon this morning -- that I think Larry Walker and

4 others mentioned that, if one more connection is

5 allowed to the sewer system, it constitutes an increase

6 in flow. And so you are not telling us, are you, that

7 you want us to have a building ban?

8 CHAIRMAN JORLING: You know, we are not

9 making conclusions at this meeting. What we are trying

10 to do is get peoples' recommendations on these --

11 MR. ANDERSON: As a practical matter --

12 CHAIRMAN JORLING: -- criteria.

13 MR. ANDERSON: -- if the facility was planned

14 20 years ago for 10 years of growth, then we feel that

15 the existing discharge should be not the present flow,

16 but the planned flow.

17 CHAIRMAN JORLING: All right.

18 Paul?

19 MR. De FALCO: Bill --

20 MR. ANDERSON: Yes.

21 MR. De FALCO: -- can you give me some ideas

22 of what is the difference in maintenance and operating

23 costs between a primary and a secondary treatment

24 plant on a general basis, an order of magnitude?

25 MR. ANDERSON: I don't have that on the tip

1 of my tongue, but I did see an article, I think written
2 by Montgomery, in the Journal recently that said of
3 a secondary sewage treatment plant, some 93 per cent
4 of the energy costs were due to the activated sludge
5 portion of it.
6 MR. De FALCO: How significant a difference
7 will there be between secondary and the state Ocean
8 Plan requirements, which I perceive are very different
9 than primary?
10 MR. ANDERSON: Yes. And it might be that,
11 if strict adherence to secondary was not required,
12 there are some intermediate processes that might be
13 considerably more cost effective, perhaps even the
14 tripping filter process, if available, could be much
15 more economical to operate on an annual basis and still
16 address itself to some of the conventional and noncon-
17 ventional pollutants that were discussed this morning.
18 MR. DUBOIS: Would a tripping filter plant
19 likely produce the same effluent in terms of toxics
20 removal as an activated sludge plant? I ask that
21 question --
22 MR. ANDERSON: I'm not really sure exactly.
23 I think it would be in the same order of magnitude
24 proportionately to the solids removal plant.
25 Benny, do you want to talk about that?

1 MR. DUBOIS: The reason I ask is there's
2 been some testimony that, if a waiver were granted,
3 that the toxics removal should be equivalent to that
4 that would be removed by a secondary treatment plant,
5 and I didn't know whether, in your judgment, a tripping
6 filter would be as effective as other forms of
7 secondary treatment in that regard.
8 MR. ANDERSON: It probably could be designed
9 to be.
10 CHAIRMAN JORLING: Thank you, Bill.
11 The next witness is Arthur Henzell from the
12 Goleta Sanitary District.
13 MR. ARTHUR A. HENZELL: Mr. Jorling and
14 members of the panel:
15 I'm Arthur Henzell, representing the Goleta
16 Sanitary District. The District is a public agency
17 near Santa Barbara on the California Coast. We process
18 the sewage of five small agencies, and we have a total
19 discharge of between five and six million gallons per
20 day, which is discharged through an ocean outfall into
21 the Pacific Ocean. The outfall line goes out approxi-
22 mately a mile at 93 feet in depth. The diffuser is
23 approximately 283 feet long.
24 I have submitted a written statement which
25 addresses each of the eight criteria stated in the law

1 and answers the questions posed in your notice of
2 this meeting.
3 We also cite in that statement the appropriate
4 legislative history.
5 The basic point of our statement is that we
6 think that you should give appropriate consideration
7 to the smaller agencies which may apply under this
8 modification provision. You should realize that, in
9 most cases, these smaller agencies have less resources
10 and the funding is less available than it is with the
11 large metropolitan areas. They do not, in most cases,
12 have the years of detailed study of the ocean
13 environment around their outfall lines.
14 We are very concerned that the regulations
15 be set up in a way that they not preclude these smaller
16 agencies from obtaining a modification. In light of
17 this, we urge that the regulations be set up in a
18 flexible manner so that they can take these matters
19 into account.
20 I will comment briefly on the eight criteria,
21 if I may, and I hope not to repeat what was said
22 before.
23 With regard to Criteria No. 1, we agree with
24 the statement of Mr. Larry Walker of the State Board
25 staff. We feel that there should be the related or

1 surrogate parameters used and that these should be
2 set forth and that you should be guided by the Ocean
3 Plan.
4 We feel that the intent of the law is very
5 clear in this regard.
6 With regard to Criteria No. 2, which assures
7 the protection of the marine biota, we could go into
8 a detailed discussion of tests. However, again we
9 think that the regulations should be flexible in this
10 regard and should provide guidelines of evidence which,
11 again, do not penalize the small district which does
12 not have the reams of information which some of the
13 larger agencies might have.
14 With regard to the monitoring requirement of
15 Criteria No. 3, we believe this was intended to provide
16 monitoring, not monitoring in the past but, rather,
17 monitoring in the future.
18 We believe that this requirement is tied to
19 the fact that there will be a five-year review of any
20 modification. Again, the legislative history seems
21 clear on this point.
22 We have no comment with regard to Criteria
23 No. 4.
24 However, in connection with the pretreatment
25 requirement under No. 5, we trust that this will be

1 interpreted so that we are talking about a pretreatment
2 program which is available and will be implemented at
3 the time the modification is approved, not something
4 in the past or at the present.
5 This, again, relates to the small district
6 which may not have had time to implement an extensive
7 pretreatment program at this time.
8 With regard to Item No. 6, a schedule of
9 activities to eliminate toxics from nonindustrial
10 sources, we would urge that this provision be inter-
11 preted -- that at least the words "applicant has
12 established" be interpreted to mean that the schedule
13 has been put together and will be implemented at the
14 time the modification is granted, not something that
15 has been in effect or is in effect necessarily at the
16 time of the application.
17 With regard to Criteria No. 7, we would
18 agree with other speakers that this should not be
19 limited to present flows but should be tied into the
20 NPDES permit.
21 With regard to Criteria No. 8, the funds to
22 be used to carry out the purposes and requirements of
23 the Act, not only is it indicated in the legislative
24 history that these funds should be available for water
25 reclamation, but it also seems to clear to us that

1 these funds should be available for the monitoring
2 program which, in many cases, will be extremely
3 expensive for the smaller agencies also for infiltra-
4 tion control and some other matters which will carry
5 out the purposes of the Act.
6 Those are the eight requirements specifically
7 of the Act. However, we feel that the definition
8 section that comes later really constitutes perhaps
9 a ninth criteria. This deals with the definition of
10 marine discharges and refers, of course, to the
11 assimilation of the discharge into the ocean.
12 There's been a lot of discussion and there's
13 discussion in the Act and in the history, legislative
14 history of the act, of depth and distance, distance
15 from the shore, as factors. However, we feel that
16 other factors should be considered, and we think that
17 the legislative history of the Act indicates that they
18 should be considered. Particularly where you have a
19 small discharger, it seems unfair to set up minimum
20 requirements for depth and length of outfall.
21 Some of the other factors which we feel
22 should be considered are the strength of the tidal
23 and other hydrological action, the salinity of the
24 receiving waters, the density differential between
25 the discharge and the receiving waters and their

1 respective temperatures.

2 In addition to the eight criteria we men-
3 tioned -- And we tried to cover some of the questions
4 which were listed in your notice under each of those
5 criteria -- there were two questions that we didn't
6 fit within each one of those. One was whether or not
7 toxic pollutants should be no greater than they would
8 be under secondary. We feel that the real test in
9 this case should be whether or not the California
10 dischargers at least meet the Ocean Plan as revised.

11 We would agree with Mr. Walker in this
12 regard.

13 Also with regard to the question of whether
14 plants treating domestic waste should be treated
15 differently than those with large industrial discharges,
16 we feel that perhaps in the case of smaller dischargers,
17 there could be an abbreviated procedure which would
18 take this into effect and that the evidence necessary
19 in the case of a discharger which has primarily
20 domestic waste would be less than in the case of the
21 large industrial discharger.

22 In summary, we hope that, in writing the
23 regulations, you will keep in mind the Congressional
24 intent, which we feel is adequately set forth in the
25 legislative history, that the smaller agency will be

1 included.

2 You will recall that at least four times in

3 the legislative history, there is a list of West Coast

4 dischargers, most of which are what I would define as

5 the smaller dischargers.

6 We also would hope that you would keep in

7 mind the fact that the evidence which they can provide

8 is not going to be -- at least the smaller discharger

9 can provide, is not going to be as extensive as it

10 might be in the case of the large discharger who has

11 had the funds and the ability to test the receiving

12 waters and make the other -- the monitoring over a

13 long period of time.

14 In other words, we hope that the regulations

15 will be flexible enough to apply to all of the

16 dischargers that were intended to be covered by the

17 legislation.

18 Thank you.

19 CHAIRMAN JORLING: Thank you, Arthur.

20 Paul, any questions?

21 MR. De FALCO: Mr. Henzell, what's the

22 current level of treatment at Goleta?

23 MR. HENZELL: Primary.

24 MR. De FALCO: What would be the additional

25 operating costs for secondary? Do you have any idea

1 in terms of magnitude of money?

2 MR. HENZELL: I heard -- We just discussed

3 that a minute ago when that question came up before.

4 MR. De FALCO: I meant in terms of Goleta

5 proper.

6 MR. HENZELL: Well, my understanding would

7 be about two and a half times. Was that correct, Ed?

8 Our Manager is here, Mr. De Falco.

9 CHAIRMAN JORLING: Two and a half times the

10 cost of primary --

11 MR. HENZELL: Yes.

12 CHAIRMAN JORLING: -- or two and a half times

13 the cost of the California Plan?

14 MR. HENZELL: As far as I know, it would be

15 two and a half times the cost of primary.

16 FROM THE FLOOR: The charge would go from

17 $2 a month to $7.83.

18 MR. HENZELL: From primary to secondary.

19 MR. De FALCO: What would be the cost of

20 attaining the California Ocean Plan requirements?

21 FROM THE FLOOR: We haven't studied that.

22 CHAIRMAN JORLING: Lisa, do you have anything?

23 MS. FRIEDMAN: No.

24 CHAIRMAN JORLING: Don?

25 MR. DUBOIS: I wonder, have you made any

1 estimates at all of the cost of applying for this
2 waiver?
3 MR. HENZELL: We have. I don't know that
4 we have estimated. We have entered into a contract
5 with our engineers for this and other matters.
6 Is there a segregation line? Perhaps you
7 can tell us that. This is our engineer from Brown and
8 Coldwell.
9 FROM THE FLOOR: We have established an
10 outside budget of $125,000. We really haven't defined
11 all the work.
12 MR. DUBOIS: $125,000. Is that the prepara-
13 tion of the materials that you would understand now
14 would be needed to submit with the waiver request?
15 FROM THE FLOOR: We have established that
16 as an outside budget. What the actual program and
17 what additional field studies would be required, we
18 don't really know at this point in time.
19 MR. DUBOIS: Thank you.
20 CHAIRMAN JORLING: Thank you very much.
21 The next witness is Ivan Day from the
22 Lakehaven Sewer District.
23 MR. IVAN DAY: Mr. Jorling and honored
24 members of the panel:
25 I'm Ivan Day from Lakehaven Sewer District,

1 and it's located in Federal Way, Washington. And if
2 you depart from Sea-Tac Airport, very often to the
3 south, you look down on either side of the airplane,
4 and you are looking at us.
5 We are in the southern part of the main
6 portion of Puget Sound. We have an agreement with
7 Metro on our east side for the portion that drains
8 into the Green River drainage. We have an agreement
9 with Milton and Pierce County for a portion of our
10 drainage to the south, and we have an agreement with
11 the City of Tacoma, which is underway at this time,
12 so you can see approximately what our boundaries are.
13 We are not an old district. We were formed
14 in 1956, but the first construction was done in 1961.
15 We built a second plant in 1969, and we normally run
16 a dry weather type flow of a million gallons, slightly
17 over at this time.
18 We have a very tight system because it's
19 basically a new system. So the inflow is not a problem
20 in our district.
21 I noticed in reading some of the paper work
22 that has been furnished to us that there has been
23 comments more than once about accounting of district
24 records and costs of operations and so forth. And
25 we do have a very sophisticated accounting system.

1 The Examiner's Office in Washington uses
2 us as an example on many occasions for other agencies.
3 So I think most of the agencies do a pretty good job
4 of that. If they will follow the State Examiner's
5 guidelines, they should have excellent luck with their
6 accounting.
7 We have converted to in-house computers,
8 and we presently are running seven programs on the
9 computer, and we hope in the long term to put some of
10 our operations of our treatment plants on computers.
11 We do not at this time anticipate asking for
12 a waiver on our Redondo primary plant. Our secondary
13 application, our Step 2 application, is in, and I
14 hope that it is very close to being awarded, and we
15 would like to go ahead with that.
16 Now, our Lakota plant, which is in on a
17 Step 1 at this point, we would like to consider it
18 later when we see the rules and the effect of the
19 rules that it would have on our district in particular.
20 Characteristics of the water in Puget Sound
21 off of the Dumas Bay, where our Lakota plant is
22 located, has adequate dissolved oxygen and very rich
23 in nutrients and quite rich in oxygen, too. I shouldn't
24 say just adequate. It's quite rich and generally the
25 amount of effluent being discharged by these two

1 plants' outfalls is small when compared to the total
2 volume of water encompassed from Point Robinson to
3 Browns Point.
4 Lakota outfall is discharging about one
5 million gallons per day and Redondo outfall also
6 discharges about one million gallons per day.
7 Since these are both very small volumes and
8 the mixing is relatively good in this area, there is
9 adequate oxygen in the ambient receiving waters and
10 more than adequate to supply the biological demand
11 of the effluent.
12 The Puget Sound trench, lying off the end of
13 our outfalls, goes down to a depth of a little over
14 600 feet.
15 The tidal currents under the water are
16 quite strong, too. The divers tell us, the submarine
17 fellows tell us, that the bottom is quite scoured in
18 the -- particularly at our Lakota outfall.
19 We had colored movies made from a two-man
20 submarine from our outfall from where it comes out of
21 the ground at about 30 or 40 feet all the way down
22 to the outfall, and they are in good condition. There
23 is no debris around the end of the outfall. And in
24 one case, there is a fish of approximately 18 inches
25 in length which is swimming very leisurely into the

1 outfall pipe and very leisurely back out, so that
2 water is certainly not offending the fish, if that's
3 any indication.
4 Octopi, or octopus, whichever is correct --
5 I'm not a marine man -- are in abundance.
6 And I will respond to the eight conditions.
7 No. 1, it is my response that as basically
8 small districts and small agencies, our Department
9 of Ecology has an excellent criteria that we live by
10 and we feel like in the case of the No. 1 condition
11 that their standards and their enforcement would be
12 sufficient in our state.
13 The second condition, I submit Exhibit A,
14 which is an example of what we did in our Step 1
15 program at Lakota Treatment Plant, and it covers 11
16 pages, and I will just touch on the headings.
17 It talks about the -- It's a biological
18 investigation. It talks about the water and its
19 makeup. It talks about the invertebrates other than
20 shellfish. It talks about shellfish. It's done in
21 a quite scientific response, done by very sophisticated
22 people in this business, and it discusses shellfish.
23 It also gets into fish and fisheries and
24 then waterfowl and water-associated bird life, the
25 most probably number of coliform bacteria -- And we

1 have lab tests in the submittal in the back that back
2 up our testing -- and the chemical testing of sediment
3 samples.
4 And it delves into the characteristics of
5 Dumas Bay and its vicinity.
6 I will touch on Exhibit B while I'm on the
7 exhibits, and Exhibit B shows the dates that we did
8 sampling and the locations, and there is a map in the
9 back of the book which shows the locations of our
10 sampling, the depths of the water and so forth.
11 And we have -- I won't go into all the
12 sampling for the sake of time. We did sample for
13 volatile solids, chemical oxygen demand, nitrogen,
14 oil and grease, mercury, lead, zinc, sulfide, arsenic,
15 iron, copper, chromium, cadmium, nickel, phosphorous
16 and DO, of course, and these and the next page shows
17 some other responses from the lab.
18 Now, our cost on this material was --
19 I don't know about other people, but my
20 glasses fit fine until I start speaking; and then all
21 of a sudden, they get very slick on my bridge mount.
22 Our cost at that time was slightly over
23 $5,000. I would guess -- That was in '75 and '76. I
24 would guess now it would still be less than ten, but
25 it would be in that range, about $10,000 to do this

1 sort of thing.

2 We hired a submarine, a two-man submarine.
3 There is a diving school in Federal Way at Redondo,
4 and the two-man submarine had the pilot -- the owner
5 of the submarine and a student from the diving school.
6 They have a scoop that takes soil on the bottom of the
7 Sound and it has a clamp that comes back over with
8 that sample and it comes to the surface, and the
9 samples that were tested were 78 per cent solid. So
10 it wasn't filtered out with water, as you can see.

11 The system worked quite well. The submarine
12 cost, as I recall, was in the neighborhood of about
13 $2800 or $2300. We have that data, if anyone would
14 care to contact us.

15 The rest of it was marine lab expenses. So
16 I would guess if this were made a mandatory type thing
17 that the price of that would probably jump when they
18 realized we had to do it. So I'm sure it would go
19 three or four times higher.

20 The third condition was referring to monitor-
21 ing impact. And along with the exhibits we turned in,
22 I would suggest five samples be tested as per Exhibit
23 B to be obtained near the outlet of the outfall and
24 approximately one-fourth mile in each direction near
25 the same depth and two samples near the shore at about

1 the same distance in each direction from the outfall.
2 Some areas with varying conditions may need
3 different sample criteria or location, depending on
4 tidal action, bottom depth and etc.
5 And appropriate maps, of course, should
6 accompany such exhibits.
7 The fourth condition we concur with and
8 suggest again the rules and the monitoring of our
9 present Washington State Department of Ecology and
10 our federal agencies are sufficient at this time to
11 protect this consideration.
12 The fifth condition is that applicable
13 pretreatment requirements would be enforced. And,
14 again, I fall back on my prior response.
15 The sixth condition, in our case, we don't
16 have industrial; we are predominantly a living area,
17 suburban residential area. We presently serve about
18 50,000, a little over 50,000 people. We are connecting
19 between four or five thousand people a year at the
20 rate we have gone the last two years, and I would
21 suggest the toxic pollutants could be checked and
22 that if a five-year program, as we are suggesting here,
23 was set up on waivers that that would be sufficient
24 for a small agency which does not have industrial
25 activities that would contribute to toxics.

1 The seventh condition is one that bothers
2 me considerably. It will be -- My response is it will
3 be very difficult for many areas experiencing growth
4 to comply with this condition. If --
5 Now, my interpretation may be different than
6 what was intended.
7 If the waiver specifies the quantity of the
8 discharge must not exceed the amount being discharged
9 at the time of waiver issuance, then most small
10 agencies in the Northwest could not conform as most
11 are experiencing growth in some degree.
12 As I read the data furnished prior to this
13 meeting, in interpreted the data to imply the waiver
14 could be for an anticipated specified quantity in
15 addition to the present flow. I would hope this
16 interpretation is correct.
17 I would suggest perhaps if this was being
18 considered for modification, that perhaps the increased
19 discharges might be tied also to the pounds of BOD and
20 settleable solids and so forth in relation to the
21 million gallons per day type of arrangement so that
22 one is not restricted to a limited amount of gallonage.
23 The eighth and last condition, the condition
24 is long, and I won't read it, but my response is our
25 interpretation of this condition is that an agency

1 that had received funding for advanced treatment
2 construction would be obligated to spend this funding
3 on other needs, such as I&I work, interceptors, and
4 so forth.
5 But we feel that such funding, if not used
6 for the purpose that it was awarded, that it be sent
7 back to the agency that issued it in the first place
8 to be prioritized and sent out to the agencies that
9 badly need it for whatever their purpose might be at
10 the time. And I think that should go back through
11 the group of people that establish those things.
12 I sincerely appreciate the invitation of
13 Mr. Dubois to appear at this informational meeting and
14 for the opportunity to present this data for your
15 consideration. And I wish to extend my thanks to the
16 Region X staff of the Environmental Protection Agency
17 in Seattle, in particular to Mr. Ellerman for his
18 cooperation and help, and to our engineering consultant,
19 Mr. Donald Williams of Williams, Ross & Associates.
20 And if we can offer any additional informa-
21 tion or testimony or respond later, we would be very
22 happy to do so in writing at some future time or to
23 serve in any sort of activity you would care for us to
24 do.
25 CHAIRMAN JORLING: Thank you.

1 MR. DUBOIS: I'm just curious on one point.
2 As I understand it, you propose not to seek
3 a waiver on the Redondo Beach outfall?
4 MR. DAY: Not at this time.
5 MR. DUBOIS: But you do on Lakota. What
6 were the factors that went into that decision?
7 MR. DAY: I hesitate to disturb the status
8 quo. And if I might step backwards a little bit, we
9 started in '69 -- I remember when Roy -- or '68. I
10 remember when Roy Ellerman came up from the office
11 when it was in Portland, Region X, and we went over
12 the Redondo plant at that time and discussed our needs
13 to enlarge. And at that time we were looking at the
14 enlargement of our clarifiers and the things that go
15 with it. We were estimating something a little less
16 than $500,000.
17 Well, now, we have grown to the point, and
18 the rules have changed and the needs have changed,
19 that we are looking at about five million, or a little
20 more, to do this.
21 And, of course, the amount of capacity we
22 are seeking now is probably double what we would have
23 -- we were seeking ten years ago.
24 I'm afraid to disturb the status quo. I'm
25 afraid if we go back to waiting for a new set of rules

1 and we need enlargement, it's something critical, I'm
2 afraid to disturb it, frankly. I would like to go
3 ahead with Step 3 unless there was some quick method
4 of improving that situation.
5 CHAIRMAN JORLING: Paul?
6 MR. De FALCO: No.
7 CHAIRMAN JORLING: Thank you very much.
8 The next witness is Lester Evans from the
9 Encina Joint Powers Agency.
10 MR. LESTER G. EVANS: I'm Les Evans, General
11 Manager of the Encina Joint Powers Sewerage Agency,
12 serving the North San Diego County.
13 And as the meeting has gotten longer and
14 longer, I have edited my remarks so they will be
15 shorter and shorter.
16 In general, we support Mr. Larry Walker's
17 statements regarding utilization of the California
18 Ocean Plan as the applicable water standard. And,
19 in fact, we pretty much support everything that Mr.
20 Walker said.
21 Perhaps one issue we would part ways on would
22 be the statutory criteria requiring that there be no
23 new or substantially increased discharges above that
24 involving discharge specified in the permit. We
25 believe the intent there is that the reference to

1 volume of discharge be that specified in the NPDES
2 permit and not necessarily that flow which was
3 occurring on the day modification was granted.
4 We are pursuing reclamation aggressively.
5 We agree that reclamation should be emphasized. How-
6 ever, under certain circumstances where reclamation is
7 not economically feasible, we feel that the volume
8 of discharge should be capable of being revised, just
9 as any other permit condition, as circumstances
10 warrant.
11 Referring to the statutory criteria concern-
12 ing monitoring systems, care should be taken not to
13 exclude arbitrarily an otherwise eligible agency.
14 Certainly, the monitoring standards should not be so
15 extensive that a small or a relatively small agency
16 discharging ten to twenty million gallons a day be
17 required to spend a disproportionate amount of its
18 budget in meeting this requirement.
19 Additionally, we feel the monitoring require-
20 ment should -- referred to in a program should be
21 in effect at the time a waiver is granted and not
22 necessarily prior to that time.
23 We believe that the effect of the discharges
24 of small Southern California coastal treatment plants
25 with relatively minor industrial wastes discharging

1 through ocean outfalls over a mile offshore and over
2 a hundred feet deep should be recognized as having
3 significantly less potential for harming the environ-
4 ment compared with the larger hundred million gallons
5 per day agencies just on the basis of this volume
6 alone and that that fact should be taken into considera-
7 tion in the writing of the regulations.
8 We appreciate the opportunity to testify
9 here in advance of the preparation of these regulations,
10 and agree with the EPA's concern that the waiver
11 provisions must be restrictive. However, we also
12 agree with the agencies that have mentioned the legis-
13 lative proceedings and the Congressional intent here
14 and feel that that should be looked at very carefully
15 and that the intent was to allow waivers in certain
16 cases under certain conditions. And we feel that these
17 conditions do exist along the Southern California coast.
18 CHAIRMAN JORLING: Thank you.
19 Les, is your present discharge characterized
20 as primary?
21 MR. EVANS: Yes.
22 CHAIRMAN JORLING: Is it expected that the
23 adjustments would be made if the California Plan applies
24 to it?
25 MR. EVANS: Yes. Right now, for instance,

1 just on suspended solids, we are discharging about 90
2 parts per million, or 92-500 would have required 30,
3 and with 75 per cent removal under the Ocean Plan,
4 we will have to meet 60, so we almost fall right in
5 between. We will have to make some improvements.
6 CHAIRMAN JORLING: Paul?
7 MR. De FALCO: Yes.
8 Les, you indicate that you don't think such
9 an extensive monitoring program is to be overly -- or
10 a disproportionate amount of money should be spent.
11 Can you give us an idea of what you mean by an appro-
12 priate amount of money for a ten to twenty million
13 gallons per day plant? You must have some idea in
14 mind.
15 MR. EVANS: Well, for instance, our total
16 budget right now is under a million dollars, and even
17 under the California Ocean Plan, I would expect to
18 stay under two million dollars for operating costs.
19 Right now, our monitoring costs are probably
20 about ten per cent of our budget, and I would like to
21 stay in that same range.
22 CHAIRMAN JORLING: Thank you very much.
23 The next witness is Fred Harper, representing
24 the, I guess, AMSA, it says here.
25 MR. FRED HARPER: Correct.

1 Mr. Jorling, members of the panel:

2 My name is Fred Harper, President of the

3 AMSA, the Association of Metropolitan Sewerage Agencies.

4 We welcome the opportunity to comment

5 generally on the problems involved in developing

6 regulations to implement Section 301(h) of the 1977

7 amendments to the Water Pollution Control Act.

8 A number of AMSA members are represented

9 here at this public meeting and are providing the

10 details on some of the options EPA is considering in

11 drafting regs which will be effective in these

12 agencies. Our points, therefore, are general and

13 procedural in character, and hopefully brief.

14 First is the general tone and goal.

15 Congress has tossed EPA a tough assignment

16 since now some judgment must be exercised, rather than

17 the easier former system of simply requiring secondary

18 treatment across the board. We note that recently

19 EPA has accepted oxidation ponds in some situations

20 as providing secondary treatment. In any event, the

21 goals should be to establish regulations which are

22 clear, which are reasonable and which will help in

23 achieving Congress' aim which, as we see it, is to

24 enable some coastal agencies to avoid waste of public

25 funds, federal, state and local, where there is no

1 appreciable beneficial environmental effects from such
2 expenditures.
3 One point of considerable importance is
4 timing. We urge that no regulations be promulgated
5 which have the result of freezing the situation into
6 a period of time in the past.
7 For example, it would be foolish, in our
8 view, to require that a monitoring system must have
9 been in existence and meeting prescribed standards
10 as of December 27th, 1977, the date of enactment of
11 the amendments.
12 In addition, many coastal agencies are com-
13 mitted to improvements for which construction is
14 underway, utilizing federal funds. Waiver considera-
15 tions should take this into account in determining
16 the effects of the discharge on a marine environment.
17 On the question of burden of proof, we
18 believe it is clear that the applying discharger bears
19 the burden fully. We hope and trust, however, that
20 EPA's staff does not deem its role to be an adversary
21 but, rather, it should be demanding in the material
22 that must be submitted and should have a healthy
23 skepticism about the quality of the data and their
24 analysis.
25 But EPA should also want Section 301(h) to

1 carry out the Congressional intent underlying it.
2 Accordingly, we presume that the Administrator may
3 approve an application with a proviso, or a series of
4 provisos, that the approval is subject to. It would
5 be foolish to deem the process to be a game in which
6 the applicant would be deemed to have lost because
7 its initial application was incomplete.
8 In short, we argue for a process that will
9 enable the Administrator to have the data and arguments
10 before him, with the flexibility to grant an applica-
11 tion, to deny it or to approve it with conditions.
12 Although statutory language does not require
13 public hearings, we believe it highly desirable to
14 set up the process for the Administrator's review in
15 a fashion that will provide an opportunity for the
16 broadest possible input.
17 The NPDES permit program seems ideally
18 suited for this purpose, and we suggest it for your
19 consideration.
20 We are pleased to answer any questions or
21 provide any information you might wish.
22 CHAIRMAN JORLING: Thank you, Fred.
23 Paul?
24 MR. De FALCO: You know, Fred, we got into
25 a series of questions earlier in the food processing

1 plants down in the Watsonville area, and I want to ask
2 you in terms of AMSA representing a number of inland
3 as well as coastal communities, do you see any problem
4 with an unusual advantage being established here for
5 a coastal community in terms of cost of treatment
6 vis-a-vis industrial facilities and the possible
7 flight of industrial facilities from inland communities
8 to the coastal areas?
9 MR. HARPER: Well, first I'll say that one
10 of the provisions, of course, of the statutory
11 criteria is that we have to comply with all pretreat-
12 ment requirements. So industry is not going to get
13 off on that basis.
14 MR. De FALCO: Well, I'm thinking basically
15 of the food processing industries.
16 MR. HARPER: Okay. The food processors,
17 I think the -- I am going to avoid the point possibly
18 in that I think the costs of waste treatment is one
19 of many things that come into a consideration of where
20 you locate a plant. You have labor; you have
21 utilities, land, and this is just another feature of
22 it.
23 But it may be less money for them, yes.
24 CHAIRMAN JORLING: Don?
25 MR. DUBOIS: No.

1 CHAIRMAN JORLING: Thank you, Fred.

2 MR. HARPER: Thank you.

3 CHAIRMAN JORLING: The next witness is Rim

4 Fay, who is representing himself.

5 MR. RIMMON C. FAY: Mr. Jorling and members

6 of the committee:

7 Thank you very much for having this hearing

8 and an opportunity to appear here today.

9 I am Rimmon C. Fay, Venice, California.

10 I'm a member of a number of organizations,

11 including the American Fishery Society and the National

12 Coalition for Marine Conservation. All the organiza-

13 tions with which I am affiliated have taken very strong

14 positions with regard to the matter of water quality

15 and the protection of the productivity of the marine

16 environment.

17 While I'm speaking today as an independent

18 marine biologist and not for any of these organizations,

19 I should like to assure you that my comments are

20 consistent with the goals and objectives of these

21 organizations.

22 Specifically, I wish to address two of the

23 eight points to be reviewed today as announced in the

24 Federal Register on February 3rd. These two points,

25 two and three, deal with the maintenance of a balanced

1 indigenous population of fish, shellfish and wildlife,
2 and allows recreational activities in and on the water
3 and the problem of monitoring on a discharge to the
4 extent practicable.
5 My concern with these matters arises from
6 a long and intensive personal record of observation
7 of the marine biota in Southern California. This
8 experience has included chemical, bacteriological,
9 oceanographic and biological studies and observations.
10 While these studies are essentially limited
11 to this area, the fundamental properties of living
12 organisms suggests that all aquatic ecosystems will
13 be impacted more or less similarly by inadequately
14 treated wastes.
15 This principle of protection of the waters
16 of this nature -- nation is cardinal in the following
17 signal pieces of legislation:
18 The Federal Coastal Management Act;
19 The Federal Fisheries Management and Conserva-
20 tion Act;
21 The Federal Clean Water Act and
22 The California Coastal Act.
23 In each of these significant legislative
24 acts, considering aquatic resources, it is explicit
25 that the quality, integrity and biological productivity

1 of the waters of these United States can only be
2 assured by adequate protection of these waters from
3 pollution.
4 In the event that a waste discharge is able
5 to obtain a waiver from the requirement to achieve
6 secondary waste treatment and still achieve adequate
7 reduction in biochemical oxygen demand and suspended
8 solids while maintaining adequate control of the pH
9 of effluent wastes, such waiver may only be granted
10 if it is consistent with the goals and objectives of
11 these and other laws in addition to the Federal Clean
12 Water Act.
13 A number of observations, including, but
14 not limited to, the following suggests that, at a
15 minimum, secondary waste treatment for deep marine
16 discharges should be required in Southern California
17 in order to assure the protection of the health of
18 the public and the maintenance of a healthy and diverse
19 marine biota.
20 Inshore ocean waters in Southern California
21 receive a daily input of about one billion gallons of
22 combined domestic and industrial waste effluent
23 exclusive of thermal waste discharges. These wastes
24 enter an aquatic system which must be managed as if
25 it turns over on an annual basis and in which inshore

1 water masses may receive repetitive, multiple waste
2 discharges plus accidental spills of oil or other
3 hazardous materials.
4 Thus, with a slow rate of turnover, waste
5 fields dilute upon waste fields, which may be impacted
6 by accidental spills. This situation results in
7 saturation of inshore circulations cells with pollutants
8 as described by Inman and Brush.
9 Reduction in the standing crop and diversity
10 of benthic algae in the vicinity of sewage outfalls
11 has not been consistent with the maintenance of a
12 balanced indigenous population of shellfish, fish and
13 wildlife as these plants are the basis of food chains
14 upon which some species of fish and shellfish, such
15 as opaleye perch and abalone, may be dependent.
16 I have noted the disappearance of several
17 species of organisms such as shrim, clams, and fishes
18 coincident with the increase in waste loadings intro-
19 duced into local sea waters.
20 Observations recorded in my laboratory have
21 shown that larvae of molluscan shellfish may be vul-
22 nerable to the presence of suspended solids as the
23 velum of the larvae suffers damage which proves fatal
24 to the larvae as a result of these encounters.
25 Toxic impacts upon sensitive marine

1 organisms of anaerobic liquors from sewage digestors
2 and effluents from primary treated wastes must be
3 extensively studied before such waivers may be granted.
4 Reduction of ambient lighting (shading) and
5 sedimentation of suspended solids on marine plants
6 has not received adequate study but such effects if
7 only recognized qualitatively must be resolved with
8 much more accuracy before relaxation of controls on the
9 release of suspended sediments is permitted.
10 Alternatively, discharge of suspended
11 sediments is presumed and in fact represented as an
12 enrichment of nutrients for suspension feeding organ-
13 isms but in fact, again, this has not resulted in
14 demonstrable increases in suspension feeding organisms
15 utilizing suspended sediments as an energy source.
16 Again, in fact, the presence of suspended
17 solids resulting in shading and fouling of algae may
18 be responsible in part for the reduction of abundance
19 in benthic algae. If this is the case, more bottom
20 area should be clear and available for suspension
21 feeding organisms because it is not occupied by algae,
22 but this has not occurred. What has occured is a
23 "balanced decline" in total biota (all species suffer,
24 albeit some more than others) in areas impacted by the
25 discharge of inadequately treated wastes.

1 At least under some conditions, the design
2 objective of rapid initial dilution of deep ocean
3 discharges may not be succeeded by subsequent equivalent
4 rates of dilution with the result that relatively long
5 distances across the sea floor and will arrive onshore.
6 As an example, Santa Monica Bay may sustain
7 periods of very low rates of water turnover when it is
8 essentially stagnant for 30-40 days at a time. During
9 episodes of stagnation, waste dilutes upon waste until
10 saturation is achieved.
11 It is possible to define the distribution of
12 the waste field in Santa Monica Bay by the absence of
13 at least one key species, the giant kelp, Macrocystis,
14 and the presence of one fouling species, the bryozoan,
15 Victorella. Macrocystis is essential as a basic plant
16 in the marine ecology of Southern California.
17 Victorella competes and may displace other organisms
18 and may be debilitating to crabs.
19 Speaking as one who has dived along the
20 coast of Southern California and Central California
21 and who has dived all of the Channel Islands, areas
22 subject to massive waste discharge compare very poorly
23 for purposes of recreational diving and fishing versus
24 those areas which are relatively unpolluted.
25 Inshore waters from Santa Monica Bay have

1 have been found to be lethal when used for mariculture
2 of some invertebrate species. Presumably this is a
3 result of the pollution of such waters which therefore
4 do not now meet the test of sustaining balanced biotas
5 of shellfish, fish, and wildlife.
6 All of the above observations indicate that
7 a balanced indigenous biota does not exist in the
8 local areas affected by massive waste discharges.
9 Until such areas can be restored and enhanced from
10 the present circumstances, I strongly question whether
11 waiver from secondary waste treatment requirements
12 will be consistent with attaining the environmental
13 goals of several legislative acts dealing with aquatic
14 resources and coastal zone management.
15 Let us assume for the purposes of discussion,
16 however, that as a result of the progress of this
17 hearing that a waiver on BOD, suspended solids and pH
18 requirements is granted by EPA for deep ocean dis-
19 charges.
20 First and foremost, as an agency, EPA must
21 assure that the granting of such a waiver is legally
22 permissible; this assumption is implicit in the fore-
23 going and consideration (3) must now be discussed.
24 What will be involved in monitoring a
25 waivered discharge to assure compliance with the

1 objectives of the Federal Clean Water Act, the Federal
2 Coastal Zone Management Act, and the Federal Fisheries
3 Conservation and Management Act?
4 First, at the present time, as a result of
5 multiple point and nonpoint sources of pollution,
6 distinct monitoring of a discharge of wastes that
7 comingles with other wastes cannot be achieved for
8 any substance other than an extraordinary atom, ion,
9 or molecule unique to a specific discharge and amenable
10 to extremely sensitive, precise analysis. Even
11 assuming that this may be achieved as a result of
12 appropriate analysis, it must be unequivocal that the
13 biological impact of such a pollutant is distinct and
14 separable from the additive and synergistic impacts
15 of any and all other comingled pollutants present in
16 variable and unpredictable amounts in the receiving
17 waters. Attempts to achieve reproducible bioassays
18 may be impossible under such non-reproducible conditions
19 Second, contemporary investigations of the
20 effects of wastes upon the present inshore biota
21 begins after a period of more than 30 years of adverse
22 impact from waste discharges. Thus, adjacent to more
23 of the major outfalls, a disturbed, greatly altered
24 biota of more or less tolerance to the existent suite
25 of pollutants discharged to this area is now present.

1 This biota should not be considered as
2 characteristic of one highly sensitive to pollutants
3 nor should it be considered as responsive to slight
4 changes in water quality. At the present time, if
5 there is one quality to be attributed to the inshore
6 marine biota of Southern California near ocean waste
7 outfalls, it is pollution tolerant and unprotected by
8 the legal intent of the Federal Clean Water Act. This
9 biota is thus vulnerable to further degradation in
10 water quality which would be consistent with granting
11 of a waiver for secondary treatment.
12 Third, any improvements in the quality of
13 inshore waters may require an extended time course
14 for demonstration against a long-term accumulation of
15 non-biodegradable heavy metals and chlorinated hydro-
16 carbons in local marine waters.
17 Fourth, a determination of what a representa-
18 tive sample of marine biota may consist of may prove
19 to be difficult to define and accept. At a minimum,
20 it should be very broad; and at a maximum, some of the
21 following may be nominated for consideration. Some
22 examples follow:
23 Abalone and other shellfish depend upon
24 benthic algae. Will the monitoring program assure the
25 growth and development of benthic algae for the support

1 of abalone and other shellfish in the areas affected
2 by the waste discharge?
3 Lobster, Panulirus, depends upon the presence
4 of surf grass at the stage of metamorphosis from the
5 larvae to the juvenile. Will the monitoring program
6 assure the growth and development of Phyllospadix?
7 Can it assure the recruitment of Panulirus?
8 Some species of the crab Pugettia live as
9 juveniles in the algae Pelvettia. Will the monitoring
10 program assure adequate populations of Pelvettia and
11 Pugettia?
12 The Garibaldi perch requires specific species
13 of filamentous red algae for its nest. Will the
14 monitoring program assure that these species of sea
15 weed will be available to this fish for its nest?
16 This inquiry could be extended at the liberty
17 of any individual specialist in the marine environment
18 and it is left to your imagination to what extremes
19 may be involved for your consideration.
20 In summary, it appears very difficult to
21 believe that the objectives of maintaining a balance
22 in populations of marine organisms can be achieved
23 for deep ocean discharges, at least insofar as Southern
24 California is concerned.
25 Considering the foregoing, my conclusion is

1 determined because the assumption that rapid initial
2 dilution may not be succeeded by subsequent rates of
3 dilution and toxic concentrations of waste may occur
4 along the shore, because of the problem of waste
5 discharges diluting upon waste discharges, and because
6 it is technically essentially impossible in this area
7 to develop adequate protection of the inshore waters
8 from such waste discharges.
9 CHAIRMAN JORLING: Thank you, Rim.
10 I have two questions.
11 One, you expressed a number of reservations
12 on the amount of bioassays to provide for a sufficient
13 monitoring of the full range of effects. Given that
14 general criticism, are there any particular methodolo-
15 gies which you might recommend that we could consider
16 for inclusion in any bioassay monitoring requirement?
17 MR. FAY: The property or the quality of
18 secondary treatment has always impressed me because
19 it's a biological process. When living organisms are
20 dealing with an effluent, that effluent has to be
21 nontoxic or the treatment process itself can't function.
22 Clearly, if organisms can live in that
23 effluent, then the discharge of that effluent, release
24 of it into the ocean, should be of a quality which is
25 consistent with maintaining marine organisms.

1 But once you waiver and get away from
2 secondary treatment, you no longer have that quality
3 of control.
4 Primary treatment allows too many things to
5 go under the rug, and deep-ocean discharges only
6 meet one esthetic criteria.
7 You know, we are sort of -- If I may step
8 back, I would much rather not see deep-ocean discharges.
9 I would much rather see extended biological secondary
10 treatment and the discharges out in front of us where
11 we can see what's going on.
12 If you want to trace a sewage field around
13 in the ocean, that's the toughest thing in the world
14 to do remotely to follow a waste discharge. You never
15 get any idea what the time course of dilution is,
16 and you have got the world's worst problem in trying
17 to figure out that the biological impacts of it are.
18 So --
19 CHAIRMAN JORLING: Did you evaluate the '78
20 California Plan revision; and, if so, does it meet
21 what you would consider to be adequately, or does it
22 assure that, if compliance were achieved with the
23 California Plan, would it be adequately treated waste?
24 MR. FAY: Unfortunately, I have not reviewed
25 that. I'm sorry.

1 CHAIRMAN JORLING: Paul?

2 MR. De FALCO: Rim, in your experience over
3 the last couple of decades, have you seen any signifi-
4 cant change in the biota along the South Coast area
5 in game or food fish that you would attribute to
6 pollution or increases in pollution?

7 MR. FAY: It's such a complex mixture that
8 we've had to deal with, as you are well aware, of
9 heavy metals, chlorinated hydrocarbons, suffice it to
10 say that at the time that DDT was introduced, effective
11 reproduction of a great many species ceased. And for
12 both algae, invertebrates, fishes, birds, and even
13 marine mammals, there are reproductive difficulties.

14 Now that the record is perfectly clear on
15 that, millions and millions of dollars have been spent
16 on studies documenting these impacts. I regret to say
17 I have witnessed their occurrence.

18 CHAIRMAN JORLING: Let me interrupt you just
19 for a second.

20 (Off-the-record announcement, not reported.)

21 MR. De FALCO: I have no more questions.

22 CHAIRMAN JORLING: Thank you very much.

23 MR. FAY: Thank you.

24 CHAIRMAN JORLING: If you do have occasion
25 to look at the California Plan, we would certainly

1 appreciate your comments.

2 MR. FAY: I do want to read it, right.

3 CHAIRMAN JORLING: For our protocol, I

4 interrupt the witness list here to allow City Councilman

5 Mr. Robert Wilkinson from the City of Los Angeles to

6 appear at this time.

7 MR. ROBERT M. WILKINSON: I apologize for

8 being late. I started at 6:30 this morning and only

9 arrived in San Francisco at 1:50. PSA is on time today.

10 We had a fine view and fine stay at San Jose

11 for about three hours.

12 I know the hour is late. I will not try to

13 read verbatim the letter I have addressed to you. You

14 can read it at your leisure. But I would like to

15 emphasize a few things.

16 As you know, early in the Fifties, the

17 present Hyperion plant was constructed to treat 420

18 million gallons per day. Of this flow, a hundred

19 million gallons was given secondary treatment. And

20 in the near future, with the construction of the

21 Sepulveda Water Reclamation Plant upstream, an

22 additional forty million gallons will be treated.

23 I have grave concerns about the requirement

24 for secondary treatment for deep-ocean discharges. I

25 feel that the requirement could be more damaging, rather

1 than beneficial. Advanced treatment will reduce the
2 amount of nutrients available to the marine environment.
3 With the urbanization of the city and the construction
4 of facilities to control storm runoff, considerable
5 amounts of nutrients have been eliminated from reaching
6 the ocean.
7 The city has been continuously monitoring
8 the ocean and Santa Monica Bay since the Hyperion
9 plant commenced operations and can find no detrimental
10 reason why the present sewage treatment system should
11 not continue to operate without extensive changes.
12 In this time of energy shortage, it is unwise
13 to expend large amounts of our energy resources --
14 about 55,000 barrels of oil per year which this would
15 cost -- and to provide secondary treatment for waters
16 that are to be discharged to the deep ocean.
17 I believe it's already in testimony that you
18 have that our lines go out five miles at the present
19 time, with an additional 4,000 feet of dispersing of
20 the water into the ocean into a 208 feet of depth into
21 a canyon that disperses the water out into the gulf
22 stream, which goes out into the ocean itself, rather
23 than coming back into Santa Monica Bay.
24 The city's cost to operate its present
25 Hyperion plant and the future sludge disposal

1 facilities are estimated to be approximately thirty
2 million dollars per year. And to add an additional
3 twelve to fifteen million dollars would create a
4 serious impact upon our residents, especially at this
5 time when we are facing other financial problems in
6 California.
7 These are extensive costs of capital
8 exclusive of the cost of capital construction, which
9 may run as much as two hundred million dollars.
10 In conclusion, I urge EPA to develop rules
11 and guidelines which will permit the City of Los
12 Angeles to obtain a waiver for the treatment level of
13 its discharges to the ocean. And the city realizes
14 that that permit is valid for five years. However,
15 during this period, we will continue to update and
16 enhance our present treatment facilities.
17 We are confident that we are in compliance
18 with requirements for allowing -- for allowing a
19 waiver. We also believe that our proposal for a
20 degree of treatment less than full secondary is in
21 the best interests of all concerned because it is less
22 energy-intensive, it provides nutrients, it is less
23 cost-effective -- it's cost-effective, and it does
24 not severely impact the ocean.
25 I would like to diverse from the statement

1 to make another comment.

2 As you know, the EPA requirements that we

3 will have a sewer charge on our residents, how that

4 will be in the City Council within the next 60 days.

5 I feel confident, as we have discussed with Mr.

6 De Falco, that it will be passed by the City Council.

7 We are going ahead, as we have discussed

8 with Mr. De Falco earlier, with all the requirements

9 and discussions that we have had.

10 I have Mr. Tillman here to try and answer

11 any questions possible.

12 CHAIRMAN JORLING: Thank you.

13 Paul, do you have any questions?

14 MR. De FALCO: No, not yet.

15 CHAIRMAN JORLING: I appreciate it, and we

16 do have the attachment here which has specific

17 comments on the regulations, and we appreciate that,

18 and we will certainly evaluate those as we go forward.

19 I appreciate your coming up, and I'm sorry

20 also that you had the delay, but thank you.

21 MR. WILKINSON: I do apologize for being

22 late, but I tried to be on time.

23 CHAIRMAN JORLING: Thank you very much.

24 MR. WILKINSON: Thank you very much.

25 CHAIRMAN JORLING: The next witness is

1 Gordon Gabrielson from the Seattle Metro.

2 MR. GORDON K. GABRIELSON: Gordon Gabrielson

3 from the Municipality of Metropolitan Seattle.

4 I am cutting the statement down quite a bit,

5 trying to stay within the time limit.

6 First, I would like to compliment the

7 Congress for providing flexibility on the marine

8 discharger question. The law needed this.

9 I also would like to thank the past and

10 present EPA Administrators and the EPA staff in Region

11 X and in headquarters for their understanding and

12 cooperation with Seattle over the past five years of

13 the date on this important issue. We have a strong

14 case, but I know our persistence may have worn thin

15 at times.

16 I would like to focus on the problem of

17 administrating the waivers and some of the eight

18 procedural items covered in the law.

19 Seattle Metro suggests the following:

20 First, put the burden of initial waiver

21 qualification determination on the state, with

22 emphasis on case-by-case review. Let the state perform

23 the initial screening.

24 Second, keep the flexibility the law allows

25 by restraining yourselves from selecting new numerical

1 criteria. Otherwise, we will get all tangled up
2 again, and implementation schedules will surely lengthen
3 further.
4 Third, accept the fact that some will
5 challenge you or the state concerned in court. Let
6 the state be your first line of defense.
7 Fourth, allow existing water quality
8 standards to apply which bear on waiver of BOD or
9 suspended solids impacts.
10 For example, apply dissolved oxygen standards
11 for BOD; turbidity standards or statements concerning
12 health of benthic life for suspended solids.
13 Fifth, rely on past water quality and eco-
14 system research and monitoring and maintain periodic
15 vigilance for continued review every five years to
16 determine compliance and eligibility for future
17 waivers.
18 Sixth, interpret new or substantially
19 increased discharge as related to renegotiated NPDES
20 permit numbers on volume or pollutant emissions on
21 a five-year cycle such that growth does not categori-
22 cally deny future waivers.
23 Seven, allow pretreatment requirements to
24 be judged in terms of approved EPA guidelines. Don't
25 force interim efforts which may be counterproductive

1 once actual 1980 pretreatment rules are known.

2 In reading over the questions posed in the
3 announcement on this public hearing, I note several of
4 the questions asked whether effluent standards should
5 be equivalent to secondary treatment, particularly
6 in terms of toxics or water quality impacts. We sense
7 that secondary treatment waivers may now be judged
8 in terms of toxic emissions rather than traditional
9 secondary treatment parameters covered under Federal
10 Regulation 40 CFR 133.

11 If waivers are to be judged primarily in
12 terms of toxics, let us deal with toxics directly.
13 Metro has given toxics special attention. We are
14 very concerned about them, and this is what we have
15 done and are doing:

16 First, we have monitored industry and our
17 other sources and have an areawide perspective on
18 specific toxic substances. We know that copper and
19 zinc, for example, are largely from corrosion of
20 plumbing pipes caused by our soft water supply.

21 We also know the total emission of these
22 particular metals from Metro treatment plants and
23 other nearby municipalities represent less than four
24 per cent of the total annual input to central Puget
25 Sound.

1 Lead enters our sewers from street drainage,
2 yet our effluent represents less than one per cent of
3 the areawide sources.
4 Other metals as well as potentially toxic
5 organics are found in our sewers and waterways. We
6 know cadmium is largely from industry and are tightening
7 up on this source with pretreatments.
8 We know that PCB is prevalent in our Duwamish
9 Estuary sediments. We also know this is from a
10 transformer spill several years ago.
11 Our effluents are monitored for metals, PCB
12 and other exotics, and relative to most places, these
13 concentrations are low.
14 Second, we have monitored our waters, biota
15 and sediments. Traditional effluent and receiving water
16 monitoring has been augmented by special research
17 efforts directed specifically at heavy metals discharged
18 from our plants to determine their impact. These
19 investigations, led by Dr. William Schell of the
20 Laboratory Radiation Ecology of the University of
21 Washington, College of Fisheries, have determined
22 no significant impacts from Metro's discharge. His
23 uniquely sensitive instrumentation and analytical
24 techniques allow measurement of extremely low concen-
25 trations and thus permit us to effectively monitor our

1 waters and biota near the discharge as well as in
2 control areas.
3 We feel we have a good early warning system.
4 What we need is a clearer understanding of what small
5 variations in these extremely small concentrations
6 mean.
7 I have attached a copy of a recent paper
8 by Dr. Schell on this work, as well as a summary of
9 Metro's entire $1.1 million Puget Sound Research
10 Program. Detailed reports are available on the
11 individual studies.
12 Now that we have briefly discussed our
13 source identification and water quality monitoring
14 and research efforts relative to metals, let us
15 consider some control options.
16 One you may already be thinking of is
17 secondary treatment or some equivalent solids removal
18 processes to provide high per cent removal of metals
19 and other potential toxics associated with suspended
20 solids. In Seattle, this is an expensive option
21 relative to the control achieved.
22 First, we do not have a toxic problem as
23 related to our discharges. We feel our data are very
24 thorough on this point.
25 Second, the areawide perspective shows we

are not a significant source except perhaps at the immediate outfall site, and here our data is the most intensive.

Our sensitive monitoring methods do allow us to detect the emission of metals there compared with background control. So if chronic biological effects from our discharge are suspected, these should develop near the outfall first. Accordingly, we should keep watching and reporting back to you, probably on a five-year cycle. We will do this.

We presently have an industrial waste pre-treatment program. What else will we do?

It is apparent that controls are coming anyway for different reasons, not because we have a problem, but because of other forces. Let me be specific.

First, pretreatment will be more rigorous, particularly after 1980 when new EPA guidelines are available.

Second, lead is coming out of gasoline. This reduces lead content from our discharge but, more important, this gets at the large areawide sources, urban drainage and atmospheric sources.

Third, water supply corrosion controls being considered by the City of Seattle to protect water

1 pipes will reduce copper and zinc concentrations.
2 We have informed the City of the implication this has
3 on our effluent.
4 Fourth, combined sewer overflow controls
5 are being planned which will remove or reduce frequency
6 and volume of these events in more sensitive fresh
7 water and nearshore shellfish areas of Puget Sound.
8 We still have local water quality problems.
9 We need to commit our monetary resources to solving
10 these local water quality problems. We do not want to
11 expand our treatment plants unnecessarily. This will
12 divert us from our local problem solving and create
13 adverse impacts at our plant sites which are in park
14 and sensitive shoreline areas. We want to spend funds
15 to solve real local problems.
16 Case-by-case flexibility is what we have
17 argued for. The Congress agreed. Let's keep the
18 waiver process workable. Congress provided the
19 provision so some worthy cases could secure waivers.
20 Let's not create a situation where we have to go back
21 to Congress again.
22 Thank you.
23 CHAIRMAN JORLING: One of the situations
24 that arises in the Puget Sound situation a little
25 bit more acutely than direct outfalls into the ocean

1 is the need to make the assessment of the cumulative
2 effect of a series of these outfalls and the potential
3 interrelationships of them. How would you propose
4 the regulations place that requirement on the applicant?
5 MR. GABRIELSON: Well, first, the studies
6 that we have conducted in Puget Sound really do take
7 into effect the cumulative nature of all the discharges.
8 The University of Washington has data that dates back
9 to the 1930's. Our monitoring data started in the
10 early 1960's, and has become very intense with these
11 recent studies.
12 The best that we can tell, there has been
13 no noticeable change in the classic parameters over
14 this time period. So I think it's a very good indica-
15 tion that we are healthy in Puget Sound, and I think
16 dissolved oxygen, turbidity and such standards would
17 be very good.
18 We intend to keep on with the heavy metals
19 studies so we can be sure we are not getting into
20 trouble there.
21 So we very much have a cumulative effect
22 in Puget Sound now, as far as our monitoring is
23 concerned.
24 CHAIRMAN JORLING: Don?
25 MR. DUBOIS: Gordon, you mentioned the

1 existing monitoring program, and did I get the proper
2 impression or draw the conclusion you felt the existing
3 monitoring program you have now is sufficient for the
4 requirements that should be incorporated in the waiver
5 provisions?
6 MR. GABRIELSON: Well, the routine monitoring
7 that we do, I think, would need to be expanded some
8 to take in more of the features that were in the
9 interim studies that were just completed. So I think
10 we would go for a more intensive monitoring program
11 than has been our past practice.
12 MR. DUBOIS: Could you give me a cost
13 estimate on what that annual cost would be for a full
14 monitoring program?
15 MR. GABRIELSON: Well, the eleven studies
16 in the interim studies that we referred to, $1.1
17 million. This was over about two and a half years.
18 We don't have to do quite that much on a sustained
19 basis. So I would imagine about a quarter of a
20 million dollars.
21 MR. DUBOIS: A quarter of a million dollars
22 a year or ongoing monitoring?
23 MR. GABRIELSON: Yes.
24 MR. DUBOIS: I think that's all I have.
25 CHAIRMAN JORLING: Lisa?

1 MS. FRIEDMAN: I understand that Seattle
2 has adopted as part of its state water quality program
3 standards based on EPA quality criteria for water; is
4 that correct?
5 MR. GABRIELSON: Well, we are using the
6 state's standards which have been approved by EPA.
7 They have water quality standards for all the water
8 bodies in the state of Washington.
9 MS. FRIEDMAN: Does Seattle presently meet
10 those standards for toxics, its existing discharge?
11 MR. GABRIELSON: So far as the Metro
12 discharges are concerned, yes.
13 Thank you.
14 CHAIRMAN JORLING: Thank you very much.
15 The next witness is -- I am going to need
16 some help from Paul on the pronunciation of the name.
17 Paul, do you want to introduce the next witness?
18 MR. De FALCO: Dr. O. V. Natarajan from
19 Guam.
20 DR. O. V. NATARAJAN: I am Dr. O. V.
21 Natarajan, Administrator of the Guam Environmental
22 Protection Agency. I am here on behalf of the
23 territorial government of Guam.
24 I should thank EPA people for giving us an
25 opportunity to be here to take part in these

1 deliberations. The public participation element of
2 the Clean Water Act is working well. A lot of times
3 EPA has public hearings. Sometimes it is hard; many
4 times, controversial, and I think it's one of the
5 elements which really works good.
6 We would like to see the marine discharge
7 provision also implemented justifiably and for the
8 purpose for which the Congress has created this
9 provision.
10 Some of you may know where Guam is, but
11 many of you may not know where Guam is. Guam is
12 very close to Hawaii, just about 3500 miles from
13 Hawaii. If I start to Guam now from here, by the
14 time I reach Guam, you can go to Washington, come
15 back here; then you can go back to Texas, we are so
16 close to the Mainland.
17 And because of the geographical proximity,
18 we have special problems, and not only the geography,
19 but also a lot of different things separates Guam
20 and other Marianas Islands from the Mainland.
21 To give you a general description, Guam is
22 four miles wide in the middle. That means if you
23 can throw a stone for two miles, you can reach the
24 ocean in both ways.
25 We are about 210 square miles, and our

1 shoreline is 80 to 90 miles of shoreline we have.
2 Within a couple of miles from Guam, there
3 is a small valley called the Marianas Trench. It is
4 about 35,000 feet deep. It's five miles deep. That's
5 the world's deepest ocean in that part of the Pacific.
6 So when we talk, maybe sometimes we might
7 get mixed up with the previous speaker about Puget
8 Sound or some of the tidal basins, but when we talk
9 deep, we mean really deep.
10 Nature has some special problems for us,
11 like typhoons, one or two minor ones every year, and
12 maybe once in ten years, we get a real big typhoon.
13 These are our building code enforcement. We build
14 shacks, what you call shacks. They Enforcement
15 Division's men are not that efficient; but nature takes
16 care of us in that way.
17 Eighty thousand civilians inhabit Guam. And,
18 in addition to that, there are 40,000 people of the
19 military, especially Navy and a small contingent of
20 Air Force people are there.
21 The cultural habits, even though it is
22 politically an American territory, culturally, geo-
23 graphically, I could say it's an Asian territory. The
24 habits are more associated with the Asian community
25 rather than the American community. They eat more

1 rice, tapioca, more starchy foods, rather than fatty
2 food, and a lot of plants.
3 Modern conveniences, such as garbage grinders,
4 we don't have those things.
5 When we cook food, more food, we have more
6 food, we give to our pigs, which is in our backyard.
7 That's what resource recovery is. We don't flush it
8 in the toilet or drain it by increasing the BOD.
9 Our basic economy is mainly military and
10 the tourist. And when I say "military industry," the
11 planes which are manufactured here or the ships which
12 are built here come over there for their use.
13 And the tourist, Japanese do come over there.
14 We import almost 95 per cent of the materials
15 we use, just like we buy Datsuns and Z-Cars just as
16 you also are buying but, in addition to that, we import
17 American tomatoes and Idaho potatoes and all those
18 things. And a majority of the material which we import,
19 so that it's nothing to talk about, what you call
20 manufacture. We almost a consumptive society rather
21 than a productive society.
22 We sell clean water, pure water, and open
23 skies. That's what our products are. And Japanese,
24 especially Japanese honeymooners, like those things,
25 and they do come over there to enjoy that.

1 Our wastewater characteristics as a total
2 are mainly of the domestic waste, and even domestic
3 waste comparatively with a low BOD compared on the
4 average normal BOD, which you are confronted with in
5 the Mainland. Because of the absence of industry and
6 commercial, we don't have much toxic waste.
7 And we have maybe a small thing as an
8 advantage. We have one agency, the Guam EPA, under
9 which all environmental programs are administered.
10 We have complete control over what comes into the
11 island; what goes out of the island, like pesticides.
12 Through the cooperative enforcement agreement
13 program with this region and also with the head of
14 the local law, each pound of pesticide which comes
15 into the island or any chemical, for that matter,
16 we can have a control over it. We know where it is
17 sold, how it is used, how it is subused. We have
18 complete control over it.
19 That is the general description about Guam.
20 And from that, I may not even say what I am going to
21 say, but just for the enforcement purpose, I'm going
22 to make a few comments.
23 We first adopted water quality standards in
24 1968. It did contain a secondary treatment provision.
25 But some of my fellow islanders would say you have to

1 have a treatment plant. True, but you have to have
2 some collection pipes. You have to have some toilets
3 so the treatment plant can be used.
4 We found that type of problem to a certain
5 extent, and then we realized the secondary treatment
6 is not appropriate to our situation. Our water quality
7 does not include oil water quality, and it's not cost
8 effective. Our needs are more in other areas than
9 improving the water quality and in reducing the public
10 health problems, and our money will be best utilized
11 in those areas rather than spending in this area.
12 And the statute criteria, we can easily meet them.
13 We don't think there is any problem in that. And we
14 are not here because the amendment has been passed,
15 but the amendment is here because of us.
16 That's how we feel. And it should be
17 obvious to everyone these are the reasons why the
18 Pacific Islands, not only Guam, but the Marianas
19 Islands also, should be exempted easily from these
20 regulations, and just we want to -- Many of you may
21 know some of these facts before; but I want to make
22 sure that nobody found these statistics. That's why
23 we are here.
24 CHAIRMAN JORLING: Thank you.
25 Paul?

1 MR. De FALCO: No.

2 CHAIRMAN JORLING: I could propose that

3 definition of "deep" to accommodate the problems on

4 the East Coast.

5 (Announcement off the record, not reported.)

6 DR. NATARAJAN: Any questions?

7 CHAIRMAN JORLING: Thank you. I have none.

8 DR. NATARAJAN: Thank you.

9 CHAIRMAN JORLING: Thank you very much.

10 The next witness is Pati Faiai of American

11 Samoa.

12 MR. PATI FAIAI: My name is Pati Faiai, and

13 I am representing the Government of American Samoa.

14 My capacity with the Government of American Samoa is

15 as the Governor's Special Assistant for Environmental

16 Affairs and Secretary of our local Environmental

17 Quality Commission.

18 Now, after listening to the representative

19 from Guam, maybe I should give a little bit of intro-

20 duction, you know, for those of you who never heard

21 of American Samoa and never have been there.

22 The geographical location of American Samoa

23 is below the Equator, and is about 2300 miles west

24 of Hawaii.

25 About the food and everything, you know, it's

1 almost similar to what the representative of Guam said.
2 You know, the weather is about the same
3 throughout the year, 75 degrees all year round.
4 I would like to offer some few remarks
5 regarding the wastewater facility that is the subject
6 of this hearing.
7 We appreciate the opportunity of being able
8 to comment on the way in which the eight statutory
9 criteria necessary to modify the requirements for
10 secondary treatment will be interpreted. From our
11 review, it is apparent that the eight statutory
12 criteria have been tailored to the environment and
13 related land use trends of the continental United
14 States. As a result, the proposed criteria generally
15 are not a proper aid to American Samoa's environmental
16 conditions and wastewater management priorities.
17 This is particularly evident when one
18 reviews our local conditions. Our point source
19 discharges flow into open ocean waters, which are
20 almost a mile deep, two miles offshore. The composition
21 of the effluent, 0.6 mgd discharge, is 100 per cent
22 domestic wastes.
23 We have two tuna cannery operations which
24 generate approximately 0.5 mgd of effluent. These
25 wastes are discharged through a separate wastewater

1 system which utilizes best practical methods recom-
2 mended by EPA.
3 Our wastewater management priorities include
4 the elimination of point source discharges along our
5 shorelines where villagers swim, fish and, at times,
6 wash clothes; the relocation of point sources in our
7 harbor to more desirable offshore discharge locations,
8 and the efficient maintenance and operation of our
9 wastewater facilities.
10 In light of these factors, we strongly
11 recommend that EPA develop special provisions in the
12 regulation for all Pacific Island territories. Such
13 provisions would recognize our unique environmental
14 conditions and would enhance implementation of more
15 appropriate wastewater management priorities in the
16 Pacific Island territories.
17 Thank you for your time and consideration.
18 CHAIRMAN JORLING: Thank you.
19 I think your statement speaks for itself,
20 and I don't have any questions.
21 Do any others have questions?
22 MS. FRIEDMAN: No.
23 MR. FAIAI: Thank you.
24 CHAIRMAN JORLING: All right. Thank you
25 very much.

1 The next witness is Jack Lambie, representing
2 the Californai Association of Sanitation Districts.
3 MR. JOHN A. LAMBIE: Thank you very much,
4 Mr. Jorling.
5 It's a pleasure for me. It's going to be a
6 hard act to follow, Guam and Samoa. But we had the
7 pleasure last year of training some folks in solid
8 waste management at the expense of EPA in Ventura.
9 I'm the Chief Engineer and General Manager
10 of the Ventura Regional County Sanitation District.
11 And it is a composite of nine cities and sixteen
12 special districts, and we run seven treatment plants,
13 and one of which has an ocean discharge. So it was
14 quite interesting a while ago in talking about the
15 monitoring costs that Mr. Harper testified, $250,000
16 for a plant of 200 -- 200 mgd. Ours is 125 for a plant
17 of 15 mgd. So those costs do run high for small
18 agencies.
19 I'm here to make a presentation on behalf of
20 our President, Ralph Volin, also and the Regional
21 District Board has endorsed these two papers which I
22 am presenting.
23 The California Association of Sanitation
24 Agencies represents many special districts in California
25 with responsibilities for wastewater treatement and

1 disposal, and in some cases dual responsibility for
2 wastewater treatment and water supply. Many of these
3 agencies are located along the coast and should
4 logically be considered for a waiver of the secondary
5 treatment requirement. Wherever the depth, ocean
6 currents and environmental factors are propitious,
7 it is certainly in the interest of the country and
8 of the affected communities to provide effective, but
9 less costly, treatment systems that incorporate deep-
10 ocean outfall diffusers.
11 Over the past several years, the State of
12 California State Water Resources Control Board has
13 conducted numerous public hearings and workshops
14 leading to the development of a reasonable rationale
15 for water quality parameters based primarily on chronic
16 and acute toxicity data. The approach incorporated in
17 Table B of the State Ocean Plan is designed to protect
18 marine biota through the assurance that toxic pollutants
19 do not approach toxic concentration in the marine
20 environment.
21 The State Ocean Plan also calls for monitoring
22 programs to verify that satisfactory conditions are
23 maintained outside the immediate area of the discharge.
24 It is recommended that the EPA accept the
25 State Ocean Plan as a suitable substitute for the BOD,

1 suspended solids and pH parameters, apparently
2 considered relevant by law. Acceptance of the State
3 Ocean Plan for California and adoption of plans based
4 on similar rationale for other coastal states with
5 ocean conditions should satisfy the first four
6 criteria of the Clean Water Act of 1977 and the intent
7 of the law.
8 As a procedural matter, it is recommended
9 that written comments for this meeting be extended
10 until March the 1st. February the 24th is a little
11 time frame for the rest of our agencies.
12 It is also recommended that, in spite of the
13 relatively short time period during which agencies
14 may apply for a waiver, that EPA publish preliminary
15 rules and regulations and receive comments prior to
16 the adoption of the final regulations.
17 Your consideration of these comments in the
18 preparation of the regulations implementing this
19 section of the law is requested by Ralph Bolin, the
20 Mayor of Napa and the President of the agency.
21 We had an opportunity to call together our
22 Attorneys Committee on the special districts, and they
23 met on the 17th and represented a wide spectrum of the
24 large and small agencies of California. And we asked
25 them these questions that were asked of you in

1 attendance to this meeting. And I will brief the
2 questions because you have repeated them so many times,
3 and they were based on the eight criteria.
4 The first section of 301(h)(1) requires
5 applicable water quality standards specific to the
6 pollutant (BOD, suspended solids and pH) for which
7 the modification is requested.
8 CASA feels that implementation of this
9 portion of the Act should look toward the particular
10 state, such as the State of California, adopting
11 appropriate requirements. In the event that the
12 State of California needs to promulgate additional
13 requirements, then it should be accomplished at an
14 early date.
15 In the event that enabling legislation is
16 necessary in the State of California, then the
17 Attorneys Committee would recommend that CASA support
18 the accomplishment of this, including, if necessary,
19 amendments to the existing Ocean Plan of the State of
20 California to permit effluent discharge that has not
21 been provided with a secondary treatment as provided
22 for in Section 301(h) of the Act. Since a state ocean
23 plan is required, it is urged that a single set of
24 standards should be made applicable if reasonably
25 possible.

1 Two. Should the evaluation of water quality
2 in the second criteria consider only the impact of a
3 discharge if a modification of the secondary treatment
4 requirement is approved, or should the evaluation
5 compare the impact of the discharge if a modification
6 is approved to the impact which would have resulted
7 from secondary treatment?
8 It is believed that the evaluation of water
9 quality based upon the second criteria of Section 301(h)
10 should be evaluated in the light of accomplishing the
11 overall objectives desired to be accomplished by the
12 Federal Water Pollution Control Act. In some instances
13 such as exist particularly on the West Coast, this
14 will permit effluent discharges that have not received
15 secondary treatment and still accomplish the overall
16 goals contemplated by the requirements of the Federal
17 Water Pollution Control Act as amended.
18 It is urged that the impact on the receiving
19 waters as specified in Subsection (h)(2) are of
20 primary importance and the method of accomplishment
21 purely subsidiary.
22 Question three. In the second criteria --
23 And this one, you have heard much about, about the
24 balanced indigenous population be defined.
25 Balanced indigenous population should be

1 determined based not upon what might have existed
2 since the beginning of man, but for some reasonable
3 prior period of time, taking into consideration some
4 reasonable change, but not necessarily a detrimental
5 change, in the indigenous population that would exist
6 in such marine waters.
7 Any impact should be exclusive of language
8 which would permit such to be determined on the basis
9 of any minor and nonsubstantial alleged change in
10 what is determined to be a balanced indigenous popu-
11 lation. An area greater than the immediate vicinity
12 of the discharge itself should not be considered --
13 should be considered. Pardon me.
14 Question four. Should the law be interpreted
15 to require that the concentration of toxic pollutants
16 (heavy metals, chlorinated hydrocarbons, etc.) in the
17 discharge granted a modification be no greater than
18 the concentration which would occur with secondary
19 treatment?
20 Answer. We believe that an affirmative
21 response is required as to this item. Presumably,
22 effluent discharges not requiring secondary treatment
23 should be permitted where the sewage being received
24 by the treatment plant is basically domestic sewage
25 and exclusive of the type of pollutants described in

1 Question four. Either discharge of such pollutants
2 into the local sewers do not exist or have been taken
3 care of by pretreatment.
4 Should either of these not be true, then a
5 proper level of treatment to delete such pollutants
6 prior to ocean discharge should be accomplished.
7 However, the determination relative to concentration
8 of toxic pollutants should be tied specifically to the
9 accepted Ocean Plan of the State of California or
10 other applicable plan rather than to the more ambiguous
11 criteria of secondary treatment.
12 Question five. Should compliance with the
13 fifth criteria (Section 301(h)(5)) require a publicly
14 owned treatment works to have an enforceable pretreat-
15 ment program at the time of the application?
16 It is our belief that publicly owned treat-
17 ment works which are to be permitted to have effluent
18 discharge by means of a deep-ocean outfall and not
19 require secondary treatment should have an enforceable
20 pretreatment program in existence at the time of the
21 approval of the application as opposed to the time of
22 the application under the section. Applicants must
23 have the opportunity to evolve acceptable pretreatment
24 programs if, in fact, the EPA should determine that the
25 one filed with application is not enforceable.

1 Question six. Should the law be interpreted
2 to require publicly owned treatment works which treat
3 only domestic wastes to be evaluated differently than
4 publicly owned treatment works which treat large
5 amounts of industrial wastes?
6 Answer six. Yes, a subcategory should be
7 established for publicly owned treatment works which
8 treat only domestic wastes. These applications should
9 be handled in an expeditious basis with a minimum of
10 documentation and substantiation. Possibly a procedure
11 whereby such shall be deemed granted if no action is
12 taken within a specified period of time would minimize
13 paper work and expense in processing such a application.
14 Although not listed in the notice of the
15 public meeting as specific items for comment, the
16 CASA Attorneys Committee feels that clarification is
17 also advisable as to Section 301(h)(3). It should be
18 assured that the practicality of the monitoring
19 system must be evaluated based on its cost effectiveness
20 as to any particular applicant.
21 Additionally, the establishment of such a
22 system of monitoring should be allowed prior to the
23 approval under Section 402 as opposed to a system
24 presented with the application.
25 Section 301(h)(7) should be clearly

1 interpreted to provide that the permit defining the
2 volume of discharge limitation be that set forth in
3 the NPDES permit rather than in the 402 permit. This
4 would provide for the consistency which is absolutely
5 necessary in the interpretation of the statute and its
6 operation.
7 And, finally, Section 301(h)(8) raises a
8 question as to the interpretation of the term "effluent
9 reduction." The Attorneys Committee believes that the
10 interpretation which must be placed on this item is
11 the extent to which reclamation can be accomplished
12 as a means of reducing the amount of effluent being
13 discharged. Such an interpretation would further
14 reinforce the policies which have been established by
15 the State of California and the Environmental Protec-
16 tion Agency in connection with the use of Clean Water
17 Grant funds.
18 In conclusion, this is a program which should
19 be delegated by the EPA to the individual state.
20 Presumably, no further action by Congress would be
21 necessary in order to allow this program to be
22 delegated to the State of California.
23 In the absence of such an interpretation,
24 the Attorneys Committee would urge support of proposed
25 legislation to the extent deemed necessary by EPA to

1 enable the State of California to take over the
2 implementation of the program as to discharges within
3 the State of California. An expression of the willing-
4 ness of the EPA to make such delegation would presumably
5 permit introduction of such legislation within the
6 current session which, if inclusive of an urgency
7 clause making such legislation effective upon
8 enactment, would allow early implementation of the
9 procedure in instances in the State of California
10 where it appears that such be deemed to be justifiable
11 and appropriate.
12 I certainly thank you for the opportunity
13 on behalf of CASA and the Regional Sanitation District
14 of Ventura. I commend you on the establishment of
15 this three-day program. I was here yesterday, all
16 day today, and I plan to be here tomorrow. And this
17 type of input and attitude that you have had, and
18 especially the cross-examination and patience with
19 your witnesses, is to be commended.
20 CHAIRMAN JORLING: Thank you.
21 Paul, do you have any questions?
22 MR. De FALCO: No.
23 CHAIRMAN JORLING: Don?
24 MR. DUBOIS: No.
25 CHAIRMAN JORLING: Lisa?

1 MS. FRIEDMAN: No.

2 CHAIRMAN JORLING: Thank you very much.

3 I think we will take about a seven- or

4 eight-minute break here and resume promptly upon the

5 conclusion of that. We still have fourteen witnesses

6 to go.

7 (Short recess.)

8 MR. De FALCO: Can we reconvene, please?

9 Tom has had to step away to make a phone

10 call. He's asked me to reconvene and start the

11 session going.

12 Our next witness would be Nachsa Siren from

13 the Trust Territory Environmental Protection Board.

14 MR. NACHSA SIREN: My name is Nachsa Siren,

15 and I am representing the Trust Territory Environmental

16 Protection Board.

17 My colleague from Guam mentioned how remote

18 Guam was. Well, I tell you, I was going to use an

19 interpreter, but apparently Dick Cotton chickened out,

20 so I have to try to speak English.

21 I have to give you a little history of what

22 the Trust Territory is.

23 It's located about over 6,000 miles west of

24 San Francisco, maybe a little more than that, and

25 about 3500 miles west of Hawaii. The size of the

1 area is about the size of the continental United
2 States. Very big, isn't it? Except that only 700
3 square miles of it is land. So we have got very,
4 very deep water. It's like Guam.
5 I think it was a little exaggerated, but
6 we do have deep water around our islands.
7 We have a very small population. It's only
8 about 70,000. I'm excluding the Northern Marianas,
9 which is now Commonwealth of the United States.
10 We do not have industry to speak of. If
11 you can call tourism industry, you know, it may be a
12 wet industry. I don't know. Or dry industry, maybe.
13 We have copra, and most of the people work
14 for Uncle Sam. Therefore, my only request is that
15 we should be considered just like the other islands,
16 like Guam and American Samoa, under a special group
17 or under the 301(h) in allowing us to waive the
18 requirements of secondary treatment.
19 I'm not saying that it will be totally
20 waived in all cases because we do have lagoons. And
21 in those cases, we will have to have secondary
22 treatment. But other than that, we would like to be
23 allowed to apply for a waiver.
24 Our main problem is not industrial --
25 industrial waste, as I said earlier, but health-

1 related. In other words, we have all our problems
2 out there are intestinal parasites. We have 90 per
3 cent of our school children who have all kinds of
4 intestinal parasites. So our problem is really to
5 build sewer lines and house connections.
6 In conclusion, that's my remark.
7 Thank you.
8 CHAIRMAN JORLING: Thank you very much.
9 Our next witness is Gerry Maier, representing
10 the Commonwealth of the Northern Mariana Islands.
11 MR. GERRY MAIER: My name is Gerry Maier.
12 I am the Environmental Planner for the Commonwealth
13 of the Northern Mariana Islands. And it is a privilege
14 to be here representing this group of islands.
15 The new government which represents the
16 first elected Governor of these islands in over 300
17 years of colonial rule, has asked me to represent
18 the government here. This government is approximately
19 and a half old.
20 And our physical location, we are neighbors
21 with Guam on the same island chain. The main island.
22 Saipan, is about 200 miles north of Guam. Very similar
23 environmental situations.
24 The Marianas Trench is there. I would like
25 to add, however, that with the population of

1 approximately 15,000 people spread over 14 islands,
2 six of which are inhabited -- Three of those have
3 populations of 50 people -- that when we want to go
4 shopping or see something of a highly, a better
5 technological development we go to Guam.
6 The major island, Saipan, is 46 square miles.
7 Now, we have talked about these problems,
8 and what we are dealing with, we have two sewer
9 treatment plants in the Northern Marianas, both of
10 them on Saipan, both of them primary, both of them
11 built in 1973 as the first public sewer treatment
12 plants for the islands. At the present time, we
13 have about eight per cent of the houses hooked up to
14 these plants. And we figure at this point, we are
15 looking at, in five years we will have 20 per cent
16 hooked up.
17 We are currently on water hours for the
18 last five years. This time of year we have gone on
19 water hours. Every night when the water is turned
20 off, the leaky pipes we have for our water distribution
21 system allow everything in the world to come in, and
22 we have a rash of intestinal problems at hospital.
23 I use this as an example to point out where
24 our priorities lie. We have a long way to go.
25 We have no industry whatsoever. There are

1 no toxic wastes.

2 We are also looking at the fact that two of

3 the islands with populations covering around a thousand

4 people have no sewer treatment facilities whatsoever.

5 We are trying to figure out how we are going to get

6 these people hooked up.

7 Our plants are running at very minimal

8 capacity, and we can build a sewer, you know, a

9 secondary treatment plant, but we aren't going to

10 have anything coming into it. We simply do not have

11 money to put that in. We have more vital health

12 problems to deal with.

13 I also have a little thing with Guam. In

14 most of the Trust Territory, the equatorial current

15 runs through there. Our nearest down current neighbor

16 is a group of islands called the Philippines, 1500

17 miles away. And considering what our neighbors in that

18 area of the ocean have already said, in our situation,

19 we would like to ask for separate requirements and

20 criteria to judge whether we are eligible for waivers

21 under this amendment.

22 Thank you.

23 CHAIRMAN JORLING: Thank you.

24 You mentioned water hours. That's a conserva-

25 tion measure because of the unavailability of fresh

1 water?

2 MR. MAIER: Right.

3 CHAIRMAN JORLING: Right.

4 MR. MAIER: It's pretty hard to flush when

5 you don't have it.

6 CHAIRMAN JORLING: The next witness is --

7 And excuse me if I mispronounce the name -- James

8 Kumagai, representing the State of Hawaii Department

9 of Health.

10 MR. JAMES S. KUMAGAI: Mr. Jorling, members

11 of the panel:

12 I'm James Kumagai, Deputy Director for

13 Environmental Health, Department of Health, State of

14 Hawaii.

15 I am joined in my remarks by three of the

16 four counties in the state. The fourth county was

17 not able to be here.

18 Hawaii supports the 301(h) provision. We

19 ask that the guidelines be developed to allow us to

20 implement the water quality management strategy

21 according to our priorities. If secondary treatment

22 were to be implemented on all of our systems, we see

23 that it will cost somewhere around $95 million. And,

24 in return, we see very little in water quality enhance-

25 ment.

1 Hawaii is an island state in the subtropical
2 zone, the result of volcanic origins, with coastal
3 waters of high clarity and the coastal zone extending
4 to 420 feet. Ocean currents oscillate or reverse in
5 the wrong field of direction with the tides, and there
6 is a net offshore transport over time in the areas
7 of outfall discharges.
8 About 80 per cent of the state's population
9 resides on the Island of Oahu, and the remainder in
10 three counties. So we have the situation of having
11 what we call a large municipality and three small
12 municipalities. And this becomes quite critically
13 important in responding to the procedural or the red
14 tape aspects of implementation of guidelines.
15 Our coastal waters are subjected to high
16 runoff discharges. The extreme case is the Island of
17 Kauai where storm runoff is on the order of 2,000 mgd,
18 compared to point discharges of less than 1 mgd.
19 So we have varying requirements for water
20 quality management within the state.
21 We can expect that the regional ecosystem
22 in that particular case would be dependent on runoff
23 from the nonpoint source of discharge, rather than
24 point source, and this becomes quite critical, in our
25 opinion, in evaluating the restrictions to our water

1 qualtiy standards on the matter of secondary treatment
2 waivers.
3 We have at the moment several large dis-
4 chargers on the Island of Oahu, and I will describe
5 them very briefly.
6 First, the San Armond treatment plant is
7 designed for 82 mgd. It is designed to discharge
8 primary or advanced primary effluent at 200 feet and
9 extending three miles offshore -- I'm sorry -- two
10 miles offshore. The earlier discharge was at 30 feet,
11 and enough studies, as well as casual observation,
12 indicated that that was totally inadequate and,
13 therefore, the outfall was extended to the greater
14 depth.
15 Second is the Honouliuli wastewater treatment
16 plant. It's being designed for 25 mgd. We hope we
17 can discharge primary effluent in the open ocean
18 regime at a depth of 200 feet.
19 Now, in this particular case, what we have
20 here is a collection of several discharges going into
21 Pearl Harbor, and combining those discharges to a new
22 outfall. So we feel that the definition of, quote,
23 existing discharges would be quite critical and will
24 impact this kind of situation.
25 The third is Kaneohe sewage treatment plant.

1 We have two treatment plants at the present time: one,
2 7 mgd; the other, 4.3 mgd, discharging into Kaneohe
3 Bay, and Kaawa Bay respectively. We feel that, even
4 with secondary treatment, both discharges should not
5 be discharged into the embankment and should be
6 diverted to the deep ocean regime.
7 For this reason, the Mokapu outfall is under
8 construction to divert the effluent to the deep ocean
9 regime.
10 And, here again, we have a situation,
11 according to our water quality management strategy,
12 to divert all bayshore discharges out into the ocean.
13 And in this particualr case, we felt also that the
14 definition of existing discharges is quite critical.
15 Another potential discharge is what we call
16 the Waini sewage treatment plant. At the present time,
17 it's discharging less than two mgd of primary effluent
18 through an outfall about 3,000 feet offshore at 32
19 feet. Here we feel that before secondary treatment
20 is implemented, we should be extending the outfall into
21 deeper waters.
22 Essentially, we need the time and also the
23 flexibility to implement this kind of plan.
24 On the neighboring islands, there is the
25 potential of the Hilo plant outfall discharging close

1 to one mile offshore at depths of 56 feet. The dis-
2 charge is about 3 mgd or so.
3 The final one we think potentially would be
4 effected is Kapaa on the Island of Kauai. Here the
5 outfall is not to be a new outfall and, again, diverting
6 small discharges from the inshore regime hopefully out
7 into deeper waters beyond the reef that fringes that
8 community.
9 So that is the situation that we have, and
10 we would like to have the opportunity at least to
11 bypass as a matter of priority the implementation of
12 secondary treatment and concentrate instead on some of
13 the actions that we feel are high priority in our
14 total environmental quality program.
15 That concludes my testimony.
16 CHAIRMAN JORLING: Thank you.
17 Don?
18 MR. DUBOIS: Yes. I would like to ask:
19 If I understand correctly, your approach is to provide
20 primary treatment but with extended outfalls into the
21 deep oceans as opposed to secondary treatment with more
22 mere shore discharges?
23 MR. KUMAGAI: Yes.
24 MR. DUBOIS: Is this done for economic
25 reasons -- Is it cheaper to do it that way? -- or for

1 environmental reasons or whatever?

2 MR. KUMAGAI: Well, primarily for environ-
3 mental reasons. We feel, because even with secondary
4 treatment, there are measurable effects, especially
5 in the Kaneohe Bay situation. Its secondary treated
6 effluent can meet the dilution requirement and so on,
7 but it's in confined bodies of water, and there is
8 evidence of bioassimilation, toxicity, and there are
9 other effects that are attributable to the discharge.

10 So even if it were secondary treatment,
11 we feel that it should be diverted outside what we
12 call the biological active zone.

13 And, of course, the economics are such that
14 it will be cheaper to divert discharges. It's more
15 cost effective to do it that way in our opinion than
16 to go to more and more treatment, even tertiary treat-
17 ment in that particular case.

18 CHAIRMAN JORLING: This was a submitted
19 question, and perhaps more appropriately directed at
20 some of the earlier island situations.

21 But some coral populations do exist in
22 Hawaii. The effect of outfalls on existing coral
23 populations, has Hawaii done anything to monitor that
24 impact?

25 MR. KUMAGAI: Yes. Hawaii did study the

1 impact of sewage effluent on coral reef, one bioassay
2 in the laboratory. This was in early 1972 or so.
3 According to the bioassays, sewage effluent
4 is toxic to coral planula as the larvae form; but in
5 the field, there are two discharges discharging raw
6 sewage. In the field, coral is growing prolifically.
7 It's there. Whereas from the laboratory results, we
8 concluded that on the coral, sewage effluent is toxic;
9 but in the field, there it was.
10 So our conclusion was, No. 1, there was
11 something else affecting the results or, No. 2, it's
12 a matter of lighter dilution because in the Kaneohe
13 Bay situation with the coral planting work that the
14 university did, it did show that there was some kind
15 of inhabition so, you know, that was part of the con-
16 clusion.
17 So we said that -- okay. To be on the safe
18 side, leave these discharges out of the question,
19 whether it's primary, raw, tertiary treatment. We felt
20 that, to be sure, it was more cost effective to get
21 outside. So that is really one of the conclusions.
22 CHAIRMAN JORLING: Thank you very much.
23 The next witness is Alan Friedland, City and
24 County of San Francisco.
25 MR. ALAN FRIEDLAND: Mr. Jorling, members of

1 the committee:

2 I'm Alan Friedland, Chief of the Bureau of

3 Sanitary Engineering for the City and County of San

4 Francisco.

5 Let me first apologize for the interruption

6 of the emergency note. I'm sorry if this was disturbing

7 to your committee.

8 As a preamble to my statement, it's important

9 that I inform you of the status of a couple of our

10 projects because one of the main issues that we are

11 raising here is the time of implementation. We have

12 already advertised for bids for a secondary treatment

13 plant that will handle about 80 per cent of the city's

14 dry weather flow.

15 We also are under a Step 2 design for the

16 ocean outfall, also dry weather and wet weather, and

17 we are in the Step 1 portion of our work for the west

18 side, the other 20 per cent of the city, which has a

19 bearing on this hearing as far as the ocean waiver.

20 So I felt it was of interest to you to have

21 the background so, as I go through the statement,

22 particularly the last point regarding the time imple-

23 mentation, you can see that essentially we are on a

24 treadmill going on progress and we are -- the points

25 of decision are vital.

1 In the interest of brevity, this statement
2 will be limited to emphasizing those points regarding
3 the eight criteria that we feel are of major importance
4 or of particular significance to the City and County
5 of San Francisco.
6 We support the concern of EPA and Congress
7 that any waivers to the secondary treatment definition
8 not weaken the objectives of the national water quality
9 program and that equity exists for all dischargers
10 nationally.
11 However, we recognize and commend the
12 Congressional intent to allow less than secondary
13 treatment for those discharges that produce an effluent
14 that will not adversely affect the marine environment.
15 A waiver in such a case is a prudent decision, allowing
16 the cost savings to be applied in a more cost-effective
17 manner to other water quality needs.
18 We look to the State of California's Ocean
19 Plan as justifiable procedure and standard for
20 determining appropriate water quality criteria for
21 ocean discharge. The recently adopted Ocean Plan --
22 I should say adopted by the State Board and not by
23 EPA -- establishes water quality standards for those
24 parameters that are meaningful tool in the protection
25 of those organisms indigenous to the marine

1 environment.

2 In addition, the State of California has
3 established a blue ribbon advisory committee in the
4 form of the Marine Estuarine Technical Committee,
5 which consists of specialists in the marine and aquatic
6 fields and other selected disciplines.

7 As an aside, this committee that worked with
8 us was on the monitoring for both the predesign and
9 predischarge, but it was the type of committee that
10 easily could be extended for the determination of
11 indigenous ordinances.

12 A committee such as this guarantees a
13 reasonable and prudent approach to defining the means
14 and standards for protecting the marine environment.

15 It would appear to us that any state able
16 to demonstrate to EPA the existence of such a compre-
17 hensive ocean plan should be delegated the authority
18 to administer the waiver provisions or EPA should
19 consider accepting such an approved plan as a basis
20 for administering this program for that state. I
21 believe this responds to Statutory Criterias No. 1, 2
22 and 3.

23 Relative to Statutory Criteria 4, 5, 6 and 8,
24 we endorse the concepts made by Mr. Walker this morning
25 -- There is no use of repeating them -- particularly

his comments on the toxicants as it relates to Question No. 4 in the statement.

Now, with regard to Criteria 7, referring only to new or increased discharges, it is our understanding that this does not apply to the changed outfall locations for existing levels of discharge. If our interpretation is correct, we find it acceptable, but we join others in suggesting that the flow identified in the permit be used.

This is of particular concern to us because, at present, San Francisco discharges its primary effluent from the ocean side of the city to near-shore waters at the northwesterly corner of the city, right at the entrance of the Golden Gate. Our new outfall system is under design which will move that discharge point to a location approximately 22,000 feet offshore into waters providing a minimum initial dilution of a hundred to one.

If granted a waiver, this outfall system could carry a blend of primary or chemically assisted primary effluent from the westerly portion of the city mixed with four times the volume of secondary effluent from the remaining portion of the city. In our opinion, this combination of 80 per cent secondary effluent and 20 per cent primary effluent discharged

1 four miles from shore should, subject to the environ-
2 mental review process, definitely be considered a
3 discharge suitable for waiver consideration.
4 As a matter of interest, we, at the contem-
5 plated outfall -- And this addresses one of the
6 questions regarding the definition of a deep-ocean
7 outfall. But our outfall is designed to go to an 80-
8 foot depth. If we were to go -- If we were to just
9 double that distance of four miles to eight, to eight
10 miles, we would only gain 20 feet in outfall depth,
11 and that would be at a cost of fifty million dollars.
12 So this point I'm making regarding the
13 definition of depth is, in many instances, a very
14 expensive determination.
15 We have one major concern regarding the
16 waiver process. Most dischargers bordering both the
17 Atlantic and Pacific seaboards are deeply involved in
18 the planning and design of various treatment and
19 outfall systems. Few enjoy the unique position of
20 San Francisco with an opportunity to discharge its
21 effluent to either the ocean or the bay waters.
22 In any case, it is absolutely imperative
23 that the planning, design and construction of these
24 facilities be allowed to proceed in the most expeditious
25 manner. Only in this fashion can we avoid the valuable

1 loss of time and the cost increase related to escalating
2 costs of construction. We, therefore, request that
3 the waiver procedures, consistent with the established
4 criteria, be defined as soon as possible and be acted
5 upon within a realistic time period.
6 As general information, San Francisco is
7 fortunate that our oceanographic and marine biological
8 studies have been underway for many years. Coupled
9 with previous and ongoing pilot plant studies, we
10 have accumulated data that we feel support the con-
11 sideration of a waiver for the definition of secondary
12 treatment as it would be blended with our secondary
13 treatment from the 80 per cent of the city.
14 Nevertheless, if compliance with such a
15 procedure entails the commencement of additional
16 extensive and long-term supportive studies as a con-
17 dition of acceptance, a Catch-22 situation is generated
18 with respect to compliance with existing federal and
19 state time schedules, coupled with the effects of
20 cost escalation.
21 We are very anxious to work with EPA, the
22 state, our fellow grantees, in making the provisions
23 of PL 95-217 a working reality.
24 I thank you very much and would be willing
25 to answer some questions.

1 CHAIRMAN JORLING: Thank you.
2 I have no questions. Don?
3 MR. DUBOIS: No.
4 CHAIRMAN JORLING: Paul?
5 MR. De FALCO: No.
6 CHAIRMAN JORLING: Lisa?
7 MS. FRIEDMAN: No.
8 CHAIRMAN JORLING: Thank you very much.
9 MR. FRIEDLAND: Thank you very much.
10 CHAIRMAN JORLING: The next witness is the
11 representative of the Sanitation Districts of Los
12 Angeles County, Frank Dryden.
13 Excuse me. James McGrath. James McGrath
14 is next, from the California Coastal Commission.
15 MR. JAMES McGRATH: There are three copies
16 of my statement.
17 CHAIRMAN JORLING: Thank you.
18 MR. McGRATH: I will make a few minor oral
19 additions to that written statement.
20 Members of the panel:
21 My name's James McGrath. I am with the
22 California Coastal Commission here in San Francisco,
23 the State Commission offices.
24 Time has not allowed for Commission review,
25 so the following is staff-level testimony on

1 implementation of Section 301(h) of the Federal Water
2 Pollution Control Act as amended. These comments are
3 made in our advisory role as a land use planning
4 agency responsible for planning within the coastal
5 zone. Responsibility for regulating water quality
6 rests with the State Water Resources Control Board.
7 A literal reading of the language of the
8 Section 301(h) amendment reveals a commendable overall
9 policy of allowing money which might be used for
10 upgrading marine discharges to secondary treatment
11 to be used instead for upstream reclamation and best
12 practicable treatment (The requirements of 201(b) and
13 201(g)(2)(A)) if such a program would have overall
14 environmental benefits. Thus, the language appears
15 to require that money be used for either reclamation
16 or best practicable treatment.
17 The language also sets standards to insure
18 that no serious adverse effects occur as a result of
19 the policy by requiring that water quality standards
20 be met and by requiring a level of water quality
21 which assures, quote, the protection and propagation
22 of a balanced, indigenous population of shellfish,
23 fish and wildlife.
24 The present task for EPA appears to be
25 establishing a regulatory framework which insures

1 this level of protection and the use of the funds for
2 reclamation.
3 We would recommend that the first element of
4 the implementing regulatory framework be a process
5 which makes factual findings to demonstrate consistency
6 with all of the criteria of Section 301(h). These
7 factual findings would necessarily be supported by
8 supplementary information sufficient to support the
9 necessary findings of fact.
10 The second element of a regulatory framework
11 which we would recommend is a policy establishing that
12 any applicant seeking a waiver must carry the burden
13 of proof. Thus, in the case of incomplete or contra-
14 dictory information, the waiver would not be issued.
15 Third, and perhaps most importantly, we
16 recommend that all of the criteria in -- and all the
17 criteria terms -- Excuse me. There is a typo -- for
18 implementing the Act be specifically and precisely
19 defined. Since this is perhaps the most important
20 item in establishing the mechanisms for implementing
21 this section of the Act, we will deal with each of
22 the terms which we consider to be so critical.
23 First, discharge into deep waters or
24 estuarine waters where there is strong tidal movement.
25 The language within this subsection indicates

1 only the discharge waters be defined in a manner to
2 insure compliance with Section 101(a)(2) of the Act.
3 Namely, protection and propagation of fish and shell-
4 fish.
5 We would recommend that deep waters be
6 defined with a minimum value and with greater values
7 to be determined, giving consideration to the volume
8 of the discharge, the currents and overall circulation
9 at the discharge point, and the sensitivity of the
10 marine environment in the vicinity of the discharge.
11 Thus, the large discharge of the County
12 Sanitation Districts of Los Angeles, in fairly close
13 proximity to the rich benthic habitat of Palos Verdes
14 Peninsula, would require a substantially different
15 perception of deep waters than would the discharge of
16 a small community in a sandy bottom locale.
17 The second critical term, a system for
18 monitoring the impact of such discharge to the extent
19 practicable.
20 The present lack of monitoring data is an
21 important factor in being unable to precisely define
22 the exact nature of current impacts on marine dis-
23 charges. For reference, the EPA Draft EIS on the
24 San Diego Metropolitan Facilities Plan concludes on
25 Page 349 that the data on the impacts of the discharge

1 on marine life are limited due, in part, to the nature
2 of the monitoring programs.
3 On Page 107, the EIS notes that the control
4 stations in the San Diego monitoring program, although
5 selected for their distance from the discharge, were
6 also affected by the outfall.
7 The EPA EIS for the Orange County Sanitation
8 Districts also notes this problem of trying to establish
9 a true control station which has not been affected by
10 the existing discharges, on Page G-82, Table G-20.
11 The San Diego EIS includes a fairly lengthy
12 criticism of current monitoring efforts, particularly
13 the use of the diversity index alone to draw conclusions
14 about the health or lack of health of the marine
15 environment. The EIS points out the problems of
16 different sampling techniques, the problem of identi-
17 fying accurately the large number of taxes and the
18 inability of the diversity index to detect such
19 substantial effects as changes in the patterns of
20 abundance and scarce species.
21 Care must be given to defining the term
22 "to the extent practicable." What factors affect this
23 term "practicable"? Cost? Size of discharge?
24 We would recommend that a major effort be
25 given to establishing monitoring requirements capable

1 of demonstrating the nature of effects. The term
2 "practicable" should not be used to constrain the
3 necessary monitoring efforts because many of the
4 effects of wastewater discharge are sublethal, such
5 as impaired reproduction and shortened life expectancy.
6 We would also recommend that a major effort
7 be made to involve the leading academic researchers
8 in chronic toxicity effects in establishing the
9 required monitoring programs.
10 Third, applicable pretreatment requirements
11 will be enforced.
12 The effectiveness of any pretreatment program
13 depends upon the enforcement and monitoring efforts
14 made by those in charge of the program. The level of
15 effort and fiscal support given to industrial waste
16 monitoring varies dramatically among the large dis-
17 charges in California, with the expected result of
18 varying effectiveness.
19 More troubling is the use of the term
20 "applicable pretreatment requirements." Current policy
21 is to require pretreatment only from major contributing
22 industries, those contributing 50,000 gallons or more
23 per average work day.
24 To digress a moment, the City of San Diego
25 testified this morning that they have no major

1 industries. Well, in fact, they have 8.5 mgd of
2 industrial discharges. However, under this category
3 of major contributing industries, they do, in fact,
4 only have one that meets this criteria.
5 These standards were established when
6 secondary treatment was a mandatory requirement, and
7 if continued, would allow the untreated discharge of
8 the vast bulk of heavy metals and chlorinated hydro-
9 carbons, the pollutants of most concern to the marine
10 environment.
11 It is recommended that applicable pretreatment
12 requirements be redefined if waivers of the secondary
13 treatment requirement are contemplated, in an attempt
14 to achieve removals of heavy metals and chlorinated
15 hydrocarbons equal to or superior to that obtainable
16 with secondary treatment.
17 Fourth, new or substantially increased
18 discharges of the pollutant.
19 If the classic secondary treatment require-
20 ment of BOD_5 and suspended solids are waived, it is
21 our recommendation that "pollutant" here be defined
22 as the materials of concern to the marine environment.
23 Namely, heavy metals and chlorinated hydrocarbons and
24 other persistent synthetic chemicals.
25 Fifth, the protection and propagation of a

1 balanced, indigenous population of shellfish, fish and
2 wildlife.
3 This section is at the heart of insuring
4 that any waivers pursuant to Section 301(h) do not
5 harm the environment. This requirement is properly
6 differentiated from the requirement to meet water
7 quality standards because the discharge of persistent
8 pollutants can and has damaged fish and wildlife due
9 to bioaccumulation even while meeting the water quality
10 standards because of great dilution.
11 It is out recommendation that this section
12 be defined in as literal a manner as possible and that
13 good health in the fish, shellfish and wildlife be
14 required as well. If this section is literally
15 interpreted, secondary treatment would, in all
16 likelihood, not be a waivable requirement because of
17 the current level of damage to fish, shellfish and
18 wildlife.
19 The EPA EIS for the Los Angeles County
20 discharge points out on Page I-72 order-of-magnitude
21 enrichment of chlorinated hydrocarbons in waters and
22 food species for pelagic birds.
23 The EIS also notes decreased benthic
24 diversity and acknowledges that improvements in
25 treatment have reduced the areal extent of sulfide

1 sediments and increased benthic diversity (Page I-61).
2 The EIR for the City of San Diego's waste-
3 water project points out on Page 4-57 that it cannot
4 be concluded that consumption of Bifht-caught fish
5 is completely safe, close quotes.
6 The Orange County EIS points out that
7 mercury levels in halibut in the monitoring area
8 average 0.2 parts per million, nearly the FDA limit
9 of 0.50.
10 The Orange EIS also notes (Page II-73) the
11 phenomenon of premature pupping among sea lions,
12 believed to be induced by chlorinated hydrocarbons or
13 microorganisms, both related to waste discharges.
14 The EPA EIS for the City of Los Angeles
15 points out the extensive occurrence of fish and
16 shellfish diseases, including fin erosion disease,
17 lip papilloma in fish and brown spot disease in crabs,
18 all related to waste discharges.
19 On Page S-4 of the city's EIS, it is pointed
20 out that the species diversity of benthic organisms
21 has decreased, and the mean number of species and the
22 median number of fish caught per troll is lower.
23 Indeed, the landing of commercial fish and shellfish
24 is presently only one-third of the peak level which
25 occurred in the early 1950's (Page GS-93).

1 The EIS also notes the conclusion of the
2 report of the University Task Force to evaluate water
3 quality effects at Hyperion sludge discharge that,
4 quote, we do not recommend eating fish caught in the
5 vicinity of the Hyperion outfall because of the
6 accumulation of halogenated hydrocarbons, close quote.
7 In summary, we support the principle of
8 Section 301(h), namely using wastewater grant funds
9 for reclamation, recognizing that Section 301(h)
10 contains within it assurances that the health of the
11 marine environment will be protected. With the
12 current industrial components of the larger wastewater
13 discharges, the only method to protect the marine
14 environment is to reduce the discharges of heavy
15 metals and chlorinated hydrocarbons, not necessarily
16 the concentrations, but the actual discharge in terms
17 of mass emissions.
18 We urge that the treatment methods selected
19 insure that the total discharge of mass emissions of
20 toxic pollutants (heavy metals, chlorinated hydrocar-
21 bons, and so forth) be no greater than that which
22 would be discharged from a properly designed secondary
23 treatment plant. It is immaterial to the marine
24 environment whether this is done through secondary
25 treatment, upstream reclamation, industrial

1 pretreatment or physical-chemical treatment methods.
2 Thank you for the opportunity to make these
3 comments.
4 CHAIRMAN JORLING: Thank you.
5 One question I have. This is a tip-of-the-
6 iceberg question, and I don't want to get to the
7 iceberg, but the concurrence by a state, is it
8 sufficient that EPA, the Administrator, get concurrence
9 from the Water Quality Board to protect your interest
10 in this, or does that have to be the Governor, or
11 should it be all state agents?
12 What I am asking you is do you have now any
13 binding role in the process?
14 MR. McGRATH: No. I tried to make it clear
15 at the beginning that our role is strictly advisory.
16 We do have some influence in our land use role. We
17 formerly had substantial water quality responsibility;
18 but currently all water quality responsibilities,
19 regulatory responsibilities, rest with the State Water
20 Resources Board. Our input is generally through that.
21 I think a mechanism to solicit that -- in
22 trying to solicit the state report might be -- or a
23 state viewpoint might be what you are looking for.
24 CHAIRMAN JORLING: Paul?
25 MR. De FALCO: Jim, would the public

1 hearing process help get a list of these views from
2 agencies, such as State Fish and Game and yourself?
3 MR. McGRATH: Yes. The state hearing
4 process, possibly the state clearing house process.
5 There are a number of mechanisms within the state
6 which I think do involve the entire spectrum of
7 resources agencies.
8 CHAIRMAN JORLING: Don?
9 MR. DUBOIS: We have had several speakers
10 say that the State of California Ocean Plan, if it's
11 followed, would protect the marine environment
12 adequately and so on. From your standpoint, is that
13 the way you feel also?
14 MR. McGRATH: Well, this is another ticklish
15 question. We commented on the Ocean Plan and supported
16 the Ocean Plan. One of the understandings in our
17 support for it was that there was a larger set of
18 requirements and that the -- which would be very
19 stringently applied. The water quality, the Ocean
20 Plan, I think is extremely well -- well done in terms
21 of its ambient water quality standards. They -- I
22 think the methodology was, you know, quite superior.
23 There is a problem, though, and I think that
24 deals with the issue of ambient standards and what
25 happens to fish in water.

1 The other problem is one of discharge with
2 the suspended solids portion, which settles -- It's
3 not involved in the ambient water column, but does,
4 indeed, have effects.
5 And I think the problem there is one of
6 persistent materials. We don't know what the threshold
7 effect is. We don't know what kinds of levels can be
8 tolerated. And I think the best kind of advice is to
9 get as many of them -- We know that there are major
10 identifiable effects out there, and I think the policy
11 consideration is to get the major portion of those
12 out, whether it's done through secondary treatment,
13 pretreatment or whatever method.
14 MR. DUBOIS: So can I conclude that you
15 wouldn't feel comfortable or rely totally on the
16 California Ocean Plan now; that you would like a
17 more careful examination than would be provided there?
18 MR. McGRATH: Well, that's -- I'm trying
19 to phrase this fairly delicately.
20 I would not say that we feel -- I'm com-
21 fortable with the Ocean Plan. What I would say is the
22 Ocean Plan, I think, is probably the technically best
23 possible effort for ambient water standards. However,
24 I think there are other items of concern, and it was
25 our understanding in the adoption process of the Ocean

1 Plan that these would be given consideration through
2 -- by EPA in this manner.
3 MR. DUBOIS: Thank you.
4 CHAIRMAN JORLING: Any other questions?
5 MR. De FALCO: No.
6 CHAIRMAN JORLING: Thank you.
7 MR. McGRATH: Thank you again.
8 (Continued on following page.)
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1 CHAIRMAN JORLING: We have nine remaining
2 witnesses, and there is a problem that's been
3 expressed with at least one concerning a flight
4 schedule. Let me try something out here.
5 I think we can complete this by 6:00
6 o'clock if we can stick to our time schedule of seven
7 to ten minutes. But of the remaining witnesses, are
8 there any that have really acute travel problems
9 besides Dr. Bascom? Are there any others?
10 Are you the next witness?
11 MR. GERALD DUNN: I am the last one.
12 CHAIRMAN JORLING: There are two witnesses,
13 or two sets of witnesses, scheduled from Alaska.
14 Are all of them --
15 MR. DUNN: One is a representative of
16 Anchorage and one is from the City of Petersburg.
17 CHAIRMAN JORLING: The Anchorage group is
18 the one that has the problem.
19 All right. They were scheduled to be last.
20 Frank Dryden? Have you got time?
21 MR. FRANK DRYDEN: I'm going to be here
22 whether anyone else is or not, I guess.
23 CHAIRMAN JORLING: Thank you.
24 Let's readjust the order, then, and take
25 Dr. Bascom, followed by the Anchorage group that has

1 to leave. Then we will go back and pick up.

2 We have an unaffiliated citizen that has

3 come in quite a while ago and, in our rotational

4 series, would be entitled to speak. We will pick her

5 up after the two travel problems and then resume

6 with the list.

7 MR. WILLARD BASCOM: Thank you very much

8 for the consideration, and my apologies to this

9 gentleman that I accidently cut in front of.

10 I will be brief.

11 My name is Willard Bascom. I have been an

12 oceanographer for somewhat over 30 years, very much

13 interested in the ecology of the California coast-

14 line.

15 I am at the moment Director of the Southern

16 California Coastal Water Research Project.

17 I am also a professor at the University of

18 California in San Diego at the Scripps Institute of

19 Oceanography.

20 I have come here today to talk briefly

21 about two particular matters which our group has

22 been studying intensively for a long time now. In

23 the main, we study all the effects of man on the

24 waters off of Southern California; but we have had

25 particular interest in those effects caused by the

1 discharge of municipal sewage.

2 One of the problems alluded to in some
3 detail by your last witness has to do with the ques-
4 tion of how does one make any sense out of the huge
5 number of animals, roughly 3500 or 4,000 kinds of
6 animals, many kinds of toxicants, a lot of different
7 conditions in the ocean and the problems caused by
8 things happening over a period of years.

9 I think that in the last few months, we
10 have made a breakthrough. We are in the process of
11 having our views reviewed by scientific sources to
12 make sure we are really correct. But let me tell you
13 for rough approximation what we know so far because
14 I think it will be very helpful to you.

15 I am referring to your Items 2 and 3, one
16 of which says -- raises the question of what is a
17 balanced indigenous population of sea life, and the
18 other has to do with a simplified method of sampling.

19 In the last six months, or a bit more, we
20 have been trying to -- we have been asking ourselves
21 these question. What we have wanted for a long time
22 was to be able to assign values to different loca-
23 tions so that it at least put them in some kind of
24 an order so one can tell the relative importance of
25 one area relative to another one with respect to

1 whether it's very clean or very polluted or whatever.
2 We have made a survey along the entire
3 coast of Southern California, extending from Point
4 Conception to the Mexican border, and at every ten
5 kilometers, we took samples, and all of these, plus
6 some other ones, were done at the depth of water of
7 the outfalls, which is roughly 60 meters or 190 feet,
8 give or take a few meters either way.
9 These samples have all been quite thoroughly
10 analyzed for chemicals and for biological materials.
11 And having assessed them, we feel that we can say
12 now which are the clean areas of Southern California
13 and assign a number to it.
14 The number is obtained as follows, and we
15 have called it the Faunal Index. The Faunal Index
16 comes from the work of one of our scientists, Jack
17 Word, who has separated the tiny creatures of the
18 bottom, of which there are literally thousands of
19 species. He has selected 25 of these which are
20 easily identifiable by nearly any biologist with
21 minimal training. And if those are identified and
22 counted, those numbers can then be put into quite a
23 simple formula and a number falls out, a number being
24 between zero and one hundred.
25 And in this particular document I have

1 given you, you will notice that, near the end of it,
2 there is a diagram showing the locations of the
3 stations and the relative values of the samples
4 along there. And you will see that, for much of the
5 coast west of Santa Monica Bay, the numbers all run
6 between 80 and a hundred. And for a very large area
7 along the coast near Camp Pendleton, generally they
8 also run on that same value.
9 Adjacent to the outfalls, you will see an
10 immediate response in which the levels have dropped.
11 You will see it also for what it was roughly 20
12 years ago and what it is today.
13 This method now has the great advantage
14 in that the work of nearly any biologist can be
15 acceptable. It no longer makes any difference what
16 kind of equipment you use to take the sample. No
17 replicates are needed. One sample on a one-shot
18 basis will give you a number, and it will be fairly
19 close, and you will be able to say this has this
20 number on this pollution scale.
21 I would recommend it to you as a simple
22 kind of a solution for identifying a balanced
23 indigenous population, which simply says that, if the
24 number is over -- Our choice of a number was 80.
25 You pick your own. If it's over some number like that,

1 you will say that does, indeed, represent a balanced
2 indigenous population, because the way the animals
3 have been selected that are in that group, some of
4 these are extremely sensitive indicators of any kind
5 of pollution at all, and their presence in the
6 area is a very good indication that the area's in
7 good condition.
8 At the other end of the spectrum, at the
9 lower end -- There is a list of the animals in this
10 document here. Those are animals which seem to love
11 it around outfalls, and they kind of count against
12 the number. And so when you get in an outfall area,
13 why the -- we have made this so it kind of exaggerates
14 the effects of outfalls just so they can't be
15 detected.
16 Now, one possible way for you to resolve
17 your Questions of 2 and 3 is to indicate that this
18 kind of number can be assigned a single sample, which
19 means that, instead of having an expensive program
20 of monitoring, you can literally go out with any
21 kind of a sampler and pick a few samples altogether,
22 have a trained biologist assess them who doesn't
23 need to know all the 4,000 critters, and assign a
24 number of it in a matter of a few hours instead of
25 a few weeks. And having assigned that number, then

1 you can say pretty much right off whether or not
2 the area is being affected by outfalls or not.
3 And I had in my published remarks there
4 other kinds of comments in them, but I won't go into
5 those now. But I'll stand on this.
6 If I can answer questions, I will be glad
7 to try.
8 I have a few more copies in the back of
9 the room for anyone else who is interested in this.
10 MR. DUBOIS: Dr. Bascom --
11 MR. BASCOM: Pardon me. I'm not doctor. I'm
12 professor, but I'm not doctor.
13 MR. DUBOIS: Would your Faunal Index work
14 out modifications in other locations like, say,
15 Puget Sound or --
16 MR. BASCOM: Yes, I believe that it would.
17 I refer to these species in a rough way,
18 but they are actually taxa, which means it's some
19 kind of a level of organism, whether a different
20 species actually within the taxa, but if that taxa
21 is appropriately represented, we believe it will
22 work anywhere else in the world.
23 We are in the process of checking it out
24 to see if that's true.
25 MR. DUBOIS: Has it been checked out in

1 the cold water areas?

2 MR. BASCOM: We are in the process of

3 doing that now. As far as we know, it will work, but

4 we want to do some more research to see.

5 CHAIRMAN JORLING: In that same vein, any

6 Faunal Index is going to require identification down

7 to the species level, and I know in some of the

8 earlier reports from the project, the identification

9 of that problem with earlier data and the qualifica-

10 tion that that puts on earlier data does jeopardize

11 the use of it.

12 What overcomes that same limitation with

13 respect to the system now?

14 MR. BASCOM: Well, there are many indices

15 around which allegedly do the same thing. And the

16 way most of them works is that they somehow balance

17 the number of species against a number of individuals.

18 So when you are in an outfall area, the

19 number of species drops and the number of individuals

20 comes up, and you still come out with the same answer

21 you had before. There are very minor differences

22 between them.

23 We deliberately invented this scheme to

24 amplify the differences so one could see.

25 The problem of identifying species, as you

1 perhaps know, we have a very active taxonomy program
2 running for several years now because of that
3 difficulty. Now, we think we don't need to do that
4 any longer because the taxa that have been selected
5 are easily identifiable by everyone.
6 That's not necessarily at the species
7 level. Sometimes it's at the family or order to
8 genera, depending on which animal.
9 We believe that that's now taken care of.
10 CHAIRMAN JORLING: In reading some of the
11 reports from the project, there are a couple of
12 statements. One is that the chromium levels of the
13 national diet are showed -- on a national basis
14 show deficiencies; therefore, the problem of the
15 chrome uptake in the Bight area are not severe.
16 Is that conclusion really supportable?
17 MR. BASCOM: Well, first of all, that
18 statement about the national diet level comes from a
19 publication by the National Academy of Sciences.
20 It's irrelevant to the second remark, although they
21 are both true.
22 That was -- simply occurred in, I think,
23 one of Dave Young's papers.
24 The chromium situation, for example, is
25 as follows:

1 Hexavalent chromium in a non-marine
2 environment, fresh water environment, is, indeed, a
3 dangerous toxicant. It's an oxidizing agent.
4 However, when that material is, in fact,
5 discharged into a number of locations, it does
6 become involved in the sewage systems. It goes
7 through a treatment plant. When it does that, it
8 comes out as trivalent chromium. In very extensive
9 experiments that we have run, we have never been
10 able to find any level of toxicity whatsoever
11 associated with trivalent chromium.
12 Upon discharge into the ocean, it becomes
13 an hydroxide precipitate, and we have had animals
14 living in it for six months without any signs of
15 change at all. It's not toxic. It's hard to get
16 the hexavalent chromium into the ocean.
17 On the other hand, on the chance that
18 some could get in, we have run detailed experience
19 in seawater with hexavalent chromium and determined
20 what I think is absolutely correct, is that the
21 threshold limitation for the -- for the breeding,
22 the reproduction of a very delicate worm, is 30 parts
23 per billion of chromium. The state law at the
24 moment, I believe, is five parts per billion. And
25 that's immediately diluted by a factor of a hundred,

1 so it means that you are nowheres near the -- any-
2 thing like the toxic limit. You could raise the
3 limit by a couple of orders of magnitude and not
4 get into a problem.
5 So there is no damage by chromium in the
6 marine animals.
7 CHAIRMAN JORLING: You are confident, then
8 -- Apparently, then, you know enough empirically about
9 what happens on the discharge to the ocean or in the
10 uptake in marine organisms that no chromium is
11 transformed from the trivalent to the hexavalent
12 state?
13 MR. BASCOM: Whether that could happen?
14 CHAIRMAN JORLING: Yes.
15 MR. BASCOM: We investigated the question
16 of whether chlorination could be an adequate oxidizing
17 agent to change it back again. We tried several
18 other hypotheses and couldn't think of any other
19 mechanism.
20 I think our work is not entirely empirical.
21 A goal of it is theoretically supportable in other
22 scientific work.
23 CHAIRMAN JORLING: But you do have in your
24 report that 75 percent of the chromium in the ocean
25 is in hexavalent form.

1 MR. BASCOM: That's right. The level in
2 the ocean is about two-tenths of a part per billion,
3 and roughly of that two-tenths of a part per billion,
4 roughly 70 percent of that is in the hexavalent form,
5 that's correct.
6 CHAIRMAN JORLING: One of the issues that's
7 of concern is the fact that suspended solids carry
8 a large amount of the toxicant material.
9 MR. BASCOM: Yes, sir.
10 CHAIRMAN JORLING: Your report has the
11 statement that suspended levels have decreased from
12 288,000 metric tons in '71 to 286,000 metric tons in
13 '76. That's not a very significant decrease.
14 How comfortable can we be that relaxtion
15 of the suspended solids is going to afford us the
16 ability to control the discharge of toxicants?
17 MR. BASCOM: I didn't suggest that you
18 should relax that. Those are high numbers. And if
19 you -- Further in this statement -- I will be glad
20 to talk about it a bit more -- it does say what our
21 suggestion is for the discharge of suspended solids.
22 First of all, as long as solids are
23 suspended, they probably do not cause a problem.
24 They almost certainly will drift off and deposit.
25 If they were to settle, they would deposit in very,

1 very thin levels far out at sea and are not involved
2 in the coast ecosystem or at any high enough
3 concentration to cause any problem.
4 We were following along with the assumption
5 that there were going to be substantial changes in
6 the treatment operations and that, you know, for
7 example, the LA County is installing now, I under-
8 stood, 200 million gallons a day of secondary treat-
9 ment. This is going to greatly cut down on some
10 of the suspended solids.
11 Now, when it cuts down on it, it doesn't
12 cut down only on it. If you have a distribution
13 curve of size, one is really concerned with settling
14 velocity. In any case, if you remove the larger
15 particles by, for example, removing the upper side
16 of that curve, now you have shifted the curve to a
17 much different situation.
18 And our suggestion in this piece of paper
19 which I have just handed to you is that you should
20 make regulations that relate to the settling velocity.
21 And the number that our group has selected after
22 considerable thought is that the settling velocities
23 should range about .01 centimeters per second, which
24 is roughly equivalent to saying that nothing can
25 land -- nothing -- not very much can land on the

1 bottom within the first three days.

2 Now, the point of this is that there is a

3 great deal of change when these materials enter in

4 the sea. They are broken up and they flocculate

5 and they join together and they are eaten and change,

6 and change in various ways.

7 We think that would be a perfectly safe

8 reason to do that if there are set criteria to

9 follow.

10 CHAIRMAN JORLING: Paul, do you want to

11 ask any questions?

12 MR. DE FALCO: Yes.

13 Willard, on the Faunal Index, it appears

14 that over the 20-year period there has been

15 additional depression. Am I correct in my interpreta-

16 tion?

17 MR. BASCOM: I think the numbers speak

18 for themselves. That's certainly correct some places,

19 yes.

20 MR. DE FALCO: If one were to adopt this

21 as a mechanism for speaking to the criteria of a

22 balanced indigenous population, would you suggest

23 that waivers be granted to Los Angeles City and

24 County or Orange County on the basis of this Faunal

25 Index?

1 MR. BASCOM: I wasn't speaking on the
2 question of waivers or sewers at all. I'm an
3 oceanographer.
4 MR. DE FALCO: I'm asking you to interpret
5 this for me, if you will.
6 MR. BASCOM: It's my understanding that
7 these plants are making changes anyway and that,
8 you know, I think some changes clearly are needed
9 and should be made.
10 And then you must give them a bit of time
11 for something to happen in the ocean to respond to
12 that. But my suggestion is that you do now have
13 some clear basis for what's going on in the ocean to
14 make up your minds.
15 As I understood it, that was your problem,
16 that the difficulty had been you had measurements
17 that went on in a plant, and what you would like
18 to have is you wanted some measurements that went
19 on in the ocean so you have some basis for deciding
20 whether it's good or bad.
21 And it seems to me that how you treat it
22 is not relevant to me. I'm only interested in
23 what comes out of it. I'm only interested in the
24 results.
25 MR. DE FALCO: Could you interpret the

1 graph for me? Is that depression significant?
2 MR. BASCOM: Some of these shown on here
3 are very significant.
4 MR. DE FALCO: Yes.
5 MR. BASCOM: What I have suggested, you
6 will see there is a smaller line, and this is all
7 described in the text which I was trying to save time
8 on --
9 MR. DE FALCO: Right.
10 MR. BASCOM: The lower line says "Background
11 in urban areas."
12 MR. DE FALCO: Right. I understand.
13 MR. BASCOM: My guess is that in the areas
14 near major cities and San Diego and Los Angeles,
15 you have got enough material in the atmosphere, lead
16 from automobiles and river runoff and all that other
17 kind of stuff, you can probably never get back up
18 to where you were. I think that's a hopeless
19 objective.
20 So my thought was perhaps there was a back-
21 ground allowance made for that to happen.
22 You understand this is a very sensitive
23 indicator, this curve.
24 MR. DE FALCO: Right.
25 MR. BASCOM: And, second, around some of

1 the major outfalls, the deposits there are the
2 result of things that were done 20 years ago perhaps,
3 or something. I think you -- the possibility of
4 reaching perfection is just out of the question. I
5 think you just -- If you had zero treatment starting
6 tomorrow, I mean zero discharge starting tomorrow,
7 you are not going to get back there for a while.
8 The fact is that that difference is in
9 the bottom, and nobody knows what to do about it.
10 So you have to be a little bit realistic.
11 And my further suggestion was in some
12 peculiar small areas around the outfall, you make
13 some kind of an exception. You say just because it
14 was screwed up by your grandfather, we got to let
15 you have another ten points to account for that,
16 or some such thing as that.
17 I'm not stuck with these numbers. I am
18 simply offering you a mechanism by which to operate.
19 MR. DE FALCO: But these are roughly ten-
20 kilometer intervals between your samples?
21 MR. BASCOM: Right. There are a lot more
22 stations that we have. These were taken so we could
23 determine what,in fact, was a control area, one of
24 the questions that was never satisfactorily answered
25 in my mind.

1 Now, I think we can say, based on this kind
2 of work and a great deal more than you see here,
3 what is a control. You will also see on the page
4 after that graph, there is a set of numbers there --
5 MR. DE FALCO: Right.
6 MR. BASCOM: -- which says these are what
7 we measured at the specific 29 control stations,
8 and they show what the minimum, the maximum and the
9 average was.
10 And you will see that, under natural
11 conditions, which we believe to be virtually untouched
12 by man, there is a very wide range of conditions.
13 There is no one number that's the right answer. It's
14 a pretty big spread, sometimes a factor of ten.
15 MR. DE FALCO: You say there can be some
16 condition in terms of the immediate discharge due
17 to the past sin, so to speak. What would be a
18 reasonable distance away from that in terms of a
19 base?
20 MR. BASCOM: My suggestion was that you
21 take -- pick out the area that's the worst at the
22 moment and you draw a little ring around it that's
23 so many square kilometers, and you say in this area
24 we will allow you --
25 MR. DE FALCO: What I am saying is what's

1 the area of that ring?

2 MR. BASCOM: How big a ring it might be?

3 MR. DE FALCO: Yes, a recommendation.

4 MR. BASCOM: As influenced by the coastal

5 currents, which are virtually always parallel to

6 the coast, this is not a ring or a square. It's

7 more likely an oblong that might be a kilometer wide

8 or four kilometers long, something like that.

9 MR. DE FALCO: On that order?

10 MR. BASCOM: On that order. That's what

11 I had in mind.

12 CHAIRMAN JORLING: The staff may, at my

13 direction, direct some specific questions at the

14 calculation of the Faunal Index. But there is one

15 issue that I might want to address. If I am correct

16 in saying that you are advocating utilization of

17 the Faunal Index for making the judgment as to

18 whether or not the population is a balanced indigenous

19 population for purposes of the statute, in the

20 formulation here, it appears that there is heavy

21 weight placed upon the measurement of the presence

22 of Group 4 species, which are those which are

23 associated with outfalls.

24 MR. BASCOM: Yes.

25 CHAIRMAN JORLING: Pollution species.

1 MR. BASCOM: Yes.

2 CHAIRMAN JORLING: How do you argue that
3 such heavy weighting of the presence of pollution
4 species gives us an idea of the balanced indigenous
5 population?

6 MR. BASCOM: Oh, but that's the point of
7 it all. You see, those are the -- those animals
8 would be very rarely found in the clean areas, and
9 so we have weighted them heavily against the outfall.
10 In fact, there is a multiplying factor of three that
11 goes with them if you look at the formula.

12 The idea is to get that number to come out
13 to zero so the best answer you can get comes out to
14 be a hundred percent. That's what you are trying
15 to get at.

16 So that, in fact, weights against it and
17 so forth, and that's the advantage of ecology, so
18 to speak.

19 CHAIRMAN JORLING: Lisa, do you have any
20 questions?

21 MS. FRIEDMAN: No.

22 CHAIRMAN JORLING: Thank you very much.
23 And I am sure we will be back in touch with you.

24 MR. BASCOM: I will leave a few more copies
25 at the back.

1 May I also offer the services of our
2 laboratory and scientists for whatever assistance they
3 can be to EPA and anyone else that's interested in
4 these matters.
5 CHAIRMAN JORLING: Thank you very much.
6 Now, we shift to the -- I hope I am correct
7 in this -- the Anchorage situation, Mr. Chapman and
8 Mr. Dunn. Is that Mr. Dunn?
9 MR. JOHN CHAPMAN: Mr. Dunn is the one with
10 the transportation problem. I have got no hurry.
11 MR. GERALD N. DUNN: My name is Jerry Dunn.
12 I am employed by the Alaska District, Army Corps of
13 Engineers, and I am working on a 201 facility plan
14 as part of the Metropolitan Anchorage Sewage Treatment
15 Plant which discharges into Knik Arm and Turnagain
16 Arm at the mouth of the Cook Inlet. It was constructed
17 during the years 1976-1977, and completed in
18 September of 1977.
19 The results of the study revealed the follow-
20 ing data relative to this body of water into which
21 the Municipality of Anchorage discharged its primary
22 treated wastes.
23 The mean tidal stage for the Anchorage area
24 is about 26 feet.
25 Current velocities induced by these tidal

1 stages is breached at eight knots.

2 The studies also confirmed that the

3 estuary, as a result of such several tidal actions,

4 is a completely mixed basin of the natural suspended

5 solids.

6 Dilution is on the order of about 1200

7 milligrams per liter.

8 Due to glacial material being carried into

9 this body of water from the major rivers that

10 connect into it, the biological survey portion of

11 this study reveals the environment is extremely

12 hostile to any biota and that any is basically

13 non-existent.

14 Within the inner tidal zone, this area

15 was essentially devoid of shellfish. Now, in the

16 area surrounding the outfall at Anchorage, only two

17 small non-commercial clams were found.

18 The point of this discussion is that the

19 State of Alaska has established a blanket water

20 quality standard for all estuaries. The Knik Arm,

21 the Turnagain Arm and Cook Inlet are not in any

22 sense of the matter in danger and hence these water

23 quality standards are not entirely applicable.

24 The study modeled the estuary, both

25 hydrologically and in terms of water quality, through

1 the use of a computer. This was done to ascertain
2 both near field and far field effects and various
3 degrees of treatment of waste water near Anchorage.
4 The results were that any degree of treatment greater
5 than primary would provide only negligible effects
6 and those benefits would be very questionable.
7 The estuary model was expressed mathemati-
8 cally to determine the assimilative capacity of the
9 estuary for primary effluent. The result was a
10 flow of 250 million gallons a day before the first
11 violation of existing water quality standards would
12 appear.
13 The standards for the propagation of shell-
14 fish are a non-existent entity in any commercial
15 species.
16 The flow of 250 million gallons a day
17 represents about a .17 million population. The
18 saturation population for Anchorage presumably is
19 500,000.
20 The cost of secondary treatment for
21 Anchorage would range between $32 and $91 million,
22 depending on the treatment process used.
23 The burden of cost could not be justified
24 by the environmental benefit derived.
25 The points of the law which I would like to

1 address are that Criteria No. 1 that there is an
2 applicable water standard specific to the pollutant
3 for which the modification is requested, the State
4 of Alaska is currently revising the water quality
5 standards, but the revisions will not be completed
6 in time to accommodate the time frame of the
7 modification of permit request. Hence, the recommenda-
8 tions of the study which I have referenced should
9 be used.
10 As indicated earlier, the environment of
11 the estuary is too hostile to provide a habitat for
12 resident populations of aquatic biota. Hence, its
13 protection is questionable.
14 Monitoring requirements of a representative
15 sample of aquatic biota may be impossible to do due
16 to the lack thereof.
17 In Point No. 4, such modified requirements
18 do not result in any additional requirement on any
19 other point or nonpoint source discharge. The
20 computer model of the estuary which was calibrated
21 with the existing conditions can give us -- And I
22 am referring to the Municipality of Anchorage and
23 also the State of Alaska -- a good indication of what
24 would occur at a point source discharge within the
25 estuary of Knik Arm, the Estuary of Turnagain and

1 the Cook Inlet.

2 Point 5, the Municipality of Anchorage has
3 no qualms about this. This has been taken care of
4 in our tariff system.

5 Point 6, pretreatment requirements, again
6 has already been taken care of within the
7 Municipality.

8 Point 7 that there will be no new or
9 substantially increased discharges from point sources
10 of pollution to which the modification applies above
11 that of volume discharge specified in the permit,
12 our computer model of the estuary indicates that it
13 does have assimilative capacity, and I think that
14 discretion should be used on the basis of this
15 computer model of the estuary to put a limit on what
16 the amount of discharge should be from the Municipality
17 of Anchorage.

18 Currently, the plant is designed at 34
19 million gallons a day. The outfall has a capacity of
20 accepting 75 million gallons a day.

21 The plant was built with a planned increase
22 in capacity prior to the publication of Public Law
23 92-500. I would advocate that the increased discharge
24 be tied in with the discharge permit.

25 In conclusion, the Municipality will apply

1 for a modification of the discharge permit.
2 And I would like to address some questions
3 at this time.
4 Yes?
5 MS. FRIEDMAN: I have a question about the
6 status of your state water quality standards.
7 MR. DUNN: That's correct.
8 MS. FRIEDMAN: Are you saying that you
9 have no BOD pH or suspended solids at present or
10 that your revision is worse than that you have now?
11 MR. DUNN: The State of Alaska currently
12 has water quality standards. However, what they have
13 is a blanket water quality standard for estuaries in
14 general, not whether they are a classical estuary
15 where you have a fresh water and a salt water
16 environment intermixing within an estuary.
17 In discussion with the people at the State
18 of Alaska Department of Environmental Conservation
19 level, they have recognized the fact that Knik Arm,
20 Turnagain Arm and Cook Inlet, the forelands
21 geographical location does not meet their sense or
22 anybody's sense of a term of a classical estuary due
23 to the high sediment loads and the hostile
24 environment in that.
25 They are currently in the process of

1 revising those water quality standards which will
2 take this into account. The time frame they were talk-
3 ing about in the last discussion was on the order
4 of a year, year and a half, before the revisions of
5 these water quality standards will come out.
6 My suggestion to them -- And this was
7 accomplished in the form of a letter accompanied by
8 the study which I have referred to, which we have
9 completed for the Corps of Engineers on that
10 estuary -- is that they follow this as guidelines
11 for the water quality standards of Knik Arm and
12 Turnagain Arm and Cook Inlet.
13 MS. FRIEDMAN: Are these revised water
14 quality standards more or less stringent than the
15 ones that currently exist for the estuary?
16 MR. DUNN: I beg your pardon? I'm sorry.
17 MS. FRIEDMAN: Are these revised water
18 quality standards more or less stringent than the
19 ones which currently exist for estuaries in general?
20 MR. DUNN: I think -- And I can't speak for
21 the State of Alaska. I'm employed by the Corps of
22 Engineers, working for the Municipality.
23 My feelings are in some areas they will
24 probably be less stringent, and in other areas, they
25 will probably be more stringent. I do feel that they

1 will be more site-specific than they are.

2 CHAIRMAN JORLING: Don?

3 MR. DUBOIS: Jerry, I understand one

4 alternative that's being looked at here is reclamation

5 in some of the wastewaters. Is the Corps looking

6 into this, or is that someone else's bailiwick?

7 MR. DUNN: Yes, the Corps is looking into

8 this. We have discussed it with the EPA, State

9 Department of Environmental Conservation and discussed

10 the possibility of discharging primary effluent on

11 this land, using rapid infiltration.

12 The geologic conditions there appear to be

13 conducive for rapid infiltration. However, there are

14 operation problems during the winter months which

15 have to be addressed, and we are talking in terms of

16 not a full fledged pilot study, but a study to answer

17 some of the questions for operation and maintenance

18 at that so that we can get better results for -- to

19 do what it would cost to do that.

20 MR. DUBOIS: If a waiver were granted, what

21 motivation would there be to pursue the land applica-

22 tion approach?

23 MR. DUNN: There are two reasons that we

24 would consider land application.

25 Currently, the existing outfall, as indicated

1 in this estuary study, is inadequate. We are caught
2 just inside of a shear zone which causes -- which
3 results in a gyre which rotates inward landward.
4 There are indications that there are waste depositions
5 occurring along the beach.
6 Whether this is critical or not, I'm not
7 sure, because there is limited access to that beach
8 since it is around the international airport area.
9 The report itself, the study, recommends
10 that the outfall be extended beyond the shear zone.
11 They had within the report looked at some
12 locations for the outfall. Whether that is optimum
13 or not, I wouldn't venture to say. Indications are
14 it's not too far out beyond where the existing out-
15 fall is to where the shear zone would be. Extension
16 of that outfall would be relatively expensive.
17 It appears at this time from a cost-effective
18 standpoint that the difference between the land
19 treatment by rapid infiltration or land treatment
20 by rapid infiltration extension of the outfall are
21 going to be very, very close.
22 Okay. Again, depending on operation
23 problems, the cost of operation and maintenance of
24 the rapid infiltration bed, so to speak, in the
25 Anchorage area, we are looking at that as an

1 alternative to primary discharge.

2 MR. DUBOIS: Thank you.

3 CHAIRMAN JORLING: Thank you. I think that

4 completes our questions.

5 We have eight more witnesses; and if we

6 are going to complete this by 6:00, which is still

7 my objective, let me express once again that, if you

8 can cross-reference to an earlier statement on a

9 specific recommendation, that would save time.

10 Secondly, we are not here to plead specific

11 cases. What we are trying to do is get information

12 and guidance on how we should write this set of

13 regulations and necessary implementing material.

14 So if we can keep it to those objectives,

15 we may be able to get out by 6:00.

16 The next witness is Judy Bendor, citizen.

17 MS. JUDY BENDOR: Well, my name is Judy

18 Bendor, and I am a resident of the City of Oakland,

19 and I would like to say that, as an unaffiliated

20 citizen, I think I am a creature that's definitely

21 necessary for full species diversity at this public

22 hearing.

23 I would like to urge in the future that

24 there be perhaps a little bit greater effort to reach

25 a broad array of the citizens on this issue. I'm not

1 sure exactly how it works, but the Federal Register
2 is not widely read among certain groups of people.
3 Speaking on behalf of a continued program
4 for secondary treatment, secondary treatment has a
5 number of advantages, among which was by the mechanism
6 of removing suspended solids and BOD, you concurrently,
7 though inadvertenly perhaps, remove toxic materials,
8 particularly heavy metals and some of your chlorinated
9 hydrocarbons. Therefore, if you apply a blanket or
10 you apply a waiver of secondary without concurrently
11 having a very stringent pretreatment toxic materials
12 program, you will probably result in a total increase
13 of mass emissions over what you would have with
14 secondary to the -- to the ocean environment.
15 As the Environmental Impact Statement for
16 the Southern California Bight has indicated, we have
17 significant evidence of harm to the species down
18 there, and we have evidence of fin rot; we have
19 evidence of heavy metals in critical organisms of these
20 species, some of which I note are only valuable as
21 an indicator of diversity, but are also commercially
22 important fish.
23 Therefore, I would strongly urge that any
24 program which waived secondary treatment have a
25 strong pretreatment program as well, one that is

1 certainly stronger than what we have in place now.
2 I would also urge that we look very care-
3 fully at the proposed new Ocean Plan to ensure that
4 any changes in the Ocean Plan have a full opportunity
5 for citizen input, not just of a specialized nature,
6 but a full array of citizen input and that the Ocean
7 Plan itself not have any wide loophole provisions
8 which do not have the safe protections for the
9 environment that are in the new Water Act.
10 I have worked for some years in water
11 quality, both in terms of point source work as well
12 as in water quality standards, and I have found that
13 a strictly ambient approach to cleaning up the
14 environment, meaning strictly background standards,
15 is not adequate to really having a full program; that
16 you need a point source or permit program as well so
17 that you can have an enforcement program and you can
18 have monitoring requirements above the point discharge.
19 Returning to a strictly ambient approach
20 is rather returning to the days before the 1970 Water
21 Act, and they have not proved very effective at clean-
22 ing up the environment. An ambient approach is okay
23 as a general tool but not as a tool of enforcement.
24 I would like to note that some people have
25 slighted over the idea that turbulence or suspended

1 solids into deep water are not necessarily a problem.
2 Well, turbulence is a characteristic of the surf
3 zone. It's not necessarily a characteristic of a
4 deep-water environment. And the animals which breed
5 out farther, perhaps two or three miles, at 80 feet
6 of depth may not be accustomed to such a high
7 turbulence. It may involve smothering the species
8 that are trying to breathe there.
9 I would also like to speak on behalf of a
10 secondary treatment plant, which is a rather finicky
11 creature. That's one of its advantages. When a treat-
12 ment plant operator has a finicky creature who has
13 a fear that what comes out of it isn't going to be
14 a very happy lot. Therefore, a treatment plant
15 operator will be concerned about the introduction of
16 toxic materials, not only because he might have a
17 monitoring report which looks unfavorable, but
18 because he would actually have a very unhappy plant
19 which smells and causes citizens complaints.
20 Therefore, the treatment, the secondary
21 treatment plant, is a nice indicator sometimes of
22 what is coming into it. And a strict reliance upon
23 monitoring requirements does not only seem to do the
24 job, but it's a very extensive way. In that regard,
25 I think the secondary treatment plant has some

1 advantages.

2 And the last thing is I myself would not

3 wish to volunteer to be a taxi driver off the

4 Southern California Bight.

5 CHAIRMAN JORLING: Thank you, Judy.

6 Our next witness finally -- Thanks for

7 your patience and the remaining peoples' patience

8 ought to be commended -- is Frank Dryden, representing

9 the Sanitation Districts of Los Angeles County.

10 MR. FRANK DRYDEN: Thank you, Mr. Jorling.

11 Members of the panel, I do represent the

12 Sanitation Districts, and Mr. John D. Parkhurst,

13 Chief Engineer and General Manager.

14 And I will not try and make a case for

15 why the Sanitation Districts' Joint Water Pollution

16 Control Plan outfall out to be granted a waiver, at

17 least not today. I do intend to before the deadline

18 has been exceeded, but I would like to comment on

19 regulations which are relevant to the eight criteria

20 in which you are faced with drafting at this time.

21 First and in the way of background and

22 the legislative history, it does seem clear that

23 Congress does, in fact, want to avoid paying for

24 unnecessary treatment and does believe that there

25 are a limited but meaningful number of places where

1 such waivers will probably be granted. And yet in
2 looking at the criteria, it's apparent that they
3 could be written to essentially eliminate everyone
4 if they were done in the most strict inflexible way.
5 The wording in the criteria has that kind of
6 opportunity.
7 I would hope that the EPA will seek to
8 establish first a simple, clear-cut set of rules that
9 will determine which proposals will be reviewed for
10 ultimate consideration.
11 In other words, a simple screen that can
12 be used to determine whether or not the applicant
13 will continue in the process. And I would suggest
14 that the simple screen could be based on meeting one
15 of three criteria that you would actually have to
16 put whatever numbers you want to, but that the
17 discharge at least be at a substantial depth, leav-
18 ing what's "substantial" up to you. I think something
19 less than the 35,000 feet that you have advocated
20 earlier would be reasonable.
21 Secondly, that another criteria would be
22 that there would be at least a significant initial
23 mixing zone. Fifty to one has been suggested, but
24 there are other -- there are other perhaps slightly
25 higher numbers that would be acceptable.

1 And a third one would be that the applicant
2 can demonstrate substantial tidal activity, flushing
3 volumes, as compared to the discharge, where the
4 waters are moved out of the area and not simply
5 accumulated and recycled.
6 Seems to me if a discharger could show
7 any one of those three conditions applying in his
8 situation, he should at least have the opportunity
9 of proving he meets the remainder of the eight
10 criteria.
11 As for the criteria of themselves, I think
12 you may have the most trouble with the first one
13 because the law does seem to be written around BOD,
14 suspended solids and pH, and as you have heard today,
15 those may not be the best criteria to be looking
16 at for marine discharges.
17 I do concur with Larry Walker and others
18 who have suggested that surrogate criteria are suit-
19 able, particularly the dissolved oxygen or limiting
20 the change in dissolved oxygen from background levels
21 of the receiving water in lieu of a BOD measurement
22 itself.
23 As for suspended solids, I think that's
24 more difficult, although there has certainly been
25 some suggestions today. Turbidity, light transmittance,

1 measurements which can be made and which have some
2 relevance to suspended solids, at least in the water
3 column.
4 If you get into looking at the effect of
5 suspended solids on the bottoms and the bottom
6 organisms, I don't think there is a very simple way
7 to get at it. And I don't think suspended solids
8 in the water column as a measurement itself that
9 there is any particular technical basis for picking
10 -- picking a number -- It would at least be very
11 arbitrary and not very significant. Such suspended
12 solids, unless they are interfering with light
13 transmittance, probably are not of concern.
14 The Faunal Index is something new to us
15 that we have not had a chance to evaluate ourselves.
16 Clearly, it is a sensitive indicator and, as Mr.
17 Bascom indicated, designed to reflect the impact of
18 waste discharges. I think it's going to take some
19 careful analysis to determine what the numbers might
20 actually mean if one were to take that approach.
21 It does have an apparent advantage in terms
22 of simplicity of measurement and the ability to
23 produce numbers. And it certainly deserves your
24 consideration.
25 pH, by the way, doesn't appear to be a

1 parameter that would need a waiver since normal
2 ranges should be acceptable as presently defined for
3 secondary treatment.
4 The second criteria, first of all, as for
5 recreational use, ignoring the concept that anyone
6 would want to use seawater as a drinking water supply,
7 I think the applicant should be able to demonstrate
8 that recreational activities, such as swimming,
9 boating, fishing, would occur the same as they
10 would with or without the waiver. And that is, if
11 you get the waiver, you don't impair what would have
12 occurred otherwise. And they will be different in
13 different situations.
14 I do think, however, that the biggest
15 problem you have in this area is looking at the
16 effect of past historic discharges, and our particular
17 system is a case in point, as has been cited on
18 numerous occasions today. Most of the problems --
19 Many of the problems are related to the historic
20 accumulation of DDT in the sediments or the sediments
21 themselves, and it is important that the rules that
22 you develop not require that the balanced indigenous
23 biota be there today because, even if we stopped
24 discharge today, the effect of the past is going to
25 remain for an extended period of time.

1 I do think there is sufficient scientific
2 data available from other locations and other studies
3 so that scientific judgments can ultimately be made
4 about an acceptable level of treatment.
5 I point out we are not talking about just
6 doing what we have done in the past, or even doing
7 what we are doing today; we are only talking about
8 the question as to whether there is some level of
9 treatment between what has gone on in the past and
10 complete secondary treatment which will produce a
11 satisfactory environmental impact.
12 And there is. And it's not an "all or
13 nothing." You don't have to have all secondary or
14 just primary. There are a great range of treatment
15 options in between, including a percentage of primary
16 which would produce a particular result.
17 As for Criteria 3, monitoring we feel is
18 important regardless of whether or not you have full
19 secondary treatment and that monitoring programs will
20 have to be tailored to the location, to the size and
21 type of discharges that are actually occurring and
22 that you should not try to tie down monitoring
23 programs at the time of the application precisely.
24 They are going to have to be changed and modified
25 as time goes on.

1 And the key thing is that the applicant
2 is committed to a suitable monitoring program and
3 that you have some concepts of the basic character
4 of a monitoring program but not the details.
5 For Criteria 4, it seems to me axiomatic
6 that, if a change in the requirements for one
7 discharge would result in an increase for another,
8 that it doesn't -- it doesn't qualify, and you should
9 have no problem with it.
10 Criteria 5 has to do with pretreatment
11 requirements. This is a difficult area because I
12 think the pretreatment requirement program of EPA
13 is still up in the air. At least we are not aware
14 of its final form. And all that can be said is
15 the law requires us to enforce pretreatment programs,
16 and the applicant should verify its intent to do so
17 and show that it has the legal capability of doing
18 so.
19 And the actual form of the enforcement
20 program will develop with time as the EPA and every-
21 one else gets involved.
22 The existence of a -- You know, obviously
23 large agencies should have existing pretreatment
24 programs going now. But they are going to be impacted
25 after the EPA does.

1 For Item Criteria 6, this seems to be a
2 very case-dependent requirement. It does seem to,
3 as recognized by the words "to the extent practicable,"
4 and that somehow the EPA is going to have to indicate
5 what kind of efforts apply to residential sources
6 they expect are reasonable in order for an applicant
7 to have any idea of what he is supposed to do in
8 this area.
9 We have educational programs going now that
10 try to tell people, you know, you don't put toxics
11 down the toilet. But the degree of effectiveness and
12 the degree of importance, it varies, I think, on a
13 case-by-case basis.
14 As for Item 7 having to do with increased
15 discharges, I think the legislative history is clear
16 that the volume limit will be as specified in the
17 discharger's NPDES permit and that it is subject to
18 modification at an appropriate time, generally five-
19 year intervals, and that that would be the number
20 they are talking about.
21 Criteria 8, having to do with funds, leads
22 to the subject of applying those funds usefully to
23 water reuse and water reclamation problems.
24 Sanitation districts have been a leader
25 in water reuse programs. We suppose directing our

1 efforts -- In fact, one of our objectives the last
2 five years has been to avoid putting so much money
3 and effort into providing more treatment than
4 necessary for marine discharges so we could devote
5 those funds and our efforts to water reuse programs,
6 which we are still developing and expanding.
7 We have a -- We have an expanded -- Excuse
8 me -- a facilities plan that has been accepted by the
9 state and EPA which calls for increasing our water
10 reuse effort.
11 We do not, by the way, expect in our
12 situation to have any increase of discharges into
13 the marine environment because we are devoted and,
14 in our plans, have prepared for increasing our water
15 reuse program as the method of handling any increased
16 flows.
17 A word about toxics.
18 You mentioned in your opening statement
19 that there are at least two kinds of toxics: One I
20 would describe, which primarily applies to heavy
21 metals which are naturally occurring and where the
22 form and concentration is an important factor, and I
23 think they should be distinguished between some of
24 the organic chlorinated hydrocarbons like DDT which
25 are cumulative and resist biodegradation. They

1 concentrate in the environment.

2 Seems to me that we can use things like

3 the State Implementation Plan Table B approach to

4 toxics as a very reasonable basis for protecting the

5 marine environment from the natural -- particularly

6 from the natural type.

7 For others, those which are truly toxics

8 and highly toxic, not only should we prohibit them

9 as we do in our system from coming into the system

10 and work at finding them and ridding ourselves of

11 them through a source control program, but it seems

12 to me the EPA should be more concerned at the point

13 of their manufacture and distribution, because those

14 types of -- types of toxics should not be released

15 in the environment in the first place. Their use

16 should be controlled. Their disposal should be

17 controlled right from the source in a limit and

18 mass balance approach and with that kind of approach,

19 these materials for which there is the greatest

20 concern could be properly kept from influencing and

21 accumulating within the environment.

22 I would like to make one last comment, and

23 that has to do with something again said in the

24 opening remarks this morning, and that was that at

25 the time of submittal for the waiver, the applicant

1 not only had the burden of proof, which is reasonable,
2 but had to have every bit of documentation and support
3 essential to prove his case in his application form.
4 I have with me today six inches of past
5 reports, which are just a small quantity of data
6 that we have accumulated; and if you are asking that
7 we furnish you absolutely everything we have to be
8 sure we have covered every question that you might
9 think of, you are asking for a monumental submittal
10 of application data and material.
11 I'd suggest that your regulations should
12 certainly require that the applicant speak to every
13 criteria that you have established; but if he fails
14 to have provided a specific bit of data, there must
15 be some room for give and take in the discussion of
16 those issues so that such data can be presented,
17 if available, and considered in coming to the final
18 decision.
19 I think it's unreasonable to expect that
20 each applicant will have thought of every question
21 the EPA might think of in reviewing his form prior
22 to his application.
23 Thank you.
24 CHAIRMAN JORLING: Thank you, Frank.
25 Paul, do you have any questions?

1 MR. DE FALCO: Yes.

2 Frank, could you give me a little feeling,

3 for you are doing some wastewater reclamation --

4 MR. DRYDEN: Yes.

5 MR. DE FALCO: -- relatively speaking,

6 just in gross magnitudes, what is the cost of reclaim-

7 ing water as opposed to secondary treatment as

8 opposed to primary or Ocean Plan treatment?

9 MR. DRYDEN: The cost of reclaiming water

10 has gone up with the advent of tertiary mixed-media

11 filters. There was a time when the cost of reclaim-

12 ing water would be comparable to the cost of

13 secondary treatment and ocean discharge. It is now

14 more costly than even secondary treatment into ocean

15 discharge, and it is obviously more costly than some-

16 thing that encompasses somewhat less.

17 And, in our case, you must recognize we

18 are committed to 200 mgd of biological secondary

19 treatment out of a total flow of 350 at the present

20 time. And we expect that flow to decrease as we

21 increase our water reuse program.

22 So we are talking about having 60 percent

23 of our system in biological secondary.

24 We are also talking about a major change,

25 and that is just going into effect now, and yet we

1 can already see the changes in the marine environment
2 of removing the centrate solids from our sludge,
3 digested sludge dewatering system, a major effort
4 which is going to take time to see all of the effects.
5 But we can already see a significant change.
6 So that these -- these projected changes,
7 we think, need to be taken into account.
8 From a cost standpoint, water reclamation
9 will cost more. We think it's worth it. We think
10 the water is worth it, and we are committed to doing
11 it.
12 MR. DE FALCO: That was my next question.
13 Apropos of worth or value of the water,
14 are you finding a market for that water?
15 MR. DRYDEN: As you are aware, I'm sure
16 that we are involved in a major study to try and
17 determine a suitable market for the water. The
18 market is not there. It's not sitting out there.
19 We have water now that is not being used. It's being
20 treated to the point where it could be used. It is
21 not being used.
22 There are many reasons for this. Some of
23 them are health reasons; some of them are practical
24 reasons in terms of delivery systems that are needed.
25 There are institutional problems to be overcome.

1 We think they can be overcome with studies
2 and with mutual efforts that are being mounted in
3 the Los Angeles/Orange County area.
4 It's going to take time. We have been work-
5 ing on this for 30 years, and we still at the present
6 time only have about four mgd, which is only about
7 half of our present treated flow, that could be used
8 in use.
9 But the drought has provided considerable
10 impetus for the concern for reuse. We are hoping
11 to ride that impetus into an expanded program.
12 The support of the state, the support of
13 the EPA, for reuse are tremendous lifts to our
14 program, and we expect it to develop over the next
15 five to ten years so that we hope all of the good
16 quality water that we have will be used.
17 I mention "good quality." Because some
18 people forget that the water which is going to the
19 ocean is very salty water. From the Los Angeles area,
20 we have many poor quality water supplies to begin
21 with. You get concentration of waters in addition
22 to salts during use. The water that we are putting
23 into the ocean could not be practically reused with-
24 out very expensive desalinization processes. That
25 water is going to continue to go to the ocean whether

1 it's given secondary treatment or filtered or any-
2 thing unless it was desalted, and desalting is --
3 really seems to be economically out of the picture
4 at this time.
5 I think people mustn't forget that because
6 it's easy to look at it and say, "Why don't you reuse
7 it all?"
8 And the answer is, "The salt."
9 So we are segregating the good quality
10 water, treating it with biological processes and
11 filters and putting it to use. All that does is
12 increase the salt content of what's left. It needs
13 to go to the ocean.
14 CHAIRMAN JORLING: Thank you very much.
15 Petersburg, Alaska,representatives John
16 Floden and David Moffat.
17 MR. DAVID MOFFAT: Ladies and gentlemen
18 of the panel and the remaining audience:
19 My name is David Moffat. I am the City
20 Manager of Petersburg, Alaska.
21 And, as you will note, the EPA got to us
22 fourth from the bottom on today. I wish they could
23 have done that with the Federal Water Pollution
24 Control Act of 1972, otherwise known as Public Law
25 92-500.

1 If we are not one of the first in Alaska,
2 and possibly the United States, I will be very
3 surprised to have secondary treatment now going on
4 the line.
5 I had planned to deal in great detail with
6 the economic and political impact in the community of
7 such a situation. However, because of the lateness
8 of the hour and the desire to have our Engineer
9 handle some, what I feel are even more important
10 aspects, I will limit myself considerably.
11 Although we are not as far as away as
12 Samoa, Guam, Saipan and the Trust Territories, some-
13 times I genuinely feel we are as geographically
14 remote. And many of the things I heard those
15 gentlemen saying I felt would apply to our situation.
16 Certainly, we are environmentally unique.
17 We have on line a secondary treatment plant that is
18 the most magnificent edification in the community of
19 Petersburg. Whenever anybody, engineer-wise, friend
20 of mine comes to town, I always drive him up there,
21 and they always whistle, and I always think, "Oh,
22 if only the fellow who designed -- the architect
23 who did the schools had done the wastewater treat-
24 ment and the fellow who did the wastewater treat-
25 ment had done the schools, we would be in beautiful

1 shape."

2 But we have our problems, and it's

3 difficult in my role as City Manager to answer 2,126

4 peoples' questions as to why we have secondary treat-

5 ment when I haven't the faintest idea myself. And

6 no engineer I have ever spoken with feels that we

7 need it.

8 I know nothing about this -- I have listened

9 all day, and much of what I heard, I don't -- I'm

10 not fully aware of, I would be the first to admit.

11 I do know that we have a plant that, for reasons

12 again that escape me -- Maybe my Engineer will speak

13 to them -- it frequently doesn't work. The Public

14 Works Director calls me at midnight and says, "I

15 have to bypass."

16 Finally, I told him, "Don't call anymore.

17 You have got an automatic bypass. Bypass. Don't

18 wake me up to bypass."

19 He's bypassing anyway.

20 The plant is, by engineering estimates,

21 two to four times larger than the city would need.

22 My Engineer will explain. In a community that size,

23 we are very cognizant and aware of health and

24 sanitary needs. And the plant, in fact, is self-

25 defeating, as he will explain to you.

1 I said to a United States Senator on the
2 phone the other day, who is very popular in Petersburg,
3 I said, "If you come and see us and promise you
4 don't let anybody know, I will take you from house
5 to house and quick act like you have to go to the
6 bathroom, and they will run ahead of you because
7 nobody in Petersburg flushes the toilet."
8 We have the water in, water out. You have
9 to save the water.
10 My first official act in four -- I should
11 add, I'm in Petersburg 20 months. My Engineer is
12 there six months. Had I been there in '72, we
13 would be much closer to the bottom on this
14 implementation. I can assure you of that. But that's
15 neither here nor there.
16 I'd finally like to say I have read the
17 amendments pretty carefully, and I don't quite under-
18 stand how they speak to waivers as regards
19 situations such as mine where we already have it.
20 We have got seven to eight million dollars worth.
21 And I have even asked the same Senator what I should
22 do about that, and I will refrain from giving you
23 his answer.
24 At this point I will turn it over to my
25 Engineer, and I thank you very much for giving me

1 the opportunity to testify.

2 MR. JOHN R. FLODEN: Members of the panel:

3 My name is John Floden. I'm the City

4 Engineer for the City of Petersburg.

5 Basically, I have got two parts to my

6 statement. First, an introductory statement telling a

7 little bit about the plant, and then some specific

8 comments on the criteria.

9 Our introductory statement may sound a

10 little specific as a case-type statement, but I

11 feel that it's necessary to establish our position

12 concerning the waiver question.

13 The City of Petersburg is located in

14 Southeastern Alaska. It's centrally located in

15 the Alaskan Panhandle.

16 And, members of the panel, I'm going to

17 paraphrase a little bit through this statement so

18 that I don't have to read it verbatim.

19 It lies on Frederick Sound right near

20 where the Wrangell Narrows enters Frederick Sound.

21 The climate is a maritime climate. The

22 annual precipitation for Petersburg is 106 inches;

23 annual snowfall is 103 inches.

24 The town is an old town with a fishing-

25 based economy. The population has a growth rate of

1 about four percent in recent years. The present
2 population, as Dave mentioned, was 2,126, and the
3 1993 estimate is 4,000.
4 Prior to the present wastewater treatment
5 project, sewage wastes from the City of Petersburg
6 were collected and dumped at 11 point outfalls into
7 the Wrangell Narrows and/or Frederick Sound. Some
8 of these outfalls were above low water at the tides
9 and, thus, did create a nuisance problem.
10 In October of 1972, the city began to work
11 on a wastewater treatment system. The system was to
12 be financed 75 percent federal, 12 and a half state
13 and 12 and a half local. The project was divided
14 into two phases. The first phase was construction
15 of a force main sewer, with pump stations built to
16 connect the existing outfalls and to route the wastes
17 to the new plant site. A deep water outfall was
18 also constructed during Phase 1. Phase 2 consisted
19 of construction of the actual treatment plant.
20 At this time, the City of Petersburg has
21 accepted the major part of the system as substantially
22 complete. The contractor is still on site, finishing
23 incineration equipment where work is cleaning up
24 punch-list items of Phase 2. The plant has been on
25 line since the spring of 1977.

1 We were -- We did comply with the 1972 law.
2 Obtaining adequate growth in our biomass on the
3 ABS tower was difficult, but due to a nice summer
4 for the City of Petersburg last year, which was a
5 drought down here, we did get adequate growth on that
6 tower. Otherwise, we wouldn't have made it accord-
7 ing to certain engineers.
8 Operation has continued since that time,
9 with very many difficulties.
10 What have we obtained by having this plant
11 on line? We get good treatment of the waste flows
12 that go through the plant. Unfortunately, the plant
13 is bypassed periodically so that no treatment results
14 at these times.
15 Further, approximately 100 homes in the
16 town are not hooked up to the sewer system because
17 they are too low to be hooked up without expensive
18 pump systems. Sewage from these is turned into the
19 Wrangell Narrows, the same as it has always been.
20 Effectively, about two-thirds of the wastes are thus
21 treated.
22 The other major problem that results from
23 the sewage treatment plant is the defeat of the
24 basic reason for a water-borne waste system. That
25 is, to remove wastes from the home as

1 quickly as possible for sanitary and health reasons.
2 The 12 and a half percent local share is being paid
3 for with revenues derived from plant operation. With
4 a $13 minimum for the first 1,000 gallons of water
5 use, and a 50 cent charge for every 1,000 gallons
6 thereafter, plus a similar water bill, the people of
7 Petersburg, in an attempt to save water and cut their
8 monthly water and sewer bills, no longer flush their
9 toilets.
10 On a spot check of homes, you could probably
11 find 90 percent with sewage waste in the toilets,
12 defeating the very purpose of sewage collection and
13 treatment, creating an unsafe sanitary condition.
14 The question should be asked, "Is all this
15 all really necessary?"
16 The outfall for the system is 1300 feet
17 offshore and is 60 feet below mean low low water. At
18 this point, the bottom drops away very quickly.
19 Another thousand feet of pipe outfall would put us
20 into water over 400 feet in depth.
21 The estimated 1993 average sewage flow for
22 the City of Petersburg is 1.24 cfs. The estimated
23 flow based on currents in Frederick Sound is
24 19,200,000 cfs.
25 In looking at these figures, it is absurd

1 to say that the City of Petersburg's sewage wastes
2 impact on the water environment of Frederick Sound.
3 Considering our statement as made, the
4 City of Petersburg is very concerned that, after we
5 have gone to the trouble, time and expense of putting
6 in a major waste treatment facility, that now the
7 regulations and requirements will be changed, and it
8 will be decided we did not have to go to this trouble,
9 time and expense. We are unique in this matter because
10 we have already installed a secondary treatment
11 facility, and we are further unique because we feel
12 that not only is secondary treatment not needed for
13 Petersburg, but that primary treatment is also
14 unnecessary because of the minuscule amount of waste
15 generated by Petersburg and discharged into Frederick
16 Sound and creates no environmental degradation or
17 impact.
18 Further, an economic hardship has been
19 created and placed upon the people of Petersburg by
20 the requirement for unnecessary treatment. This
21 economic hardship has further caused a potential
22 health hazard because it has created unsanitary
23 conditions in the homes of Petersburg residents on
24 their attempt to conserve on water use and thereby
25 reduce their monthly billing.

1 Just an off fact on that. The average
2 monthly sewer and water bill in Petersburg runs
3 between $50 and $70.
4 Since the requirements of sewage treatment
5 came by way of the federal government, the City of
6 Petersburg feels that the federal government is
7 responsible and should remedy the situation.
8 The City of Petersburg proposes the follow-
9 ing two remedies to the situation:
10 That the plant be bypassed permanently;
11 that the federal government reimburse the city its
12 12 and a half percent share of costs expended to
13 date; or that
14 Two. That the plant be operated to treat
15 the wastes of Petersburg to a secondary level of
16 treatment in order that the money spent to date not
17 be totally wasted, and that the city be reimbursed
18 its 12 and a half percent share since the plant is
19 not needed and would only be operated for show, and
20 that the city be given a yearly grant equaling the
21 cost of operation, maintenance, and administration
22 to pay for the operation of the unneeded plant.
23 The additional pages in the statement are
24 data-type information, and while our conclusions in
25 that opening statement are not specifically geared to

1 the secondary waiver, we are continuing to work on
2 those and other means.
3 Our specific comments on the criteria are
4 the September, 1977, deadline for applications is
5 too early unless this is to be interpreted as a dead-
6 line for giving a notice of intent to apply for the
7 waiver. Otherwise, funds should be given to small
8 towns and communities to bear the cost of the
9 unnecessary or the necessary consultants which would
10 be required if we have to do it in such a short time.
11 If we have further time, we can do it in-house, which
12 is more bearable to a small community.
13 On Item No. 2, recreational activities
14 should be defined specific to an area and not by an
15 overall general definition.
16 Item 3, the extent of the monitoring
17 requirements should be based on the extent the
18 community can afford to pay.
19 On the fourth item, this should be strictly
20 interpreted by EPA, we feel, in order to protect
21 small communities, such as Petersburg, from large
22 dischargers who can more easily pay for secondary
23 treatment.
24 On the seventh item, allow for a
25 community growth during the five-year waiver time and

1 for continued growth during each subsequent waiver
2 granted.
3 From the above five statements that I made,
4 it can be seen that the community of Petersburg feels
5 very, very strongly that community size is a very
6 important factor in the regulations that are going
7 to be adopted; that smaller communities should
8 definitely be given some type of advantage in apply-
9 ing for this waiver because the costs that they have
10 to bear for treatment are much greater percentagewise
11 per person.
12 Our main comment is that those communities
13 which have complied with the law and have constructed
14 secondary treatment facilities to date be not
15 excluded because of their prior good faith from now
16 obtaining a waiver of the unneeded treatment in
17 order that we can remove this burden from the
18 shoulders of the people in these small towns.
19 We do want to state we will be applying
20 for a waiver unless we are specifically excluded
21 because we already have treatment.
22 That's all that I have.
23 CHAIRMAN JORLING: Any questions?
24 MR. DUBOIS: Did I understand you correctly
25 that you said $50 to $70 per month for the sewage bill

1 alone?

2 MR. FLODEN: No. That is sewer and water.

3 MR. DUBOIS: How much of that for each?

4 MR. FLODEN: It's about half and half.

5 MR. DUBOIS: All right.

6 MR. FLODEN: A slight bit more to the

7 sewage.

8 CHAIRMAN JORLING: Thank you.

9 Our next witness is Ramon Guzman from Puerto

10 Rico.

11 MR. RAMON M. GUZMAN: My name is Ramon

12 Guzman. I am representing the Puerto Rico Aqueduct

13 and Sewer Authority of the Commonwealth of Puerto

14 Rico.

15 I wish to start my brief presentation by

16 borrowing a phrase from the gentleman from the Metro

17 system who started his presentation earlier this

18 afternoon when he said that Congress should be

19 congratulated for attaining these amendments to the

20 Water Pollution Control Act. I think that rather

21 than congratulate, maybe the best words would be

22 the very needed corrections that Congress is intending

23 to do, not only making this correction, and this is

24 a secondary thing, but as well we all know that there

25 are some other corrections that maybe at a later time

1 Congress might make for these needed corrections.
2 We all know that 92-500 does not allow
3 flexibility of waste treatment as it was the
4 Congressional intent to provide equity among the
5 municipalities and industry. It is known that this
6 equity concept that the Act requires does not
7 differentiate between receiving bodies of water,
8 their capability for waste assimilation or
9 geographical conditions. But we all know that this
10 concept of equity has brought many controversial
11 and possibly unjustified limitations at areas where
12 the concept of environmental protection could be
13 done at a much lower expense of funds and, on some
14 occasions, with less total environmental degradation.
15 The proposed modification of Section 301 of 92-500
16 is, in our opinion, a forward step toward different
17 approaches in some special cases.
18 I remember Congressman Jim Wright, speak-
19 ing to the Oversight Committee in Washington to
20 discuss the implementation of 92-500, who stated as
21 follows:
22 "One cannot speak of the grant
23 program without getting into EPA's
24 definition of secondary treatment. Its
25 definition and its application nationwide

1 has caused considerable consternation
2 because some communities, looking at
3 a variety of local circumstances,
4 consider it to be wasteful, excessive
5 and even environmentally unsound. To
6 mention only a few situations where
7 greater flexibility would seem to be
8 appropriate are those conditions where
9 the outfall pipe empties into the deep
10 ocean."
11 And the Water Quality Strategy Paper
12 prepared by the EPA staff years ago says:
13 "Common sense dictates that the
14 economic and environmental effects of a
15 course of action should be considered
16 together and that there should be a
17 regulation comparison of these with the
18 costs and benefits of other courses of
19 action."
20 One of the conditions for the modification
21 of secondary treatment requirements proposed requires
22 the need to maintain water quality and the protection
23 and propagation of a balanced, indigenous population
24 of shellfish, fish and wildlife.
25 Biologists can run bioassay analyses and

1 determine the TL levels for the marine line prevailing
2 in the area of discharge and then set a limitation
3 based on their tolerance limits.
4 It is possible now to have a biological
5 modular which can indicate the effect of any discharge
6 in the ecosystem, just as we put data on an air
7 emission model to predict the effect of the plume
8 discharge to the air.
9 EPA has its own mathematical model to
10 determine the dilution when wastewaters are discharged
11 to the ocean through a submerged outfall. These
12 technologies can assure complicance with the require-
13 ments of the proposed modification. Another condition
14 requires that the applicant should establish a
15 schedule of activities designated to eliminate the
16 entrance of toxic pollutants.
17 We have done calculations to determine the
18 residual concentrations on toxic pollutants once
19 discharged through a submerged outfall for at least
20 one of our systems. These calculations, based on
21 prolonged studies, indicated concentrations much
22 below the tolerance limits for these species of
23 marine life indigenous to the area of discharge.
24 We consider that when toxic or trouble-
25 some ions are present, pretreatment must be provided

1 to permit the discharge of wastewaters through a
2 submarine outfall. Toxic ions can be controlled
3 through pretreatment requirements in the regulation
4 for admittance of wastewaters to the municipal
5 sewerage system.
6 The publicly owned system can request pre-
7 treatment of some of the industrial wastewaters, and
8 thus limit the concentration of the toxic or any
9 troublesome ion that may adversely affect the receiv-
10 ing waters. The pretreatment consideration in primary
11 treatment with ocean outfalls is a safety measure
12 to insure that no toxic ion could be present in
13 concentrations that will be detrimental to the marine
14 line in the area of discharge.
15 We consider also that with the provisions
16 indicated in the proposed modifications for secondary
17 treatment requirements, the maintenance of the state
18 water quality criteria, and adequate monitoring, among
19 other reasons, will assure the maintenance of good
20 conditions, fulfilling the requirements of 92-500 in
21 the spirit of the law.
22 There is no limitation on dissolved oxygen
23 in submarine outfalls, provided that an adequate
24 diffuser system is designed. Even in Puerto Rico,
25 where the prevailing tropical climate results in lower

1 DO saturations because of higher temperatures as
2 compared to the U.S. mainland, the depletion of
3 oxygen does not go far. One item of consideration
4 is the long-term oxygen demand compared with the
5 short term. The five-day BOD test, at 20 degrees
6 Centigrade, which is used in Puerto Rico, seldom
7 applies to their local conditions.
8 It does not take more than ten to twelve
9 hours at any point in Puerto Rico for a discharge
10 to reach the ocean waters. Thus, the oxygen demand
11 of wastewaters discharged into receiving streams in
12 Puerto Rico will be oxidized in the ocean, right on
13 the shoreline. Through an ocean outfall, the oxygen
14 demand will be satisfied in a more efficient way than
15 in plants providing secondary treatment, as the
16 effluent in the latter goes to the shoreline.
17 The higher the degree of treatment, the
18 higher the cost and non-water quality considerations.
19 But has the non-water quality considerations that
20 92-500, in Section 304 (1) (b) (1) been taken into
21 consideration for coastal communities? We do not
22 think so. It is the same regulation which provides
23 no flexibility of treatment. The higher degree of
24 treatment, the higher the need for additional energy,
25 and consequently use of fuel. Puerto Rico, as well as

1 Hawaii and the Virgin Islands, must depend fully on
2 the import of fuel at a very high cost.
3 Senator Fong of Hawaii has stressed the
4 need to include benefit-cost considerations in
5 environmental projects. Scientific research in
6 Hawaii has already demonstrated that advanced primary
7 treatment is sufficient for Honolulu and that
8 secondary treatment with full chlorination is neither
9 relevant nor cost-effective and is particularly
10 "wasteful of resources."
11 Such also is the opinion of the Commonwealth
12 of Puerto Rico, where it has been demonstrated by
13 actual operations that the receiving waters can be
14 adequately protected without the necessity of spend-
15 ing unnecessary public funds.
16 In the meantime, the Commonwealth of Puerto
17 Rico does not have the needed funds to provide
18 adequate water pollution control programs through
19 construction of secondary facilities at many of its
20 communities. The use of the limited public funds for
21 overprotection of the ocean waters without enough
22 funds to protect the inland surface waters at other
23 communities is not, in our opinion, environmentally
24 sound.
25 While being a member two years ago of the

1 Effluent Standard and Water Quality Information
2 Advisory Committee created under Section 515 of 92-500,
3 we had the chance to discuss some of these
4 inconsistencies of the Act. This topic of ocean out-
5 falls surfaced as one in which modifications should
6 be done to make the mid-course corrections to P.L.
7 92-500.
8 A point of consideration in our specific
9 case is that Puerto Rico has the lowest per capita
10 income among the 50 states. Puerto Rico does not
11 even have the necessary public funds to match the
12 federal funds. When you consider that 70 percent
13 of the publicly owned treatment works in the
14 continental U.S., with a much healthier economy than
15 Puerto Rico could not attain the BPCTCA concept by
16 the statutory deadline, you must imagine how uphill
17 the road has been for us. We cannot afford to use
18 public funds in overprotection of the receiving
19 waters, when there are inland communities with no
20 waste treatment at all, and many others that must be
21 upgraded.
22 The EPA Region II determined after the July
23 1st deadline that 90 percent of our publicly owned
24 treatment works did not meet the requirements, not
25 because the Island is not conscious of the need to

1 protect the surrounding waters and our beaches, but
2 because of lack of funds.
3 We are including as part of this
4 presentation an estimate of the average cost per family
5 needed to construct municipal sewage systems to
6 groups in Puerto Rico which at this time are not
7 served by this necessary service. There are at this
8 time 473,366 families which do not have sewer service.
9 This means that less than half of the families in
10 Puerto Rico are not served by a public sewerage
11 system. The Island needs $265 million to provide
12 this service.
13 On the other hand, the estimated additional
14 cost in 20 years to provide secondary treatment to
15 wastewater treatment facilities on coastal
16 municipalities is about $123 million. This is what
17 we referred to previously as overprotection of ocean
18 waters, at the rate of $123 million, while these
19 473,000 families do not have any sewerage services.
20 There are 207 community areas in Puerto
21 Rico, with a total of 71,780 families, which have
22 no sewerage service. You can imagine the public
23 health problems existing and those that can be
24 solved by serving these families. There are also
25 another 401,586 families that do not live in these

1 communities. Neither of these are served by
2 sewerage systems.
3 With the $123 million for secondary treat-
4 ment at the coastal communities, Puerto Rico can match
5 funds for a total of $228 million, which together with
6 the state funds will make a total of $351 million.
7 We can construct with these funds the facilities to
8 serve these 207 municipalities.
9 These systems have already been designed.
10 Puerto Rico needs these $123 million for the need to
11 provide sewer service to the smaller communities.
12 In fact, these inland communities are composed of
13 families with the lowest per capita income.
14 In approving the proposed legislation for
15 secondary treatment required amendments, Congress at
16 the same time is making a mid-course correction in the
17 implementation of 92-500, and correct one of the
18 inconsistencies of the Act that has been the subject
19 of wide disagreement among engineers, scientists,
20 and municipal and state officers. We hope that
21 Congress approves this amendment.
22 We are not here to present the specific
23 case of Puerto Rico, but to defend a legislation that
24 will also benefit other areas in the United States,
25 and which does not violate the Congressional intent

1 to protect our surface waters. It is, in our opinion,
2 within the spirit of the law, which sets a goal to
3 greatly reduce pollution in the nation's waters.
4 Thank you very much for this opportunity
5 to present our points of view. Those are our
6 comments for this presentation.
7 CHAIRMAN JORLING: All right. Thank you
8 very much.
9 Does anyone have any questions?
10 MR. DE FALCO: No.
11 MS. FRIEDMAN: No.
12 MR. DUBOIS: No.
13 CHAIRMAN JORLING: Thank you.
14 It's just about 6:00. We have four witnesses
15 to go. I think, rather than have a break for dinner
16 and come back, we will try and test everybody's
17 patience.
18 So our next witness is Ken Ensroth from
19 the Seattle Chapter of the Sierra Club.
20 MR. KEN ENSROTH: I want to thank you, Mr.
21 Jorling and the panel and the hearing reporter, for
22 being very patient and courteous throughout the long
23 technical hearing. You made this day much more
24 bearable for all of us.
25 My name is Ken Ensroth, and I am a research

1 assistant on water issues for the Northwest Office
2 of the Sierra Club, 4534 1/2 University Way, N.E.,
3 Seattle, Washington 98105.
4 I am also appearing today on behalf of the
5 National Sierra Club office at 530 Bush Street,
6 San Francisco 94108, and the Clean Water Coalition of
7 Metropolitan Seattle.
8 Before giving our substantive comments, we
9 would like to register our concern with the inadequacy
10 of the EPA's public participation efforts in this
11 matter. It was our understanding that EPA was going
12 to solicit citizens' views in a wide-ranging hearing
13 schedule. Yet to date this is the only hearing that
14 has been announced.
15 It is also entirely unclear to us as to
16 whether EPA has already drafted regulations on
17 secondary treatment waivers for deep ocean dischargers,
18 or whether you are still in the process. The January
19 27 draft of the preliminary concept papers on the
20 Clean Water Act Amendments simply says under Ocean
21 Outfalls:
22 "Not available as part of this
23 package; Project being accomplished
24 separately."
25 Such a section appears to be totally absent

1 from the February 10 draft. Where and when is this
2 project being accomplished? Why were citizens not
3 involved from the beginning of the process? What
4 opportunity is there for written comment?
5 We hereby request that similar hearings be
6 held in a reasonable geographic distribution around
7 the country as our membership in the Northeast,
8 Northwest, and elsewhere believe that they have some-
9 thing to say on this matter.
10 We also ask for reasonable advance notice
11 of hearing dates. Our San Francisco office received
12 only two weeks' notification of this hearing. Many
13 interested citizens received no notification at all.
14 We believe that the Clean Water Act mandates
15 full public involvement and that EPA's efforts on
16 this question have been less than satisfactory.
17 The process and the time frame for
18 consideration of marine discharge waivers from
19 secondary treatment have not been clear to the
20 general public. In Seattle, information in the press
21 from Metro seemed to indicate that Metro would have
22 little difficulty in obtaining a waiver. We believe
23 that this is not the case and that the public needs
24 to be informed.
25 One of our primary concerns when discussing

1 waivers from secondary treatment is the adverse
2 impact of toxic chemicals on aquatic biota. Acute
3 toxicity, as well as chronic toxicity, bioaccumulation,
4 and physical accmulation make many components of
5 primary sewage effluent potentially very hazardous
6 to marine life. Secondary treatment removes not only
7 80 to 90 percent of BOD and suspended solids, but
8 also the majority of most toxic chemicals through
9 biochemical action on the chemicals themselves, and
10 by removing chemicals adsorbed to suspended solids.
11 A recent study of sewage effluent
12 constituents in San Francisco Bay showed that
13 detergent residues had the highest toxicity to marine
14 line of these constituents. Detergent is
15 substantially removed from the effluent by secondary
16 treatment. Most heavy metals are also removed by
17 secondary treatment. These factors need to be taken
18 into account.
19 By removing a high percentage of the toxics
20 and heavy metals, the effluent can be safely reused
21 in a wide variety of applications, from irrigation to
22 watering city parks to stream flow augmentation to
23 whatever. The recent period of western drought has
24 shown us we cannot take the resource value of water
25 for granted. With rising demands on water supply,

1 the resource value of reclaimed water is also
2 increased.
3 As to the question of pretreatment, we
4 believe the municipality should be required to show
5 proof of a history of compliance with the current
6 federal standards, not only in their regulations, but
7 also in their monitoring and enforcement.
8 The 1975 list of major commercial
9 dischargers to Seattle Metro's sewage system compiled
10 by Metro Engineers has some rather questionable
11 entries:
12 Pacific Garages discharges 27,000 gallons
13 per day of acids, caustics, resins, solvents,
14 fertilizers, detergents and chemicals, COD, BOD, SS,
15 and oil. The treatment method listed for this
16 discharge is "pretreatment being developed."
17 Bethlehem Steel discharges 32,000 gallons
18 per day of tin, zinc and oil, with no pretreatment
19 listed.
20 Many other dischargers of toxics to Metro
21 appear to have only minimal pretreatment facilities.
22 And the monitoring and enforcement of dischargers
23 that do have substantial pretreatment listed is
24 unclear.
25 Before Metro, or any other municipalty, is

1 granted a waiver from secondary treatment, they should
2 prove that they have attained a high level of pre-
3 treatment, and that their effluent meets toxics
4 standards equivalent to, or greater than, secondary
5 treatment. Such a proof would not only help to
6 protect water quality and aquatic biota, it would
7 allow for the safe application of sludge to
8 agricultural crops and other land disposal methods.
9 Many of the locations where this type of a
10 waiver could theoretically be considered are part of
11 complex estuarine systems, such as Puget Sound and
12 San Francisco Bay. We are only beginning to under-
13 stand the high resource value, both economic and
14 biological, of estuaries.
15 Page 67 of the regional environmental
16 impact statement on Metro's proposed sewage
17 facilities states that:
18 "Estuaries, such as Puget Sound,
19 also serve as nurseries for a number of
20 aquatic organisms, providing food and
21 shelter for embryonic larval, juvenile
22 and adult life stages. Early life stages
23 are especially sensitive to environmental
24 conditions."
25 Puget Sound and San Francisco Bay are also

1 important migratory corridors for anadromous fish and
2 many bird species. Protection of these resources
3 must be a major aspect of the cost/benefit analysis
4 of secondary treatment.
5 We believe the municipality should be
6 required to monitor not only dischargers to its
7 system, but also the quality of its effluent and the
8 receiving water body, for a period of time before a
9 a waiver is granted. Such monitoring should
10 demonstrate that the municipality is not discharging
11 harmful quantities of toxic chemicals. If a waiver
12 is then granted, continual and frequent monitoring
13 of the discharge and the receiving body should be
14 required. If at any time it is found that the
15 discharge is having a significant adverse impact on
16 the receiving body, the waiver should be reevaluated
17 and possibly revoked. All monitoring should be
18 corroborated by independent monitoring by EPA or an
19 appropriate state agency.
20 The question of how to define a "balanced,
21 indigenous population of shellfish, fish and wild-
22 life" is a difficult one. However, the species
23 composition historically present in a given area
24 should be considered.
25 San Francisco Bay once had an indigenous

population of Dungeness Crab. The reasons for their disappearance are not clear, but pollution is quite possibly a factor.

Page 71 of Metro's regional EIS states that "while no direct cause-and-effect relationship can be demonstrated at West Point (Metro's largest facility), the evidence thus far suggests that the deep water fish community there may have been altered by the discharge of wastewater."

Clearly, much more research needs to be done. In any case, decisions on this criteria should not be based on acute impacts,such as fish kills which only show gross water quality deterioration.

It is not clear to us from Criteria 7 who and what is and will be eligible for a waiver. We feel that an applicant should be allowed no increase or relocation of their discharge from the time they apply for a waiver. The cumulative impacts of granting more than one waiver in an area should be evaluated as part of Criteria 4.

Puget Sound has several major municipal dischargers. Granting them all waivers could result in excessively high chronic pollutant loadings. All potential applicants should be evaluated in relation to each other and to other pollutant sources

1 in the area. This could perhaps best be accomplished
2 through the statewide 208 planning program.
3 Industry is still pushing for waivers
4 similar to 301 (h), as evidenced by a February 2,
5 1978, letter to the editor of the "Seattle Post-
6 Intelligencer" from ITT Rayonier, which complained
7 of unequal treatment by Congress of cities and
8 industries. We would not want to see poor planning
9 lead to cumulative impacts and dangerous precedents.
10 Related to this concern,we feel that
11 absolute quantitative limits, in pounds per year or
12 a similar measure, for toxics discharged to marine
13 waters are needed. Given the unknowns of bio- and
14 physical accumulation, toxic loadins must be limited.
15 We interpret Criteria 8 and other statements
16 by EPA to mean that the water quality goals in the
17 Clean Water Act come first. page 75 of Metro's
18 regional sewage EIS says:
19 "Virtually all of the Metro
20 Puget Sound beach and offshore stations
21 failed to meet the state fecal coliform
22 standard for commercial shellfish waters
23 in 1976."
24 For Metro to be granted a waiver from
25 secondary treatment under such conditions seems to us

1 to be a radical shift from the direction of the Act.
2 Reaching the water quality goals of the Act must come
3 first.
4 The announcement from Region X concerning
5 this hearing paraphrases Senator Edmund Muskie,
6 Chairman of the Senate Environmental Pollution
7 Subcommittee, which drafted the recent amendments:
8 "He intends that, if there are
9 any doubts about the necessary level of
10 wastewater treatment, it should be
11 resolved on the side of water quality
12 protection."
13 We concur with that judgment.
14 Thank you for your consideration and
15 patience.
16 We will be submitting further testimony in
17 written form, and I would be happy to respond to
18 any questions.
19 CHAIRMAN JORLING: Thank you, Ken.
20 With respect to your first set of questions,
21 the materials that will be generated following this
22 meeting will be made available to those people that
23 have appeared as witnesses and others who have
24 indicated special interest in this. So you will have
25 many additional opportunities.

1 Thank you.
2 MR. ENSROTH: Thank you.
3 CHAIRMAN JORLING: Thank you for your
4 patience.
5 MR. ENSORTH: Certainly.
6 CHAIRMAN JORLING: Wilson Fieberling of
7 the City of Santa Cruz.
8 MR. WILSON FIEBERLING: My name is Wilson
9 Fieberling, Director of Public Works of the City of
10 Santa Cruz.
11 I have made some small changes in the
12 written text and in light of the prior testimony and
13 in the interest of brevity.
14 Ours is a small seacoast city of 38,000
15 people, about 75 miles south of San Francisco, on
16 the north shore of Monterey Bay.
17 Our present outfall is a half-mile long,
18 discharging into 40 feet of water. The planned
19 extension is about two and a half miles long,
20 discharging into a hundred feet of water.
21 Now, this may sound similar to you. You
22 heard earlier from the City of Watsonville, which
23 is about 25 miles south of us, the only difference
24 being that our discharge is actually into the open
25 ocean rather than into the center of Monterey Bay;

1 another difference being that our city is somewhat
2 more residential in character, somewhat less industrial
3 waste.
4 Our treatment plant has been selected as
5 a regional facility to provide sewage treatment for
6 most of Northern Santa Cruz County, and the consolida-
7 tion program is eliminating two outfalls into
8 Monterey Bay.
9 Our present daily flow is about ten million
10 gallons per day, and the plant is capable of producing
11 21 million gallons per day processing.
12 We are completing a two-year $1.3 million
13 201 facilities plan study. Included in this study
14 was a $470,000 oceanographic investigation, which
15 was very complete. The results of this study show
16 conclusively that advanced primary treatment effluent
17 conforming to the California Ocean Plan will have
18 no harmful effect upon the ocean.
19 I have the following comments to make on
20 the questions raised in your public notice.
21 First of all, the application of state
22 water quality standards.
23 We believe it is only reasonable that state
24 water quality standards apply rather than the BOD_5,
25 suspended solids and pH parameters. The latter

1 parameters are meaningless when measured in ocean
2 water after dilution has occurred.
3 I would like to expand on the point of
4 state involvement. The State of California has
5 already meticulously considered the effects of waste
6 discharge on the environment. The comprehensiveness
7 of research completed and the regulatory process
8 far exceeds that undertaken in any other state or
9 at the national level.
10 In developing its Ocean Plan, California
11 has provided almost all the criteria needed for
12 establishing grounds for waivers in the state.
13 Coupled with adequate monitoring and enforcement
14 programs, the application of the Ocean Plan to each
15 discharger will result in adequate environmental
16 protection.
17 The second is the definition of "balanced,
18 indigenous population."
19 We think it unwise to come up with
20 universally applicable definitions about health of a
21 population. Some latitude should be given to the
22 regional boards in applying this criteria on a case-
23 by-case basis. A distinction should be made between
24 existing discharges and new discharges. Criteria
25 for existing discharges must be devised which reflect

1 the fact that the biota may already have been
2 disturbed in the vicinity of the outfall.
3 In the case of Santa Cruz, an inadequate
4 outfall is being replaced with a longer and deeper
5 outfall at a new location. In this case, we have
6 the opportunity to conduct predischarge monitoring
7 to carefully quantify the "before" state. Certainly,
8 the "before" state must be the best definition one
9 can provide of a "balanced, indigenous population."
10 It should be the point of comparison for
11 post-discharge studies to determine if significant
12 deleterious changes take place.
13 If changes occur, the permit can be revised
14 and appropriate enforcement actions taken.
15 As an example of the complexity of these
16 monitoring programs, we attach the Santa Cruz program
17 for its proposed new outfall. It's oriented to
18 sampling both the soft and hard bottom ocean
19 environments, and is quite extensive.
20 As a measure, we plan to spend $290,000 on
21 predischarge monitoring alone. Post-discharge
22 monitoring could considerably exceed this amount,
23 depending on the program length. This is over and
24 above the $470,000 that we have already spent on the
25 predesign field studies.

1 In sum, we ask for consideration of effects
2 on a case-by-case basis, recognizing individual
3 differences in quantities of discharge, locations
4 and environments.
5 And on the question of "Toxic Pollutants:
6 Should they be no higher than in secondary effluents,"
7 the proposal that toxic pollutants be no higher than
8 in secondard effluents is unworkable. What secondary
9 effluent will serve as the point of comparison?
10 A better approach would be to define the
11 levels of toxic pollutants that cause harm and
12 then control to that standard. This is the approach
13 in California's Ocean Plan criteria. Any other
14 criteria may provide too little protection or cause
15 costly treatment to be implemented in cases where
16 toxic pollutant levels are too low to be of concern.
17 The question of pretreatment programs,
18 requiring agencies to implement new or more rigorous
19 pretreatment or source-control programs prior to
20 application is not tenable. Why have cities and
21 local businesses spend great sums on source control
22 prior to knowing whether a waiver will be granted?
23 A more reasonable approach would be to
24 require these programs as a permit condition with an
25 appropriate compliance schedule at the time a waiver

1 is granted.

2 On the question of waivers for only
3 domestic wastes versus mixed municipal/industrial
4 waste, attention should be placed on specific
5 substances in the waste stream that could cause
6 environmental harm, as required by Section 301 (h)
7 of the Amendments. There should not be an artificial
8 distinction between wastes of the same type based on
9 simplistic assumptions about the source of the wastes
10 entering the sewer system.

11 For example, food processing wastes, such
12 as those found in the Santa Cruz waste stream, are
13 high in degradable organic material but relatively
14 free from toxic substances. Such industrial wastes
15 could be governed by the same requirements that
16 would govern domestic wastes from Santa Cruz.

17 Again, we believe California's Ocean Plan
18 speaks to the parameters of concern and to the require-
19 ments of Section 301 (h).

20 We refer you to the extensive 201 facilities
21 planning and oceanographic work conducted by Santa
22 Cruz in support of its decisions.

23 Draft copies of our Reports 1 and 2 have
24 been forwarded to Mr. Bill Helphingstine of the EPA
25 and are incorporated into this testimony by reference.

1 We have taken a very analytical and
2 quantitative look at the problem and make a sound
3 case for the application of Ocean Plan criteria for
4 treatment level and discharge.
5 Finally, I would like to repeat something
6 that has been expressed before by the representative
7 of the Coastal Commission and others.
8 We feel that some consideration should be
9 given in the regulations concerning the quantity of
10 discharge. The discharge of a hundred million
11 gallons per day in the Los Angeles Bight may be
12 considerably more significant than approximately
13 five percent of that amount in the entire Monterey
14 Bay and into a similar ocean environment. We think
15 that, in considering your regulations, that
16 particular point which has been made by several
17 speakers should be considered.
18 Thank you.
19 CHAIRMAN JORLING: Thank you, Wilson.
20 Any questions?
21 MS. FRIEDMAN: I have none.
22 CHAIRMAN JORLING: Warren Nute, representing
23 J. Warren Nute, Inc.
24 MR. J. WARREN NUTE: Warren Nute,
25 consulting engineer in San Rafael. We are in the

1 field of sanitary engineering, mostly in this area
2 and the Northern California area.
3 We appreciate the opportunity to comment
4 on the modification of the secondary treatment
5 requirement for marine discharges. It is not clear
6 from the notice, however, whether the proposed
7 modification applies only to existing deep marine
8 discharges or will also apply to new or planned out-
9 falls and treatment facilities.
10 Also, consideration should be given to
11 the cases where we have already constructed or have
12 in operation secondary treatment plants with costly
13 outfalls. If the secondary treatment requirement
14 is to be modified, should not these plants be allowed
15 to operate only part of the plant units and thus
16 benefit from lower operating costs?
17 In planning future facilities we would
18 suggest that the dischargers be given the option of
19 installing primary or intermediate treatment with a
20 deep-water outfall or full secondary treatment with
21 a shallow water discharge or, as an alternate,
22 disposal through a natural overland flow system such
23 as a wetlands which would benefit wildlife before
24 entering the marine environment.
25 This latter method would meet growing

1 public concerns that reclaimable fresh water from
2 secondary treatment facilities is being wasted to
3 marine waters through costly outfalls. In addition,
4 it meets the objectives of Section 101 (a) (2) of
5 the Act which calls for the protection and
6 propagation of fish, shellfish, and wildlife as well
7 as recreation.
8 As an example of a low-cost system meeting
9 these objectives, I have submitted an article from
10 the January, 1978, California Water Pollution Control
11 Association Bulletin describing our wetlands project
12 near Martinez utlizing secondary treated effluent.
13 This project is designed for the benefit
14 of wildlife. And the flow, after it goes through
15 the marsh, flows into the slough after it goes into
16 the Carquinez Straits and provides the aquatic
17 animals that live in the marshes food for the down-
18 stream fish and wildlife.
19 It's a tremendous birding area. It's the
20 best birding area of all of Contra Costa County,
21 and I would invite these folks from Washington, if
22 you have time, not to miss it. I would be glad to
23 take you over and show it to you.
24 We have always been concerned with the Ocean
25 Plan since, in requiring disposal by dilution in

1 deep marine waters, no consideration has been given
2 to the quality of effluent being discharged. In other
3 words, even waters treated to drinking water standards
4 would require the deep water outfall and diffuser
5 system. This may be because outfalls were originally
6 designed for disposal of raw sewage and the textbooks
7 made no allowance for high quality treated effluents
8 from modern plants.
9 We support your efforts in bringing about a
10 modification of the requirements which will not
11 only provide reasonable and necessary protection of
12 the marine environment but will be cost effective
13 by eliminating the need for costly and often redundant
14 facilities. We suggest however, that the waiver be
15 made applicable to both existing and planned
16 facilities. In addition, we would like to see this
17 type of approach applied to plants on bay or
18 estuarian waters. In such waters we recommend full
19 secondary treatment but feel that costly deep water
20 outfalls are not only unnecessary but waste
21 reclaimable water to the marine environment. Greater
22 benefit can be provided to natural ecological systems
23 through discharges of this fresh water source to
24 shallow waters, sloughs and marshes bordering the
25 estuary.

1 Thank you.
2 CHAIRMAN JORLING: Thank you, Mr. Nute.
3 Any questions?
4 MR. DE FALCO: No.
5 MS. FRIEDMAN: No.
6 CHAIRMAN JORLING: And our last witness,
7 I believe, unless there are still some volunteers,
8 is John Chapman, representing the City and Borough
9 of Sitka, Alaska.
10 MR. JOHN CHAPMAN: Thank you.
11 I'm sorry I don't have a prepared text. If
12 you need one, I would be happy to get one typed up.
13 I'm with Tryck, Nyman & Hayes, consultants
14 in Anchorage, Alaska, and we are assisting the
15 Cities of Sitka and Kodiak currently in developing
16 wastewater collection and treatment projects. We
17 have not assisted the City of Petersburg.
18 In case anyone misunderstands, I'm not say-
19 ing that Petersburg would be any more happy today
20 had we helped them.
21 Typically, the cities that we have been
22 involved with in Alaska, coastal cities, have no
23 unified sewage collection systems. They generally
24 have anywhere from six to twenty or twenty-four
25 individual raw sewage outfalls discharging anywhere

1 from above high tide to below low tide.

2 I think a deep outfall would be considered

3 by any of these communities to be an unqualified

4 improvement. And in this case of Sitka and Kodiak,

5 raw sewage has been discharged into the receiving

6 waters since the years 1802 and 1786, respectively,

7 and many of those communities contend, in all

8 sincerity, that no problems have ever occurred.

9 The point of this is certainly not to

10 debate the need for treatment. I think that that's

11 been debated enough.

12 The main point I think is that, if you

13 were to tell any of these cities at this time, who

14 are now in the process of constructing treatment

15 plants in deep water outfalls, and not only that,

16 but very expensive interceptor systems and pumping

17 systems, that their plants or their projects don't

18 qualify for waivers from secondary treatment because

19 they are going to involve new outfall locations,

20 they would very strongly feel that you are playing

21 games with them.

22 Another point is that it really is, as I

23 think you have probably been made aware of today,

24 difficult to convince many communities that any sort

25 of treatment is necessary. We are working on this.

1 Region X is working on this. The State of Alaska.
2 But they need to feel that you really do have a
3 real appreciation for their problems. It will make
4 it easier for all of us, not only in the political
5 arena today, but in getting them to operate and
6 maintain their plants in an effective way.
7 I don't think anybody really ever will
8 expend enough effort in Alaska to operate plants as
9 well as they might be in any case. Well, to the
10 best we can. I think it's all very well to say
11 that cities must monitor a representative segment
12 of marine biota and that discharges must not interfere
13 with the state-mandated water quality levels. But
14 I think it's been illustrated quite clearly today
15 that studies to justify waivers, especially coupled
16 with the necessary monitoring requirements following
17 the granting of waivers, can be, for small communities,
18 as expensive as secondary treatment, or there is a
19 difference certainly between a primary and secondary
20 treatment. And concern with the cost of secondary
21 treatment is really the reason we are here today.
22 Cities really can't afford to undertake
23 studies of this sort to determine the requirement
24 for secondary treatment unless it's possible at
25 some point to fairly precisely define what the scope

1 of the studies must be, what the scope of the
2 monitoring program must be.
3 And this point is before the studies are
4 undertaken, I feel. I think if we come to you and
5 say, "Sitka is going to apply for a waiver from
6 secondary treatment; we are going to conduct current
7 meter studies at these locations, we are going to
8 conduct diffusion studies at these locations, we are
9 going to develop a model, we are going to predict
10 dissolved oxygen, we are going to predict whether or
11 not we are going to get settlement of solids and the
12 DO is going to be at least four or at least five,"
13 that in all fairness, EPA should be prepared to say,
14 "If this is the way it turns out, then, yes, you
15 will get your waiver."
16 At that point you should be able to give
17 us a yes or no.
18 Now, I realize that it may not be a totally
19 unqualified yes or no. But we need to know where we
20 are going because, as I said before, the costs of
21 studies are not something that can be ignored by small
22 cities.
23 I concur that it may be a problem to find
24 representative major marine biota. In the case of
25 Kodiak, certainly crab is about the best known major

1 marine biota, and in some years, crabs are abundant
2 in the Kodiak area and in other years, you can't
3 find any, and no one knows why. At least I certainly
4 don't, and most of the marine biologists don't know
5 exactly where they go or why.
6 I'm sure that we can find some marine biota
7 that would be representative indices. But to find
8 them and obtain the data necessary to establish the
9 baseline levels is going to take longer than until
10 September of 1978. They are not going to make it
11 by then.
12 I certainly concur that water quality
13 studies should be geared to the size of the community.
14 I certainly concur that EPA and states should
15 consider participation in the cost of water quality
16 studies.
17 I disagree with the suggestion of one
18 witness today that we should consider areas where
19 there are no outfalls as the baseline for determining
20 the acceptability of the effects of outfalls. That
21 seems to me to be saying that we are going to allow
22 no degradation, and I think that's unrealistic. I
23 think it fails to comply with the intent of the
24 original law that allowed secondary treatment. It
25 certainly fails to comply with the intent of this

1 waiver provision.

2 I think the requirement for the discharge

3 of heavy metals, certainly that has to be monitored,

4 and there should be a water quality criteria

5 established. But we do have many communities with

6 essentially domestic sewage that do not contain high

7 quantities of heavy metals and other toxicants.

8 I disagree with the statements of several

9 witnesses that secondary treatment should be a base-

10 line for this type of discharge. I feel that the

11 primary treatment, if it's allowable for the other

12 parameters, should be allowable for toxic materials

13 also.

14 I would be happy to answer any questions

15 you might have.

16 CHAIRMAN JORLING: That wraps up the

17 witness list. Before we close, I think it might be

18 appropriate to compliment the reporter for his

19 ability to sit this long.

20 And something I should have done, probably

21 when more people were here, is to thank the staff

22 for the work they have put into this, and will

23 continue to put into it. Lisa Friedman and Bob

24 Bastion, Don Baumgartner and all the rest deserve --

25 Tom O'Farrell, he's Chairman; he doesn't need thanks --

1 to thank them because they have done a tremendous
2 amount of work, and it's the kind of thing necessary
3 to make this become public policy.
4 So with that, we will conclude this formal
5 part of the presentation.
6 The record will be open for 15 more days;
7 and at that time, or probably before that time, we
8 should be issuing draft materials which will then be
9 circulated prior to publication of the proposal in
10 the Federal Register.
11 So let's break for the evening.
12 Thank you.
13 (Whereupon, the public meeting concluded
14 at 6:30 o'clock p.m.)
15 ---o0o---
16
17
18
19
20
21
22
23
24
25

STATE OF CALIFORNIA)
) ss.
CITY AND COUNTY OF SAN FRANCISCO)

I, THOMAS R. WILSON, hereby certify that the proceedings in the Public Meeting on the Modification of Secondary Treatment Requirement, held at the Offices of Region IX, U.S. Environmental Protection Agency, 215 Fremont Street, San Francisco, California 94105, on February 22, 1978, were taken down in shorthand by me, a Certified Shorthand Reporter and a disinterested person at the time and place therein stated, and that the proceedings were thereafter reduced to typewriting under my supervision and direction.

I further certify that I am not of counsel or attorney for either or any of the parties to the said proceedings, nor in any way interested in the event of this cause, and that I am not related to any of the parties thereto.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office this 25th day of February, 1978.

OFFICIAL SEAL
THOMAS R. WILSON
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
SAN FRANCISCO COUNTY
My Commission Expires February 28, 1978

Thomas R. Wilson
NOTARY PUBLIC in and for the
City and County of San Francisco,
State of California