12/28/91

To: Pat Young & Norm Lovelace, OPINAP
From: Sheila Wiegman, ASEPA
Re: Cannery NPDES Monitoring Program

Attached is further suggestions on the cannery NPDES monitoring program. I appreciate any further input from you guys. I faxed the same letter to Doug at a fax # he gave me. I listened to meeting he had with Steve Costa last week — Doug can give you details. This is almost as bad as the consent agreement!

I hope all is well with you & Happy New Year.

OFFICE OF THE GOVERNOR
ENVIRONMENTAL PROTECTION AGENCY

December 27, 1991

To: Doug Liden, USEPA Region IX, Permits Section

From: Sheila Wiegman, Environmental Coordinator, ASEPA

Re: Cannery NPDES Monitoring Program

I would like to provide additional suggestions for the American Samoa cannery NPDES permits. As eutrophication of Pago Pago Harbor is a major potential impact of the cannery effluent, obtaining data to determine the eutrophic state of the harbor and to monitor future trends related to eutrophication would be appropriate. Chlorophyll a in the water column does provide some measure, but it does not provide information on the species levels or classes of phytoplankton. Determining whether the water body is limited by nitrogen or phosphorus can assist with proper control of nutrient inputs and so that the desired level of plant biomass is obtained. It has been previously suggested that harbor phytoplankton is sensitive to phosphorus levels, but this should be verified.

Another important measure that could be studied is the role of sediments in nutrient concentration in Pago Pago Harbor. The American Samoa Government (ASG) has collected data on toxic components of the harbor sediments in the pilot harbor toxicity study, but little data is available on nutrient or organic concentrations. The future, expanded ASG Toxicity Study will provide more data on the toxic components of the harbor sediments. This will likely be a one time study and could include nutrient measurements, but collection of data over time would provide information on changes occurring in Pago Pago Harbor due to the reduction of nutrient inputs (institution of high strength waste segregation) and relocation of the cannery discharge. Sedimentation may play or have played an important role in removing nutrients from the harbor. The changes in nutrient loading could lead to release of nutrients from the sediments impacting harbor recovery. In addition, the nutrient and organic components of the sediments may affect the concentration and availability of heavy metals affecting toxicity.

Our suggestions for the cannery permits in order to obtain the above types of information are:

1. The permittee cooperatively with Samoa Packing Co., NPDES permit No. _____ (or Star-Kist Samoa...), shall complete a study in which a direct assessment of the algal-nutrient relationships in Pago Pago Harbor is ~~are~~ obtained. This study shall include construction of algal-nutrient response response curves for a range of nitrogen:phosphorus ratios, nitrogen and phosphorus levels, salinity levels, and phytoplankton species. A proposed study design shall be submitted to USEPA and the EQC within six months of the effective date of the permit. The study shall be completed within one year of the effective date of the permit, and a report of the findings shall be submitted to USEPA and the EQC by that date.

2. The permittee cooperatively with Samoa Packing Co., NPDES permit No._____ (or Star-Kist Samoa....), shall undertake a yearly sediment monitoring program in Pago Pago Harbor in order to assess the concentration of nutrient and organic components, the distribution of stored nutrients, the size of the nutrient reservoir, and the rate of accumulation of nutrients. Seven sites shall be located within Pago Pago Harbor and analysed for TN, TP, percent organics, percent solids, and bulk density. Three sites shall be located in inner Pago Pago Harbor and four sites shall be located in the outer harbor. These sites shall be approved by USEPA and the EQC prior to sampling. This monitoring shall take place annually by the anniversay date of the effective date of the permit, and a report of the findings shall be submitted to the USEPA and EQC 90 days after completion of sampling.

I will call you on January 6, 1991, from PICO in Hawaii should you have any questions.

cc: Norm Lovelace, USEPA, OPINAP
Pat Young, USEPA, OPINAP

FAX FORM

12/26/91

American Samoa Environmental Protection Agency
Office of the Governor
Pago Pago, American Samoa 96799
Phone (684) 633-2304
Fax No. (684) 633-5801

TO: Pat Young or Wherever Can Help

FROM: Sheila Wiegman, ASEPA

SUBJECT: Cannery NPDES & Mixing Zone Permits

NO. OF PAGES INCLUDING COVER PAGE 5

MESSAGE

Please pass a copy of these letters to Doug Liden in Permits. I will be offisland 12/30 to 1/9, but I will stop by PKO office 1/6 if draft cannery permit is faxed there or if anything on the draft cannery or mixing zone permits require discussion. Thanks & Happy Holidays!

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799

In reply refer to:

OFFICE OF THE GOVERNOR
ENVIRONMENTAL PROTECTION AGENCY

December 24, 1991

Norman L. Lovelace, Chief
Office of Pacific Island and
Native American Programs
U.S. EPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

Dear Norm:

In order to coordinate and expedite processing of the mixing zone and NPDES permits, I would like to provide a status report on the mixing zone permit. The Environmental Quality Commission (EQC) met on November 27, 1991 to consider the canneries' application for a mixing zone in Pago Pago Harbor. At that time, the mixing zone was aproved including the zone of initial dilution for ammonia. The EQC requested certain conditions for the mixing zone permit and an opportunity to review the final permit before issuance.

Can we see draft permit, EQC approval NW? EPA needs to comm.

A draft mixing zone permit has been completed, but due to Hurricane Val and travel schedules of the EQC, review of the permit has not taken place. The mixing zone and NPDES permits should contain the same ambient monitoring program, and this has not yet been finalized. Also, I understand your office has some questions on the zone of initial dilution for ammonia. Both these issues should be resolved prior to completion of the final mixing zone permit.

As the mixing zone application has undergone the public review procedure and been approved by the EQC, issuance of the draft NPDES permits should proceed. I and my staff would like the opportunity to see the draft NPDES permits for the canneries prior to the start of the public review period. The final mixing zone permit should reflect any relevant changes to the final NPDES permits as a result of public comment, thus final issuance of the mixing zone permit should coincide with the final NPDES permits. Please let us know if this procedure is appropriate.

Sincerely,

Pati Faiai, Director

cc: Pat Young, USEPA Region 9
Doug Liden, USEPA Region 9
ASEPA Env. Coor.,

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799

In reply refer to:

OFFICE OF THE GOVERNOR
ENVIRONMENTAL PROTECTION AGENCY

December 23, 1991

Norman L. Lovelace
Chief
Office of Pacific Island and Native American Programs
U. S. EPA
75 Hawthorne St
San Francisco, CA 94105

Dear Norm:

I would like to provide suggestions for the monitoring programs for the National Pollutant Discharge Elimination System (NPDES) permits for the VCS Samoa Packing Co. and Star-Kist Samoa Inc.. My staff have met with the American Samoa Department of Marine and Wildlife Resources for information on the expected impacts on biota and habitat in Pago Pago Harbor and a review of the proposed program from your office.

In general, the proposed monitoring program focuses on priority pollutant scans and studies on the biological community in the immediate area affected by the cannery discharge. While these goals are commendable, it is possible other environmental impacts may not be assessed. As there are no protocols for toxicity bioassays in equatorial tropical waters, the validity of bioassays on the cannery effluent may be marginal. The proposed monitoring program requiring divers at the outfall depth may be dangerous (no decompression chamber in American Samoa) and very expensive. The most important public health impact of the cannery discharge would result from any toxic pollutants that bioaccumulate through the food chain affecting biota for human consumption. Pathogenic or bacteriologic impacts are not likely related to the cannery effluent. Infauna and fish in the benthos near the outfall are not consumed by people in Samoa. Nearshore (up to 20 meters) and offshore pelagic fish are regularly consumed. Historically people have not fished in the deeper harbor waters. If the effluent reaches the nearby reef flat, the potential impacts are decreased water clarity and possible sedimentation. A monitoring program based on the fate and a better characterization of the effluent would better address public health and environmental concerns.

Our suggestions for a monitoring program are made in light of the following information:

1. There is little or no baseline quantitative information on the habitat and biota of Pago Pago Harbor.

2. A monitoring program should be based on potential public health and environmental impacts. The program should complement other monitoring efforts and known environmental problems.

3. A priority pollutant scan of the effluent should be completed prior to requiring priority pollutant scans of the infauna and fish populations. It is difficult to tie the cannery effluent to any habitat or biological concentration of priority pollutants without this.

4. The American Samoa Government (ASG) is presently undertaking a study to characterize the amounts of toxic pollutants in the sediments and fish of American Samoa, as a follow-up to a pilot study on inner Pago Pago Harbor. High levels of lead and other pollutants of concern were found in sediments and fish tissue. The inner harbor has been a sink for industrial, military, and anthropomorphic pollution for more than fifty years. We are unsure of the exact sources, but suspect the canneries are not a prime source. The organic nature of the effluent discharged to the inner harbor along with the poor flushing of this area led to a near eutrophic state. The institution of high strength waste segregration and location of the remaining discharge in the outer harbor is expected to significantly contribute to the reversal of this condition. Undoubtedly, Pago Pago Harbor has suffereed degradation due to the cannery inputs, human development, and land reclamation (Pago Park).

Our suggestions for a monitoring program are:

1. Monitoring Program Goals

a. Determine compliance with American Samoa Water Quality Standards (ASWQS) at the edge of the zone of mixing and the status of water quality in Pago Pago Harbor after installation of the outer harbor pipeline.

b. Determine the fate of the effluent plume after discharge. This is necessary to verify the model predictions on the mixing zone and whether the near reef flat may be impacted.

c. Determine whether cannery effluent contributes to toxic pollution in Pago Pago Harbor.

2. Monitoring Program Tasks

a. Monthly ambient water quality monitoring as previously provided to determine compliance with ASWQS. A clause should be included to allow for modification of the entire monitoring program as necessary by ASG and U.S. EPA.

→ Determine toxicity of ~~the~~ effluent

b. A series of tracer or dye studies conducted twice per year for two years or quarterly for one year to determine the fate of the effluent should be required. The protocol should be completed by the canneries for approval by ASG and U.S. EPA. Should the studies show that the nearby reef flat, local fisheries, or any other habitats or biota of concern may be impacted, appropriate sediment and biological monitoring would be required.

c. A yearly priority pollutant scan of the effluent from each cannery should be conducted. Should the scan or the ASG Toxicity Study demonstrate the presence of pollutants of concern related to the cannery effluent, appropriate sediment and biological monitoring should be required. Toxicity bioassay of the effluent annually could be included, but the results might be difficlut to interpret.

We might want to consider allowing the canneries to submit a monitoring program for U.S. EPA and ASG approval. We could provide them with basic monitoring program goals and requirements. If their approach is satisfactory or easily modified, it could be placed in the draft permit. This would allow for better cooperation and acceptance of requirements. Another possible permit condition is to require that the canneries assist ASG financially with the Toxicity Study.

I hope this information will assist with monitoring program development. It is in the interest of the ASG to collect data and assess the impacts of highest priority. You may contact Sheila Wiegman of my staff for any questions on this matter.

Sincerely,

Pati Faiai, Director

cc: Doug Liden, USEPA Region 9
Env. Coord., ASEPA
Dr. Peter Craig, DMWR

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799

In reply refer to:

OFFICE OF THE GOVERNOR
ENVIRONMENTAL PROTECTION AGENCY

December 24, 1991 Serial: 496

Norman L. Lovelace, Chief
Office of Pacific Island and
Native American Programs
U.S. EPA Region 9
75 Hawthorne St.
San Francisco, CA 94105

Dear Norm:

In order to coordinate and expedite processing of the mixing zone and NPDES permits, I would like to provide a status report on the mixing zone permit. The Environmental Quality Commission (EQC) met on November 27, 1991 to consider the canneries' application for a mixing zone in Pago Pago Harbor. At that time, the mixing zone was aproved including the zone of initial dilution for ammonia. The EQC requested certain conditions for the mixing zone permit and an opportunity to review the final permit before issuance.

A draft mixing zone permit has been completed, but due to Hurricane Val and travel schedules of the EQC, review of the permit has not taken place. The mixing zone and NPDES permits should contain the same ambient monitoring program, and this has not yet been finalized. Also, I understand your office has some questions on the zone of initial dilution for ammonia. Both these issues should be resolved prior to completion of the final mixing zone permit.

As the mixing zone application has undergone the public review procedure and been approved by the EQC, issuance of the draft NPDES permits should proceed. I and my staff would like the opportunity to see the draft NPDES permits for the canneries prior to the start of the public review period. The final mixing zone permit should reflect any relevant changes to the final NPDES permits as a result of public comment, thus final issuance of the mixing zone permit should coincide with the final NPDES permits. Please let us know if this procedure is appropriate.

Sincerely,

Pati Faiai, Director

cc: Pat Young, USEPA Region 9
Doug Liden, USEPA Region 9
ASEPA Env. Coor.,

Rcd 1/7/92

AMERICAN SAMOA GOVERNMENT
PAGO PAGO, AMERICAN SAMOA 96799

In reply refer to:

OFFICE OF THE GOVERNOR
ENVIRONMENTAL PROTECTION AGENCY

December 23, 1991

Serial: 497

Norman L. Lovelace
Chief
Office of Pacific Island and Native American Programs
U. S. EPA
75 Hawthorne St
San Francisco, CA 94105

Dear Norm:

I would like to provide suggestions for the monitoring programs for the National Pollutant Discharge Elimination System (NPDES) permits for the VCS Samoa Packing Co. and Star-Kist Samoa Inc.. My staff have met with the American Samoa Department of Marine and Wildlife Resources for information on the expected impacts on biota and habitat in Pago Pago Harbor and a review of the proposed program from your office.

In general, the proposed monitoring program focuses on priority pollutant scans and studies on the biological community in the immediate area affected by the cannery discharge. While these goals are commendable, it is possible other environmental impacts may not be assessed. As there are no protocols for toxicity bioassays in equatorial tropical waters, the validity of bioassays on the cannery effluent may be marginal. The proposed monitoring program requiring divers at the outfall depth may be dangerous (no decompression chamber in American Samoa) and very expensive. The most important public health impact of the cannery discharge would result from any toxic pollutants that bioaccumulate through the food chain affecting biota for human consumption. Pathogenic or bacteriologic impacts are not likely related to the cannery effluent. Infauna and fish in the benthos near the outfall are not consumed by people in Samoa. Nearshore (up to 20 meters) and offshore pelagic fish are regularly consumed. Historically people have not fished in the deeper harbor waters. If the effluent reaches the nearby reef flat, the potential impacts are decreased water clarity and possible sedimentation. A monitoring program based on the fate and a better characterization of the effluent would better address public health and environmental concerns.

Our suggestions for a monitoring program are made in light of the following information:

1. There is little or no baseline quantitative information on the habitat and biota of Pago Pago Harbor.

2. A monitoring program should be based on potential public health and environmental impacts. The program should complement other monitoring efforts and known environmental problems.

3. A priority pollutant scan of the effluent should be completed prior to requiring priority pollutant scans of the infauna and fish populations. It is difficult to tie the cannery effluent to any habitat or biological concentration of priority pollutants without this.

4. The American Samoa Government (ASG) is presently undertaking a study to characterize the amounts of toxic pollutants in the sediments and fish of American Samoa, as a follow-up to a pilot study on inner Pago Pago Harbor. High levels of lead and other pollutants of concern were found in sediments and fish tissue. The inner harbor has been a sink for industrial, military, and anthropomorphic pollution for more than fifty years. We are unsure of the exact sources, but suspect the canneries are not a prime source. The organic nature of the effluent discharged to the inner harbor along with the poor flushing of this area led to a near eutrophic state. The institution of high strength waste segregration and location of the remaining discharge in the outer harbor is expected to significantly contribute to the reversal of this condition. Undoubtedly, Pago Pago Harbor has suffereed degradation due to the cannery inputs, human development, and land reclamation (Pago Park).

Our suggestions for a monitoring program are:

1. Monitoring Program Goals

a. Determine compliance with American Samoa Water Quality Standards (ASWQS) at the edge of the zone of mixing and the status of water quality in Pago Pago Harbor after installation of the outer harbor pipeline.

b. Determine the fate of the effluent plume after discharge. This is necessary to verify the model predictions on the mixing zone and whether the near reef flat may be impacted.

c. Determine whether cannery effluent contributes to toxic pollution in Pago Pago Harbor.

2. Monitoring Program Tasks

a. Monthly ambient water quality monitoring as previously provided to determine compliance with ASWQS. A clause should be included to allow for modification of the entire monitoring program as necessary by ASG and U.S. EPA.

b. A series of tracer or dye studies conducted twice per year for two years or quarterly for one year to determine the fate of the effluent should be required. The protocol should be completed by the canneries for approval by ASG and U.S. EPA. Should the studies show that the nearby reef flat, local fisheries, or any other habitats or biota of concern may be impacted, appropriate sediment and biological monitoring would be required.

c. A yearly priority pollutant scan of the effluent from each cannery should be conducted. Should the scan or the ASG Toxicity Study demonstrate the presence of pollutants of concern related to the cannery effluent, appropriate sediment and biological monitoring should be required. Toxicity bioassay of the effluent annually could be included, but the results might be difficlut to interpret.

We might want to consider allowing the canneries to submit a monitoring program for U.S. EPA and ASG approval. We could provide them with basic monitoring program goals and requirements. If their approach is satisfactory or easily modified, it could be placed in the draft permit. This would allow for better cooperation and acceptance of requirements. Another possible permit condition is to require that the canneries assist ASG financially with the Toxicity Study.

I hope this information will assist with monitoring program development. It is in the interest of the ASG to collect data and assess the impacts of highest priority. You may contact Sheila Wiegman of my staff for any questions on this matter.

Sincerely,

Pati Faiai, Director

cc: Doug Liden, USEPA Region 9
Env. Coord., ASEPA
Dr. Peter Craig, DMWR

VAN CAMP
SEAFOOD
COMPANY, INC.

December 27, 1991

USEPA, Region 9
Office of Pacific Island
and Native American Programs
75 Hawthorne Street
San Francisco, CA 94105

ATTN: Mr. Norman Lovelace

Dear Norman:

This letter is to advise of the limitations for Nitrogen and Phosphorus agreed upon between StarKist and Samoa Packing Company.

	Sampac	StarKist	Combined
Nitrogen			
Monthly Ave (#/D.)	800	1,200	2,000
Daily Max. (#/D.)	2,080	2,260	4,340
Phosphorus			
Monthly Ave (#/D.)	208	192	400
Daily Max. (#/D.)	271	309	580

should be 4035

DM = present DM limit

Issues related to other NPDES limits will be addressed separately.

Sincerely,

James L. Cox

James L. Cox, Director
Engineering and Environmental Affairs

JLC:ms

cc: Pat Young - Fax 415-744-1604 Pati Faiai - Fax 684-633-5801
Doug Liden- Fax 415-744-1873 Sheila Wiegman - 684-633-5801

122791.2JC

4510 Executive Drive, Suite 300 San Diego, CA 92121-3029
Phone: (619) 558-9662 FAX: (619) 597-4282