

**DRAFT FOR PUBLIC COMMENT**

**MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT § 102  
OCEAN DUMPING RESEARCH PERMIT**

**PERMIT NUMBER AND TYPE:** OD2020-01 Research

**EFFECTIVE DATE:** To be determined after 30-day comment period

**EXPIRATION DATE:** 18-months after Effective Date

**PERMITTEE:** StarKist Samoa Company (StarKist)  
368 Atu'u Road  
Pago Pago, American Samoa 96799

**WASTE GENERATOR:** StarKist Samoa Company (StarKist)  
368 Atu-u Road  
Pago Pago, American Samoa 96799

**WASTE GENERATED AT:** StarKist Samoa Company (StarKist)  
368 Atu'u Road  
Pago Pago, American Samoa 96799

**PORT OF DEPARTURE:** Pago Pago Harbor, American Samoa

**WASTE TRANSPORTER:** Vessel to be determined by permittee  
Aquatic Blue Environmental  
P.O. Box 1861  
Pago Pago, American Samoa 96799

A research ocean dumping permit is being issued to StarKist Samoa Company (StarKist or permittee). The Regional Administrator of EPA Region 9 (Regional Administrator) has determined that disposal of fish processing liquid wastes off American Samoa meets EPA's ocean dumping criteria at 40 C.F.R. Parts 227 and 228. For this permit, the term "fish processing liquid wastes" shall refer to Dissolved Air Flotation (DAF) Sludge, Presswater, and Precooker Water generated at the permittee's tuna cannery in Pago Pago, American Samoa (Facility); or any combination of the three liquid waste streams pumped from StarKist Samoa's onshore holding tanks into the ocean disposal vessel for transportation to the ocean disposal site. This research permit will be evaluating StarKist's proposed three liquid wastes, comparing them to the three historic liquid wastes from previous ocean dumping permits, and determining if there are any significant differences. StarKist's processing methodology and Facility waste stream management infrastructure have changed since mid-2012 when ocean disposal was

discontinued. This research permit does not allow the disposal of other fish processing liquid wastes (i.e., butcher water), fish concentrate, other fish processing solid wastes (i.e., carcasses, entrails), or other solid materials generated from the StarKist Facility.

This research permit authorizes the transportation and dumping into ocean waters of fish processing liquid wastes as described in the special conditions section pursuant to the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. §§ 1401 *et seq.*) as amended (MPRSA or the Act); regulations issued thereunder; and the terms and conditions stated below.

This MPRSA research permit does not contain any information collection requirements subject to Office of Management and Budget review under the Paper Work Reduction Act of 1980 (44 U.S.C. § 3501 *et seq.*). This determination has been made because the permit does not require data collection by more than 10 persons.

## 1. GENERAL CONDITIONS

- 1.1. Operation under this research ocean dumping permit shall conform to all applicable federal statutes and regulations including, but not limited to, the Act, the Marine Plastic Pollution Research and Control Act of 1987 (P.L. 100-220), the Clean Water Act (33 U.S.C. § 1251 *et seq.*), and the Ports and Waterways Safety Act (33 U.S.C. § 1221 *et seq.*).
- 1.2. All transportation and dumping authorized herein shall be undertaken in a manner consistent with the terms and conditions of this permit. StarKist Samoa Company (hereafter referred to as "the permittee") shall be liable for compliance with all such terms and conditions. The permittee shall be held liable under § 105 of the Act (33 U.S.C. § 1415) if any permit violations occur, including during disposal operations when the permittee's fish processing liquid wastes are loaded aboard the disposal vessel in holding tanks. If a permit violation occurs during the transportation and disposal of fish processing liquid wastes, the waste transporter may also be liable for permit violations.
- 1.3. Under § 105 of the Act, any person who violates any provision of the Act, 40 C.F.R. Parts 220 through 228 promulgated thereunder, or any term or condition of this permit may be subject to substantial administrative, civil, or criminal penalties. Violations of the Act or the terms and conditions of this permit include but are not limited to:
  - 1.3.1. Transportation to, and dumping at any location other than that defined in Special Condition 2.2 of this permit;
  - 1.3.2. Transportation and dumping of any material not identified in this permit, or transportation and dumping of the authorized material more frequently or in greater quantities than authorized in this permit, unless specifically authorized by a written modification hereto;

- 1.3.3. Failure to conduct permit monitoring as required in Special Conditions 3, 4 and 5.; or
  - 1.3.4. Failure to file reports on fish processing liquid wastes and disposal site monitoring reports as required in the Special Conditions pertaining to reports.
- 1.4. Nothing contained herein shall be deemed to authorize, in any way, violation of applicable American Samoa Water Quality Standards. The following water quality standards apply:

**Table 1.** 1989 American Samoa Water Quality Standards: Oceanic Waters [§24.0207(g)(1-7)].

<b>Parameter</b>	<b>Median Not to Exceed the Given Value</b>
Turbidity	0.25 NTU
Total Phosphorus	15.0 :ug/L as P
Total Nitrogen	130.0 :ug/L as N
Chlorophyll <i>a</i>	0.25 :ug/L
Light Penetration Depth	130 feet, to exceed the given value 50% of the time.
Dissolved Oxygen	Not less than 80% of saturation or less than 5.5 mg/L. If the natural level of dissolved oxygen is less than 5.5 mg/L, then the natural dissolved oxygen level shall become the standard.
pH	The pH range shall be 6.5 to 8.6 pH units and within 0.2 pH units of the level which occurs naturally.

Should the American Samoa Water Quality Standards applicable to this permit be revised, such revised standards shall apply to this permit.

- 1.5. After notice and opportunity for a hearing, this permit may be revised, revoked or limited, in whole or in part, subject only to the provisions of 40 C.F.R. §§ 222.3(b) through 222.3(h) and 40 C.F.R. § 223.2, as a result of a determination by the Regional Administrator of EPA Region 9 or his delegate that:
  - 1.5.1. The cumulative impact of the permittee's dumping activities or the aggregate impact of all dumping activities in the dump site designated in Special Condition 2.2 should be categorized as Impact Category I, as defined in 40 C.F.R. § 228.10(c)(1);

- 1.5.2. There has been a change in circumstances regarding the management of the disposal site designated in Special Condition 2.2;
- 1.5.3. The dumping authorized by the permit would violate applicable American Samoa Water Quality Standards;
- 1.5.4. The dumping authorized can no longer be carried out consistent with the criteria defined at 40 C.F.R. Parts 227 and 228;
- 1.5.5. The permittee violated any term or condition of the permit;
- 1.5.6. The permittee misrepresented, or did not accurately disclose all relevant facts in the permit application or monitoring reports; or
- 1.5.7. The permittee did not keep records, engage in monitoring and reporting activities, or notify appropriate officials in a timely manner of the transportation and dumping activities as specified in any condition of this permit.
- 1.6. The permittee shall ensure that all facilities, including any vessels associated with the permit, are in good working order to achieve compliance with the terms and conditions of this permit. During all loading operations, there shall not be a loss of fish processing liquid wastes to any waterway. During transport to the disposal site, there shall not be a loss of fish processing liquid wastes to Pago Pago Harbor or the ocean.
- 1.7. The ability of the designated waste transporter (above) to operate in accordance with all requirements and conditions of the permit must be confirmed with documentation (including final specification and United States Coast Guard certification) and approved by the Regional Administrator or his delegate before commencement of disposal operations.
- 1.8. The permittee shall notify the Regional Administrator or his delegate in writing of any change in the designated fish processing waste transporter at least 30 days before the transfer date. Written approval by the EPA Region 9 Regional Administrator or his delegate must be obtained before such a transfer occurs. The ability of the new waste transporter to operate in accordance with all requirements and conditions of the permit must be confirmed with documentation and approved by the Regional Administrator or his delegate before commencement of operations.
- 1.9. The permittee shall allow the EPA Region 9 Regional Administrator or his delegate, the Commander of the Fourteenth U.S. Coast Guard District (USCG) or the delegated USCG liaison office, the Director of the American Samoa Environmental Protection Agency (ASEPA), and/or their authorized representatives to:

- 1.9.1. Enter into, upon, or through the permittee's premises, vessels, or other premises or vessels under the control of the permittee, where, or in which, a source of material to be dumped is located or in which any records are required to be kept under the terms and conditions of this permit or the Act;
  - 1.9.2. Have access to and copy any records required to be kept under the terms and conditions of this permit or the Act;
  - 1.9.3. Inspect any dumping equipment, navigational system equipment, monitoring equipment, or monitoring methods required in this permit;
  - 1.9.4. Sample or require that a sample be drawn, under EPA, USCG, or ASEPA supervision, of any materials discharged or to be discharged; or
  - 1.9.5. Inspect laboratory facilities, data, and quality control records required for compliance with any condition of this permit.
- 1.10. If material which is regulated by this permit is disposed of, due to an emergency, such as to safeguard life at sea, in locations or in a manner that does not comply with the terms of this permit, the permittee shall make a full report, according to the provisions of 18 U.S.C. § 1001, within 15 days to the EPA Regional Administrator or his delegate, USCG and ASEPA describing the conditions of this emergency and the actions taken, including the location, and the nature and amount of material disposed.
  - 1.11. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of rights, nor any infringement of Federal, State, Territory or local laws or regulations, nor does it obviate the necessity of obtaining State, Territory, or local assent required by applicable law for the activity authorized.
  - 1.12. This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities, or, except as authorized by this permit, the conduct of any work in any navigable waters.
  - 1.13. Unless otherwise provided for herein, all terms used in this permit shall have the meanings assigned to them by the Act or 40 C.F.R. Parts 220 through 228, issued thereunder.

2. **SPECIAL CONDITIONS - DISPOSAL SITE AND FISH PROCESSING LIQUID WASTE CHARACTERIZATION**

Special conditions are necessary to define the length of the permit period, identify the disposal site location, describe fish processing liquid waste streams and define maximum

permitted limits for the combined three liquid waste streams (DAF sludge, presswater and precooker water) stored in on-shore storage tanks.

## **2.1. Location of the Liquid Waste Generator and Duration of the Permit**

2.1.1. The material to be dumped shall consist of fish processing liquid wastes, defined in Special Conditions 2.3 and 2.4, generated at the permittee's fish cannery in Pago Pago, American Samoa, and consistent with 40 C.F.R. § 228.(m)(1)(vi).

2.1.2. This permit shall become effective on [to be determined] and it shall expire 18 months after the effective date.

## **2.2. Location of Disposal Site**

Disposal of fish processing liquid wastes generated at the location defined in Special Condition 2.1.1 shall be confined to a circular area with a 1.5 nautical mile radius, centered at 14° 24.00' South latitude by 170° 38.30' West longitude as further identified as the Fish Processing Waste Disposal Site, American Samoa, at 40 C.F.R. § 228.(m)(1).

## **2.3. Description of Fish Processing Liquid Wastes**

2.3.1. During the term of this permit, and according to all other terms and conditions of this permit, the permittee is authorized to transport and dispose a combined fish processing liquid waste stream total maximum of 300,000 gallons per day.

2.3.2. The fish processing liquid wastes-- Dissolved Air Flotation (DAF) sludge, presswater and precooker water-- are combined and stored in the permittee's onshore storage tanks prior to transport to the ocean disposal site.

2.3.3. This research permit does not allow the disposal of other fish processing liquid wastes (i.e., butcher water), fish concentrate, other fish processing solid wastes (i.e., carcasses, entrails), or other solid materials generated from the StarKist Facility.

## **2.4. Fish Processing Liquid Waste Stream Limits**

2.4.1. Fish processing liquid waste stream limits apply to the combined fish liquid wastes of DAF sludge, presswater and precooker water, which are combined and stored in an onshore storage tank prior to transport to the ocean disposal site (see Table 3 - following page).

**Table 3.** Limits for Onshore Storage Tank Fish Liquid Wastes

<b>Physical or Chemical Parameter (units)<sup>a</sup></b>	<b>Storage Tank</b>
Total Solids (mg/L)	101,800
Total Volatile Solids (mg/L)	84,100
5-Day BOD (mg/L)	129,390
Oil and Grease (mg/L)	62,940
Total Phosphorus (mg/L)	1,750
Total Nitrogen (mg/L)	10,980
Ammonia (mg/L)	11,810
pH (pH units)	6.2 to 7.1
Density (g/mL)	0.97 to 1.03

a = All calculated values were rounded to the nearest 10, except density and pH ranges.

- 2.4.2. Permitted Maximum Concentrations for the onshore storage tank fish liquid waste were calculated based on an analysis of data over a 4-year period from the permittee's previous ocean dumping permits. EPA Region 9 will be evaluating the data collected under this research permit with a focus on StarKist's proposed three liquid wastes, comparing them to the three historic liquid wastes from the previous permits, and determining if there are any significant differences. StarKist's fish processing methodology and Facility waste stream management infrastructure have changed since mid-2012 when ocean disposal was discontinued. EPA Region 9 will periodically review the data during the research permit to evaluate any significant differences relative to these limits as applied to a future special permit.
- 2.4.3. The Permitted Maximum Concentrations, density range and pH range listed above, shall not be exceeded at any time during the term of this permit.

3. **SPECIAL CONDITIONS - ANALYSIS OF FISH PROCESSING LIQUID WASTES**

Compliance with the permitted maximum concentrations defined in Special Condition 2.4 shall be determined by monthly monitoring of the liquid waste in the onshore storage tank. **The sampling dates shall be scheduled within the first two weeks of the month to allow enough time for laboratory analyses and report writing to comply with Special Condition 3.3.**

3.1. **Analyses of Fish Processing Liquid Wastes**

3.1.1. Concentrations or values of the parameters listed in Special Condition 2.4 and those listed in the table below shall be determined for the liquid waste in the onshore storage tank. Once a month, the permittee shall analyze samples taken from its onshore fish processing liquid waste storage tank during the transfer of these liquid wastes to the disposal vessel's holding tanks.

3.1.1.1. Three samples shall be taken from the onshore storage tank transfer line at 10-minute intervals. These samples shall be composited to produce one sample for analysis. The permittee's samples shall not be combined with fish processing waste from any other locations.

3.1.1.2. The parameters and detection limits listed in Table 4 shall be analyzed and used for the onshore storage tank composite samples.

**Table 4.** Physical and Chemical Parameters and Associated Method Detection Limits for Analyses of Onshore Storage Tank Liquid Waste

<b>Parameter</b>	<b>Method Detection Limit</b>
Total Solids	10.0 mg/L
Total Volatile Solids	10.0 mg/L
5-Day BOD	10.0 mg/L
Oil and Grease	10.0 mg/L
Total Phosphorus	1.0 mg/L
Total Nitrogen	1.0 mg/L
Ammonia	1.0 mg/L



<b>Parameter</b>	<b>Method Detection Limit</b>
pH	0.1 pH units
Density	0.01 g/mL

3.1.2. All sampling procedures, analytical protocols, and quality control/quality assurance procedures shall be performed according to the most up-to-date guidance (i.e., American Society for Testing and Materials, or ASTM) and approved by EPA Region 9.

### 3.2. **Analytical Laboratory**

3.2.1. Within 30 days of the effective date of this permit, the name and address of the contract laboratory or laboratories and a description of all analytical test procedures and quality assurance/quality control procedures, including detection limits being used, shall be provided to EPA Region 9.

3.2.2. Any potential variation or change in the designated laboratory or analytical procedures shall be reported, in writing, for EPA Region 9 approval.

3.2.3. EPA Region 9 may require analyses of quality control samples by any laboratories employed to comply with Special Condition 3.1 and Appendix A. Upon request, the permittee shall provide EPA Region 9 with the analytical results from such samples.

3.2.4. Should there be a modification in the permittee's fish processing procedures such that there may be a significant change in the quality of a fish processing liquid waste stream (DAF sludge, presswater or precooker water) EPA Region 9 and ASEPA shall be notified 60 days prior to such modification. At their discretion, either agency may require that the permittee conduct a complete analysis of parameters for specified liquid waste streams and report the results to EPA Region 9 and ASEPA within 30 days of sampling. (A sample shall consist of three replicate grab samples pooled for use as a composite sample. The detection limits specified in Table 4 shall be used in all fish processing liquid waste stream analyses.) If necessary, bioassays may be required in addition to parameter analyses.

### 3.3. **Reporting**

3.3.1. The permittee shall provide EPA Region 9, ASEPA, the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS) and the

Western Pacific Regional Fishery Management Council (WPRFMC) with a report, prepared every 3 months during the research permit period, that contains the following information:

- 3.3.1.1. Daily volume of fish processing liquid waste (total combined liquid waste streams of DAF Sludge, Presswater and Precooker water) generated at the permittee's facility and pumped into the permittee's onshore storage tanks to be reported in gallons per day;
  - 3.3.1.2. Daily volume of fish processing liquid waste disposed at the ocean disposal site to be reported in gallons per day;
  - 3.3.1.3. Monthly fish processing liquid waste analyses from the onshore storage tank demonstrating that the fish processing liquid wastes being dumped comply with the permitted limits of parameters listed in Special Condition 2.4 and a cumulative yearly summary of the volumes of fish processing liquid wastes disposed at the ocean site;
  - 3.3.1.4. The monthly amount of alum (aluminum sulfate) and coagulant polymer added to the fish processing liquid waste streams reported in pounds per month.
- 3.3.2. Such reports, including a comparison with the data collected under previous ocean dumping permits shall be submitted to EPA Region 9, ASEPA, NMFS USFWS and WPRFMC within 45 days of the end of the preceding 3-month period for which they were prepared. The reports shall be submitted within this time unless extenuating circumstances are communicated to EPA Region 9 and the ASEPA in writing. In addition to a hard copy of the data submitted to EPA Region 9, a digital copy of all required data shall be submitted in an EPA Region 9-compatible format, including name of cannery, permit number, and months for which the data is submitted. [Appendix B shows examples of the data that must be uploaded to the third-party compliance monitoring contractor database and hard copies mailed to the designated agencies.]
- 3.3.3. A summary report of all 3-month reports listed in Special Condition 3.3.1, including comparisons with permit limits and a detailed discussion of the summary results, shall be submitted by the permittee to EPA Region 9 and the ASEPA 60 days after expiration of the research permit. Delay or non-compliance with this requirement may delay or preclude issuance of a future special permit. All fish processing liquid waste data shall be reported in the same format as required in Special Condition 3.3.2 [Appendix B shows examples of the data that must be uploaded to the third-party compliance monitoring contractor database and hard copies mailed to the designated agencies.]

- 3.3.4. Upon detection of a violation of any permit condition, the permittee shall send a written notification of this violation to EPA Region 9 and ASEPA within five working days and a detailed written report of the violation shall be sent to the agencies within 15 working days. This notification shall pertain to any permit limits (defined in Special Condition 2.4) that are exceeded, violation of volume limits (defined in Table 2 under Special Condition 2.3.1), and any disposal operation that occurs outside the disposal site defined in Special Condition 2.2.
- 3.3.5. During the research permit, the permittee shall submit a report to EPA Region 9 and ASEPA on the results of at least two sets of confirmatory suspended phase acute toxicity bioassay tests and dilution model calculations (i.e., Limiting Permissible Concentration) of the predicted concentrations of fish processing liquid wastes disposed at the designated site. The suspended phase bioassays shall be conducted using at least one species from each of the following three groups: Group 1 = *Mytilus* sp. (mussel), *Crassostrea* sp. (oyster), *Acartia tonsa* (copepod), or *Trypneustes* sp. (sea urchin) larvae; Group 2 = *Holmesimysis costata* (mysid shrimp) or *Penaeus vannamei* (white shrimp); and Group 3 = *Citharichthys stigmaeus* (speckled sanddab) or *Coryphaena hippurus* (dolphinfish) juveniles.

Appropriate suspended phase bioassay protocols, either protocols approved by EPA Region 9 or protocols published by ASTM, shall be followed. Suspended particulate phase bioassays shall be run using the following fish processing liquid waste concentrations: 100%, 75%, 50%, 25%, 10%, 5%, and a control (0%). A minimum of five replicates are required per dilution concentration. Concurrent reference toxicant tests shall be conducted when the suspended phase bioassays are run.

A sampling and testing plan shall be submitted to EPA Region 9 for approval before the bioassay tests are conducted. Samples for the suspended particulate phase bioassays shall be composited from the permittee's onshore storage tanks. Three samples shall be taken from the onshore storage tank transfer line at 10-minute intervals. These samples shall be composited to produce one sample for analysis. The permittee's samples shall not be combined with fish processing waste from any other locations. Samples shall be collected and shipped to the testing laboratory according to EPA Region 9-approved methods to ensure that the samples do not change before the bioassay tests begin. All suspended particulate phase bioassays shall be started within 10 days of sampling.

If changes in processing and /or disposal operations should occur, an additional re-evaluation of the disposal model may also be required. These evaluations (bioassays and/or modeling) would be used to confirm the toxicity of the fish processing liquid wastes and to evaluate the disposal operations based on the use of a different disposal vessel or different mode of disposal.

The confirmatory bioassay report shall contain the following information:

#### 3.3.5.1. INTRODUCTION AND PROJECT DESCRIPTION

The project description should include the following information about fish processing liquid waste toxicity, previous bioassay test results, and the design of the new bioassay tests. The discussion of modeling results should also consider previous modeling results for the ocean disposal site.

#### 3.3.5.2. MATERIALS AND METHODS

Fish processing liquid waste sampling and sample handling procedures should be described or referenced.

References for laboratory protocols for suspended phase bioassay tests.

- 1) EPA Region 9-approved methods and references.
- 2) Test species used in each test, the supplier or collection site for each test species, and QA/QC procedures for maintaining the test species.
- 3) Source of seawater used in reference, control and bioassay tests.
- 4) Data and statistical analysis procedures.
- 5) Limiting Permissible Concentration (LPC) calculations.
- 6) For modeling analysis as required in Special Condition 3.3.5., there should be a description of the model selected to evaluate dispersal of fish processing liquid wastes at the ocean disposal site. Use of this model shall be approved by EPA Region 9 before it is used by the permittee to evaluate the fish processing liquid waste disposal plume.

#### 3.3.5.3. DESCRIPTION OF SAMPLING PROCEDURES

The permittee is required to submit documents on QA/QC procedures and actual sampling procedures used during fish processing liquid waste stream sampling and handling of the samples.

#### 3.3.5.4. FINAL RESULTS, ANALYSIS OF DATA AND DISCUSSION

- 1) Complete bioassay data tables and summary bioassay tables shall be furnished in the report. All data shall be submitted in hard copy and in EPA-compatible digital format.
- 2) The permittee shall analyze the bioassay data and calculate the LPC of the material as defined at 40 C.F.R. § 227.27(a-b).
- 3) The permittee shall use the LPC in the approved plume model to determine the concentration of fish processing liquid wastes disposed at the designated ocean disposal site which complies with EPA's Ocean Dumping Criteria defined at 40 C.F.R. Parts 227 and 228.

#### 3.3.5.5. REFERENCES

This list should include all references used in the field sampling program, laboratory protocols, LPC calculations, modeling analyses, and historical data used to evaluate the fish processing liquid waste disposal operations at the designated ocean disposal site.

#### 3.3.5.6. DETAILED QA/QC PLANS AND INFORMATION

The following topics should be addressed in the QA Plan:

- 1) QA objectives.
- 2) Organization, responsibilities and personnel qualifications, internal quality control checks.
- 3) Sampling and analytical procedures.
- 4) Equipment calibration and maintenance.
- 5) Sample custody and tracking.
- 6) Documentation, data reduction, and reporting.
- 7) Data validation.
- 8) Performance and systems audits.
- 9) Corrective action.
- 10) Reports.

#### 4. **SPECIAL CONDITIONS - VESSEL OPERATIONS**

Specifications for vessel operations are defined to limit dumping activities to the dump site identified in Special Condition 2.2 and to record all dumping activities. The permittee's fish processing liquid wastes are expected to be pumped onto the disposal vessel such that disposal trips may be daily or every other day depending on when maximum capacity is reached on the disposal vessel.

##### 4.1. **Posting of the Permit**

This permit, or a true copy thereof, shall be placed in a conspicuous place on the vessel authorized by this research permit for the transportation and dumping of the three fish processing liquid wastes.

##### 4.2. **Vessel Identification**

The vessel engaged in the transportation of fish processing liquid wastes for ocean disposal shall have its name prominently located on both sides of the vessel. The name and number shall be kept distinctly legible always, and any vessel without such markings shall not be used to transport or dump fish processing liquid wastes.

##### 4.3 **Prohibition on Leaking or Spilling During Transport**

Transportation of fish processing liquid wastes must be halted if leaking or spilling is detected. The vessel must be taken offline until all necessary repairs are conducted and the repairs are certified as complete; documentation submitted to EPA Region 9 for review and approval before operations are re-started.

##### 4.4 **Third-Party Independent Inspector:**

An independent quality control inspector ("*independent*" means not a direct employee of the permittee or waste transporter) must certify in writing that the vessel is properly instrumented to record total volume loaded on the disposal vessel, continuous GPS locations during each disposal trip, discharge start and end for each trip, and discharge rate for each disposal trip. The independent quality control inspector must also certify that all data is recorded in a secure ("black box") system installed on the vessel and data is transmitted to the inspector's web-based application/database at the conclusion of each disposal trip. The permittee shall provide a summary of the disposal trip data and associated trip plots from the compliance monitoring database as well as any discrepancies or inaccuracies of recorded data in the permittee's report to EPA for the relevant month (see Special Conditions 4 and 5).

##### 4.5 **Posting Disposal Vessel Tracking and Fish Processing Liquid Waste Data on the Internet:**

Within 24 hours of the completion of each disposal trip, data recorded from the primary disposal tracking system must be posted by a third-party contractor to a World Wide Web (Internet) site accessible by EPA Region 9. The Internet site must be searchable by disposal trip number and date, and at a minimum for each disposal trip, the following must be uploaded from the black box system, including:

- 4.5.1. total volume of fish liquid wastes loaded and discharged for the trip
- 4.5.2. visual display of the disposal vessel transit route to the ocean disposal site
- 4.5.3. the beginning and ending locations of the disposal event;
- 4.5.4. and discharge rate throughout the transit in the disposal site.

The requirement for posting this information on the Internet is independent from the hard-copy reporting requirements.

Other field observation and disposal operations information to be uploaded to the database include the following:

- 4.5.5. Observe, note and plot the time and position of any floatable material;
- 4.5.6. Observe, note and plot the wind speed and direction every 30 minutes while dumping fish processing liquid wastes at the designated disposal site;
- 4.5.7. Observe and note current direction at the beginning and end of the disposal trip, and the direction of the disposal plume at the end of the disposal operation;
- 4.5.8. Observe, note and plot the presence of any visible (previous) disposal plume and any unusual occurrences during the disposal trip, or any other information relevant to the assessment of environmental impacts as a result of dumping activities; and
- 4.5.9. Any unusual occurrences noted under Special Condition 4 shall be highlighted in the report defined in Special Condition 3.3.1.
- 4.5.10. Any deviation from the normal disposal pattern such as circumstances described in Special Condition 4.4 and reasons for the deviation.
- 4.5.11. Copies of the daily trip logs recorded by the vessel master/captain shall be sent to EPA Region 9, USCG Liaison Office in Pago Pago, and ASEPA as part of the 3-month report.

4.5.12. Appendix B shows examples of the data that must be uploaded to the third-party compliance monitoring contractor database and hard copies mailed to the designated agencies.

#### 4.6 **E-Mail Alerts:**

The third-party system must also generate and distribute “e-mail alerts” regarding any degree of apparent dumping outside of ocean disposal site (“mis-dumping”), and regarding any apparent substantial leakage/spillage or other loss of material en route to the ocean disposal site. Substantial leakage/spillage or other loss shall be evaluated for each trip where this is detected or observed between the time that the disposal vessel begins the trip to the ocean disposal site and the time of actual disposal. E-mail alerts for any disposal trip with potential violation must be sent to EPA Region 9 within 24 hours of the end of that trip.

#### 4.7 **Disposal Vessel Instrumentation for GPS Location and Discharge Tracking:**

The primary tracking system for recording ocean disposal operations shall be vessel-based. The disposal vessel shall have a primary navigation/tracking system functioning for each disposal trip, calibrated for accuracy at a minimum at the beginning of each ocean disposal project, that automatically and continually indicates and records the following information throughout transportation to, disposal at, and return from the American Samoa fish processing liquid waste disposal site:

- a. position of the disposal vessel, to a minimum accuracy of 3 m (10 ft);
- b. speed and heading of the disposal vessel;
- c. flow sensors that indicate when discharge is occurring;
- d. flow sensors that indicate the rate of discharge;
- e. time and location of each disposal event (e.g., the discharge phase).

This system must record these data at a maximum 1-minute interval while outside of the disposal site boundary, and at a maximum 15-second interval while inside the disposal site boundary during the discharge transit phase. The primary system must also include a real-time display, located in the wheelhouse or otherwise visible to the helmsman, showing the position of the disposal vessel relative to the boundaries of the fish liquid waste disposal site, superimposed on the appropriate NOS chart so that the operator can confirm proper position of the disposal vessel within the site before the start of discharge of the fish processing liquid waste on the up-current site of the center point of the ocean disposal site.

#### 4.8 **Back-up Navigation System:**



If a functioning back-up navigation system is available, it must meet the minimum accuracy requirements listed above. If the primary (disposal vessel's) navigation tracking system fails during transit, the disposal trip may continue only so long as the back-up navigation and tracking system remains operational. Further disposal operations using a disposal vessel whose navigation tracking system fails must cease until the primary disposal tracking system's capabilities are restored.

#### 4.9. **Determination of the Disposal Location Within the Dump Site**

On each disposal trip, the master of the disposal vessel shall determine the location of the disposal operation as follows:

- 4.9.1. The disposal vessel, as defined under WASTE TRANSPORTER on page 1 of this permit, shall proceed directly to the center of the disposal site at the location specified in Special Condition 2.2.
- 4.9.2. The master of the vessel shall observe the conditions at the dump site center, noting the vessel's position (latitude and longitude), wind direction, and observed surface current direction.
- 4.9.3. The master of the disposal vessel shall proceed 1.1 nautical miles up current from the center of the disposal site and record the position of the disposal vessel (latitude and longitude). This position shall be the starting point for disposal operations for each disposal trip.
- 4.9.4. The master of the disposal vessel shall ensure that the vessel's GPS system is operational and continuously recording the vessel position, thereby documenting compliance with the procedures defined in Special Conditions 4.7 and 4.8. The hard copy of the computerized navigational plot for each disposal trip shall be submitted to the permittee. The permittee shall submit these hard copies of the computerized navigational plots with the 3-month reports required under Special Condition 3.3.1. The hard copies of the navigational plots shall include:
  - 4.9.4.1. The disposal vessel's course during the entire dumping operation; and
  - 4.9.4.2. The times and location of entry and exit from the disposal site, position and time of arrival at the center of the disposal site, position and time of arrival at the location 1.1 nautical miles up current from the disposal site, beginning and ending position and time of dumping operations, and disposal vessel position plotted every 15 minutes while dumping operations occur.

- 4.9.5. The master of the disposal vessel shall sign and date each hard copy of the computerized navigational plots certifying that the hard copies are an accurate record of the disposal vessel's track for each disposal trip.
- 4.9.6. The master of the disposal vessel shall certify that disposal operations occurred in the manner required by the permit.
- 4.9.7. The procedures listed in Special Conditions 4.7 through 4.8 shall be repeated for each disposal trip.

#### **4.10. Disposal Rate and Vessel Speed**

- 4.10.1. The disposal vessel shall discharge the material authorized by this permit beginning at the disposal location as determined by Special Condition 4.9. The vessel track shall be in a direction that is perpendicular to the current detected at the center of the disposal site as defined in Special Condition 2.2. Disposal shall occur in a target area defined by an oval shape track along an axis at least 0.5 nautical miles on either side of the starting point determined in Special Condition 4.9. The entire disposal vessel track shall be within the disposal site boundaries.
- 4.10.2. Deviations from normal disposal operations (as described in Section 4.9) must be reported within 30 days of the date of occurrence. If such deviation should occur, the master of the disposal vessel shall describe the adverse conditions in the log and submit a record of the disposal trip, including the computer-generated navigational plot. Minor deviations in the vessel's track due to adverse ocean conditions (e.g., large waves, strong winds, etc.) are allowed if disposal operations occur in the prescribed target area thereby allowing the fish processing liquid waste to disperse within the disposal site boundaries. If adverse sea state conditions prevent ocean disposal operations in this manner, then all operations shall cease until sea state conditions are compatible with the required disposal operations.
- 4.10.3. From June 1 through November 30, fish processing liquid wastes shall be pumped from the disposal vessel into the ocean at a rate of 140 gallons per minute per knot, not to exceed 1,400 gallons per minute at a maximum speed of 10 knots.
- 4.10.4. From December 1 through May 31, fish processing liquid wastes shall be pumped from the disposal vessel into the ocean at a rate of 120 gallons per minute per knot, not to exceed 1,200 gallons per minute at a maximum speed of 10 knots.

#### **4.11. Permitted Times for Disposal Operations**

Dumping operations shall be restricted to daylight hours. The disposal trip should be initiated with enough time to complete the trip in daylight hours. Any deviations should be reported no later than 5 working days after the trip; the permittee and the waste transporter shall provide EPA Region 9, ASEPA and USCG Pago Pago with a detailed written report on the circumstance which created the deviation.

## **5. SPECIAL CONDITIONS - DUMP SITE MONITORING**

The monitoring program for disposal of fish processing liquid wastes in the ocean must document effects of disposed liquid wastes on the receiving waters, biota, and beneficial uses of the receiving waters; compliance with EPA's Ocean Dumping Regulations; and compliance with permit terms and conditions. Revisions to the monitoring program may be made under the direction of EPA Region 9 at any time during the permit term, in compliance with 40 C.F.R. §§ 223.2 and 223.3. This may include a change in the number of parameters to be monitored, the frequency of monitoring, the location of sample stations, or the number and size of samples to be collected.

Implementation of the disposal site monitoring program and all segments of the monitoring program specified in Special Condition 5 and Appendix A shall be the responsibility of the permittee.

### **5.1. Monitoring Program**

The permittee shall conduct the monitoring program, defined in Appendix A, to determine the environmental impacts of ocean dumping of fish processing liquid waste. If possible, monitoring cruises shall be scheduled within the first two weeks of each month to allow enough time for laboratory analysis and report writing in compliance with Special Condition 5.2. The permittee shall notify EPA Region 9 and ASEPA at least 48 hours before any scheduled monitoring activities. Site monitoring data must be uploaded to the third-party compliance monitoring contractor database upon completion of QA-QC evaluation.

### **5.2. Monitoring Reports**

Monthly site monitoring reports shall be submitted to EPA Region 9, ASEPA, NMFS, USFWS and WPRFMC with the 3-month reports as specified in Special Condition 3.3.2. The reports shall include: neatly compiled raw data for all sample analyses, and quality assurance/quality control data. An annual report shall include: an annual compilation of data, statistical analysis of sample variability between stations and within samples for each parameter, and a detailed discussion of the results.

### **5.3. Final Summary Report**

5.3.1. A report shall be submitted to EPA Region 9, ASEPA, NMFS, USFWS and WPRFMC 60 days after the permit expires. This report shall summarize all the data collected to characterize fish processing liquid wastes and the results of the dump site monitoring program specified in this research permit.

5.3.2. At a minimum, the summary report shall contain the following sections:

5.3.2.1. Introduction (including a summary of previous ocean disposal activities),

5.3.2.2. Location of Sampling Sites,

5.3.2.3. Materials and Methods,

5.3.2.4. Results and Discussion (including comparisons and contrasts of data from this research permit with previous MPRSA § 102 research and special permit data related to disposal of fish processing liquid wastes off American Samoa),

5.3.2.5. Conclusions; and

5.3.2.6. References.

#### 5.4. **Quality Assurance/Quality Control**

5.4.1. All appropriate phases of the monitoring, sampling, and laboratory analytical procedures shall comply with the EPA Region 9-specified protocols and references listed in Special Condition 3.1.2.

5.4.2. The qualifications of the on-site Principal Investigator in charge of the field monitoring operation at the dump site shall be submitted to EPA Region 9 for approval whenever a new Principal Investigator is retained. Notification of any change in this individual shall be submitted to EPA Region 9 at least 7 days before the cruise is scheduled.

### 6. **SPECIAL CONDITIONS - NOTICE TO REGULATORY AGENCIES**

#### 6.1. **Notice of Sailing to the U.S. Coast Guard Liaison Office and the American Samoa Environmental Protection Agency**

6.1.1. The waste transporter shall provide telephone notification of sailing to USCG Pago Pago and ASEPA during working hours (7:00 a.m. to 3:30 p.m.) no later than 24 hours before the estimated time of departure for the dump site defined in

Special Condition 2.2. A record of contact with both agencies shall be reported with other information for each disposal trip.

- 6.1.2. The waste transporter shall immediately notify USCG Pago Pago and ASEPA upon any changes in the estimated time of departure greater than two hours.
- 6.1.3. Surveillance of activities at the dump site designated in Special Condition 2.2, may be accomplished by unannounced aerial overflights or observation from another vessel by EPA Region 9, ASEPA, USCG or American Samoa Department of Public Safety personnel; or a USCG ship rider and/or a ASEPA or EPA Region 9 ship rider who will be on board the towing/conveyance vessel for the entire voyage. Within two hours after receipt of the initial notification the waste transporter will be advised whether a ship rider will be assigned to the waste transporter's disposal vessel.
- 6.1.4. The following information shall be provided to USCG Pago Pago and ASEPA in the notification of sailing defined above:
  - 6.1.4.1. The time of departure,
  - 6.1.4.2. Estimated time of arrival at the dump site,
  - 6.1.4.3. Estimated time of departure from the dump site, and
  - 6.1.4.4. Estimated time of return to port.

## 6.2. **Reports and Correspondence**

- 6.2.1. Two copies of all reports and related correspondence required by General Condition 1.10, Special Conditions 3.2, 3.3, 4.3, 4.5, 4.6, 4.7, 5.2, 5.3, 6.1, and all other materials, including applications shall be submitted to EPA Region 9 at the following address:

U.S. Environmental Protection Agency, Region 9  
ATTENTION: Ocean Dumping Program  
Water Division (WTR-2-2)  
75 Hawthorne Street  
San Francisco, California 94105-3901  
Telephone (415) 972-3476 (Allan Ota)

- 6.2.2. One copy of all reports required by General Condition 1.10 and Special Conditions 4.5, 4.6, 4.7 and 6.1 sent to the USCG shall be submitted to the following address:

Commanding Officer

U.S. Coast Guard Liaison Office  
P.O. Box 249  
Pago Pago, American Samoa 96799  
Telephone (684) 633-2299

- 6.2.3. One copy of all reports required by General Condition 1.10 and Special Conditions 3.2, 3.3, 4.3, 4.5, 4.6, 4.7, 5.2, 5.3, and 6.1 sent to ASEPA shall be submitted to the following address:

Director  
American Samoa Environmental Protection Agency  
Office of the Governor  
Pago Pago, American Samoa 96799  
Telephone (684) 633-2304

- 6.2.4. One copy of the all reports required by Special Conditions 3.3, 5.2 and 5.3 shall be sent to the USFWS, the NMFS and the WPRFMC at the following addresses:

Project Leader  
Office of Environmental Services  
U.S. Fish and Wildlife Service  
300 Ala Moana Boulevard  
P.O. Box 50167  
Honolulu, Hawaii 96850

Western Pacific Program Officer  
National Marine Fisheries Service  
2570 Dole Street  
Honolulu, Hawaii 96822-2396

Executive Director  
Western Pacific Regional Fishery Management Council  
1164 Bishop Street, Suite 1405  
Honolulu, Hawaii 96813

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2020

For the Regional Administrator:

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Robert Stoker  
Regional Administrator  
U.S. EPA, Region 9

**APPENDIX A**

**RESEARCH OCEAN DUMPING PERMIT OD 2020-01  
OCEAN DUMP SITE MONITORING PLAN**

**7. SPECIAL CONDITIONS - MONITORING OF RECEIVING WATER**

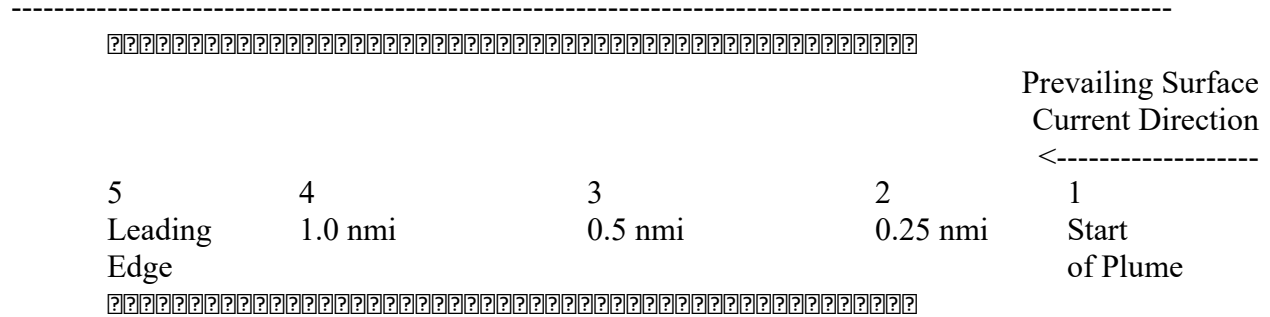
Monitoring of the receiving waters at the disposal site defined in Special Condition 2.2 shall be the responsibility of the permittee. The required site monitoring may be accomplished jointly through an agreement between permittee and other permittees authorized to use the disposal site. Any such agreements negotiated between the permittee and other authorized permittees shall be the sole responsibility of the permittee named in this permit. EPA Region 9 requires that a monitoring program be developed that complies with the special conditions defined below.

During each monitoring cruise, the disposal plume from the disposal vessel shall be sampled by taking discrete water samples for the measurement of parameters listed in Special Condition 7.2.4.

**7.1. Location of Water Sampling Stations**

7.1.1. On each sampling cruise, the latitude and longitude of all sampling stations shall be determined and plotted using an acceptable navigational system.

7.1.2. The Principal Investigator shall ensure that discrete water samples are taken at the locations marked in Figure 1.



**Figure 1.** Orientation of Sample Stations (Top View) in the Middle of the Discharge Plume Visually Identified at the Time of Sampling.

7.1.3. The following stations, defined in Figure 1, shall be sampled on each sampling cruise:

7.1.4.1. Station 1 shall be the starting point of the dumping operation as determined in Special Condition 4.3.

7.1.4.2. Station 2 shall be 0.25 nautical miles (nmi) down-current from Station 1.

7.1.4.3. Station 3 shall be 0.5 nmi down-current from Station 1.

7.1.4.4. Station 4 shall be 1.0 nmi down-current from Station 1.

7.1.4.5. Station 5 shall be at the leading edge of the discharge plume, but within the plume.

7.1.4. The Principal Investigator shall ensure that each sampling station is positioned as close as possible to the middle of the discharge plume according to his/her best professional judgment.

## 7.2. **Water Column Characteristics to Be Measured**

7.2.1. Discrete water samples at Stations 1, 2, 3, 4, and 5 shall be taken at depths of 1, 3, and 10 meters from the surface at the middle of the plume visually identified by the Principal Investigator.

7.2.2. Surface water conditions shall be recorded at all stations including:

7.2.2.1. Wind speed and direction;

7.2.2.2. Current direction and wave height; and

7.2.2.3. Observations of plume color (e.g., Forel-Ule color scale), odor, floating materials, grease, oil, scum, and foam.

7.2.3. Water samples shall be obtained using a self-closing 3-liter water sample device at each depth listed in 7.2.1.



7.2.4. Water column parameters analyzed from discrete samples taken at the depths listed in 7.2.1 shall include:

**Table 4.** Physical and Chemical Parameters to be Analyzed from Water Samples Taken at the Ocean Disposal Site.

<b>Parameter<sup>a</sup></b>	<b>Method Detection Limit</b>
Total Suspended Solids	10.0 mg/L
Total Volatile Suspended Solids	10.0 mg/L
Oil and Grease	10.0 mg/L
Total Phosphorus	1.0 mg/L
Total Nitrogen	1.0 mg/L
Ammonia	1.0 mg/L
pH	0.1 pH units

a = Samples should be acidified to pH <2 with sulfuric acid and refrigerated at 4EC until analysis.

7.2.5. Temperature measurements shall be taken at depths of 1, 3, and 10 meters at the starting point of the disposal operation, as defined in Special Condition 4.9.

**7.3. Frequency of Sampling**

7.3.1. Water samples shall be collected in association with active dumping operations. Each station listed under Special Condition 7.1 shall be sampled once each month. These samples shall be used to characterize the receiving waters at the disposal site.

7.3.2. Control samples shall be taken at Station 1 before dumping activities.

7.3.3. Station 1 shall be sampled at a point within the plume immediately after discharge operations cease.

7.3.4. Stations 2 through 5 shall be sampled consecutively at distances indicated in Special Condition 7.1.4 to allow efficient sampling of the discharge plume. The time between each sample and the sampling location, beginning with the control

sample and ending with the sample collected at the leading edge of the plume, shall be recorded.

#### **7.4. Water Quality Criteria and Standards**

7.4.1. The Limiting Permissible Concentration (LPC) of the liquid phase of the fish processing liquid wastes shall not be exceeded beyond the disposal site boundary within four hours after dumping or at any point in the marine environment after four hours. The LPC, as defined at 40 C.F.R. §227.27, shall not exceed applicable American Samoa Oceanic Water Quality Standards (see Table 1). EPA Region 9 and ASEPA will evaluate the LPC based on EPA's Ocean Dumping Regulations and the concentration of parameters measured at the stations sampled during the tenure of this permit.

#### **7.5 Reporting**

Results of laboratory analyses must be uploaded to the third-party compliance monitoring contractor database.

### **8. MONITORING OF BIOLOGICAL COMMUNITIES**

#### **8.1. Pelagic Resources**

8.1.1. All sightings of fish, sea turtles, sea birds, or cetaceans near the disposal site shall be recorded including:

8.1.1.1. Time, location and bearing;

8.1.1.2. Species name(s); and

8.1.1.3. Approximate number of individuals.

8.1.1.4. Field observations must be uploaded to third-party compliance monitoring contractor.

**APPENDIX B - REPORT FORM 1 – OD2020-01 RESEARCH**

**Monthly Volumes of StarKist Samoa Fish Processing Liquid Wastes Generated Per Day  
and Volumes of Fish Processing Liquid Waste Disposed at the Ocean Site**

**Volume Limit = 300,000 Gallons**

**Month \_\_\_\_\_ 20\_\_**

[DATA TO BE UPLOADED TO THIRD-PARTY  
COMPLIANCE MONITORING CONTRACTOR  
WEBSITE]

<b>Date</b>	<b>Total Volume Generated (gallons/day)</b>	<b>Volume Ocean Disposed (gallons/day)</b>	<b>Date</b>	<b>Total Volume Generated (gallons/day)</b>	<b>Volume Ocean Disposed (gallons/day)</b>
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16					
SUBTOTAL			SUBTOTAL		
			GRAND TOTAL		

NOTE: An asterisk (\*) to the right of the date of fish processing liquid waste volume signifies that a violation of the permit limit has occurred. Total number of violations this month = \_\_\_\_\_.

Monthly quantities of alum (aluminum sulfate) and  
coagulant polymer added to the fish processing liquid  
waste streams:

Aluminum sulfate: \_\_\_\_\_  
pounds/month  
Coagulant polymer: \_\_\_\_\_  
pounds/month

[DATA TO BE UPLOADED TO THIRD-PARTY  
COMPLIANCE MONITORING CONTRACTOR  
WEBSITE]



<b>OD 2020-01 Permit Limits</b>	101,800	84,100	129,390	62,940	1,750	10,980	11,810	6.2 to 7.1	0.97 to 1.03										

\*Note an asterisk (\*) next to the liquid waste concentration signifies that a violation of the permit limit has occurred.



<b>Month &amp; Year</b>	<b>Total Generated (gallons/month)</b>	<b>Aluminum sulfate (pounds/month)</b>	<b>Coagulant polymer (pounds/month)</b>	<b>Volume Ocean Disposed (gallons/month)</b>	<b>Volume Ocean Disposed (gallons/month)</b>
<b>Cumulative Yearly Totals</b>					

NOTE: A separate table shall be prepared for each calendar year.