Seafood Processing Standard – Effluent Discharge Module

Issue 1.0

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Global Seafood Alliance Certification Standard

Contents

A Introduction

Environmental responsibility is an essential pillar of the Global Seafood Alliance (GSA) Seafood Processing Standard. Seafood processing facilities that fit within the scope of this module, treat their own effluents, and discharge into a natural water body shall be audited against the clauses in this module and are required to meet GSA effluent parameters as described herein. This module shall be audited in combination with the Core Seafood Processing Standard 6.0.

B Scope

The scope of this module covers effluent discharge requirements for seafood processing facilities not defined as a remote wild processing facility. *Note: GSA defines a remote wild processing facility as being only accessible by sea or air, or that is more than 30 minutes travel by land from a metropolitan area with a population of 10,000 or greater and only processes wild-caught seafood products.*

C Clause Requirements

C1 Exemptions

The auditor shall complete this section (C1) only if the facility is claiming an exemption for either no effluent discharge to a natural water body or if all effluent is discharged to a municipality. If the facility does not qualify for an exemption, this section is to be left blank and the auditor should go directly to section C2.

EFF1 **Exemption for No Discharge**: The facility qualifies for an exemption because they do not discharge to a natural water body and meet local or national government permits and regulations.

Examples of natural water bodies include coastal waters, bays, estuaries, canals, etc. Examples of no discharge: effluents used for irrigation or other purposes preventing discharge to naturally occurring water bodies. Auditor is to verify through records and site inspection. If verified, this module is complete.

EFF2 **Exemption for Discharge to Municipality**: The facility qualifies for an exemption because they discharge to a municipality or private treatment plant. *Auditor to verify through site inspection and records.*

EFF2.1 Plants shall not exceed local or national government permitted load levels when discharging effluents to a municipal or industrial treatment facility.

C2 Onsite Effluent Management

EFF3 Facilities shall have a valid government permit for discharge into a naturally occurring water body (sea, river, estuary, etc.). The facility shall provide the auditor with a description and diagram of the effluent process.

EFF3.1 If no government permits are required the facility shall need to have conducted an environmental impact assessment on the scale and level of effluent that can be discharged into this naturally occurring water body.

EFF4 To minimize the chance of disease transmission from effluents discharged to natural waters, facilities shall screen out solids and treat effluents by using a documented validated disinfection process which shall kill disease organisms before release and comply with any species-specific disease prevention requirements.

EFF4.1 After disinfection of effluents, residues of disinfectant shall be neutralized, removed, or allowed to dissipate prior to effluent discharge.

EFF5 Records of effluent water quality concentrations entering natural bodies of water shall comply with government regulations, or the SPS criteria in Table 1, whichever is stricter.

EFF5.1 For New Applicants: At least three consecutive months of effluent data, collected during operation, shall be available for effluents that enter natural bodies of water (rivers, streams, canals, estuaries, etc.). Effluent samples shall be analyzed for all the variables listed in Table 1 (including 3 months' worth for the quarterly variables).

EFF5.2 For Recertification: Test results for ongoing water quality monitoring shall be met as noted in Table 1 for the last calendar year.

EFF5.3 Facilities shall record water quality monitoring parameter results per the frequency listed in Table 1 and report during the annual audit the average annual concentrations for each parameter as shown in the table.

EFF6 **Verification of Samples During the Audit**: The facility or third-party lab shall use a documented process to collect, seal, and mark/identify all samples to ensure that they are being conducted in a consistent manner and from pre-defined locations across the facility.

EFF6.1 The facility shall demonstrate that samples are being collected properly and according to the process defined by the facility or third-party lab, from the correct locations, using accepted sample collection methods, and marked and sealed properly.

EFF6.2 All collected samples shall be shipped for testing, to an environmental testing laboratory that holds valid environmental testing certifications such as NELAP (National Environmental Laboratory Accreditation Program), ISO 17025 accreditation, or national/local governmental certifications.

EFF7 **Effluent Discharge and Operation Data:** The facility shall record and provide the auditor with the annual average volume of effluent discharge in cubic meters and number of days in operation.

EFF7.1 Data – input annual average volume of effluent discharged in cubic meters/day for last calendar year.

EFF7.2 Data – input the number of days the plant was in operation during the last calendar year.

Table 1: Effluent Water Quality Parameters, Requirements, and Values		
Parameter	**Value**	**Frequency**
pH (standard units)	6.0-9.0	Quarterly (or monthly for new facilities requiring 3 months of data)
Total suspended solids (mg/L)	100 or less	Monthly
Either total phosphorus (mg/L)	25 or less	Monthly
OR soluble phosphorus (mg/L)	5 or less	Monthly
Total ammonia nitrogen (mg/L)	10 or less	Monthly
5-day biochemical oxygen demand (mg/L)	200 or less	Quarterly (or monthly for new facilities requiring 3 months of data)
Oil and grease content (mg/L)	20 or less	Quarterly (or monthly for new facilities requiring 3 months of data)
Dissolved oxygen (mg/L)	3.0 or more	Weekly

C3 Mixing Zone - for Marine Environments Only (Alternate Option 1)

Facilities discharging directly to high energy marine environments may elect an alternative approach to compliance by demonstrating that the water quality concentrations (of parameters listed in Table 1) at the edge of an established mixing zone are less than, or equal to, concentrations measured upstream of the discharge pipe.

EFF8 When a Mixing Zone option is used, the facility shall demonstrate it can comply with the following:

EFF8.1 A mixing zone radius exceeding 10m in length shall be established by a hydrological study conducted by a licensed environmental engineering entity.

EFF8.2 Quarterly monitoring of parameters listed in Table 1 shall be conducted at a point on the downstream edge and another point upstream of the established mixing zone. GPS coordinates shall be provided to identify locations of sampling.

EFF8.3 Mixing zone sampling results shall demonstrate that concentrations do not increase between downstream and upstream monitoring points.

EFF8.4 Under the mixing zone option samples shall be monitored on a quarterly basis.

Implementation

A mixing zone is the defined portion of a waterbody where a permitted wastewater discharge undergoes initial dilution. Specific water quality criteria are permitted to exceed the numeric limits for those criteria within this defined area. Water immediately outside the permitted mixing zone is required to meet all water quality criteria listed in Table 1.

C4 Assimilative Capacity Study - for Marine Environments Only (Alternate Option 2)

Facilities discharging to marine environments unable to comply with the variable limits listed in Table 1 may elect to have assimilative capacity studies that clearly demonstrate that their effluent discharge produces no adverse effects on the receiving water bodies.

EFF9 When the assimilative capacity study option is used, the study shall be conducted by a qualified third-party, shall be made available for auditor review, and shall be current.

EFF9.1 Facilities shall record and submit to the certification body water quality monitoring parameter results per the frequency listed in Table 1 and report the average annual concentrations for each parameter as shown in the table.

Implementation

Assimilative capacity studies must be conducted by a qualified third-party and updated annually. This option is only available for facilities for which assimilative capacity studies are also allowed by permits or local or national regulatory requirements.