

ENVIRONMENTAL MANAGEMENT PLAN
FOR THE
CONTINUED OPERATION OF THE SEAFLOWER
FISH PROCESSING FACILITY, LUDERITIZ.



Prepared by:



Final draft 22 November 2022

Document Status

Project: Environmental Management Plan for the Continued Operation of the Existing Seaflower Whitefish processing facility

Location: Industry Road, Lüderitz

Client: Seaflower Whitefish Corporation LTD
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Report Type: EMP
Final Draft – for submission to MEFT

ECC App. No.: To be registered.

Approval to submit the EMP Report



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22/11/2022

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1 Introduction

1.1 Background

Seaflower Whitefish Corporation LTD is a Namibian owned fishing company based in Lüderitz, located on portion J, Industrial Road. The company operates with frozen fish and fishery products.

National Fishing Corporation of Namibia (FISHCOR) was established on the 27th of December 1991 in terms of the National Fishing Corporation of Namibia Act, 1991 (act 28 of 1991) of the National Assembly which paved the way for the establishment of strategic partnerships.

Seaflower Lobster Corporation Limited (SLC) became a wholly owned subsidiary of the National Fishing Corporation of Namibia Limited on the 7th of April 1993. The company owns and operates a processing facility as well as Six (6) lobster vessels in Lüderitz. Lobster Products are packed and marketed through the NAMROCK brand which is 66% owned by SLC.

In 1994, FISHCOR entered into a Joint Venture Agreement with Nordic Partners, which resulted in the establishment of Seaflower Whitefish Corporation Limited (SWC) that owns and operates a wet fish processing facility in Lüderitz. In addition to wet fish, SWC is also allocated a hake freezer quota.

SEACOPE was established in 2004 to jointly manage and utilize the Hake freezer which operates the marine trawler Pemba Bay.

1.2 Environmental Clearance Certificate for Operation

Seaflower Whitefish Corporation LTD was previously issued with an Environmental Clearance Certificate which expires in September 2022. As a result, the ECC needs to be renewed, hence the undertaking of this exercise to update and renew the EMP. The updating process of the EMP began with an audit exercise undertaken on 08 September 2022 at the Seaflower factory in Lüderitz. (Audit Results attached as Appendix A) The results of the audit exercise were used as basis for drafting this EMP.

This EMP was presented to the SHEQ department during a virtual meeting on 24 November 2022.

1.3 Environmental Assessment Practitioner (EAP)

NamXperts Consulting cc is an independent firm of consultants appointed by Seaflower to audit the previous EMP and compile an Environmental Management Plan (EMP), which would be used

to apply for an ECC for their continued operations of their factory in Lüderitz. NamXperts has no vested or financial interest in the proposed project, except for fair remuneration for professional services rendered.

The relevant curriculum vitae documentation of the EAP is attached in Appendix B.

1.4 Environmental Management Plan

The company has commissioned an operational Environmental Management Plan (EMP) for the existing processing facility through the Quality Department which is integrated with Health & Safety as well Environment.

The EMP is an organization and operation-specific plan that is developed to ensure that the operations or activities taking place on a specific location are done in an environmentally sustainable manner where all contractors and subcontractors, including consultants, understands the potential environmental risks arising from such operations or activities and take appropriate actions for risk management. The EMP also ensures that the activities and operations are carried out in accordance with the design by taking appropriate mitigative actions to reduce adverse environmental impacts during its life cycle.

1.4.1 Objectives of an Environmental Management Plan

The purpose of an EMP in Seaflower, is to promote sustainable management of the environment and the use of natural resources as well as to provide for a process of assessment and control of the company's activities which may have significant effects on the environment. Therefore, the EMP aims to:

- Ensure that commitments to minimize environmental effects are met
- Document environmental concerns and appropriate protection measures
- Provide concise and clear instructions to all personnel within Seaflower
- Identify a range of mitigation measures which could reduce and mitigate the potential impacts to minimal or insignificant levels
- To identify measures that could optimize beneficial impacts
- To create management structures that address the concerns and complaints of stakeholders with regards to the development
- To establish a method of monitoring and auditing environmental management practices during all phases of development

- Ensure that all development phases of the operational activities within the company continues within the principles of environmental management
- Detail specific actions deemed necessary to assist in mitigating the environmental impacts of the operations
- Ensure that the safety recommendations are complied with
- Propose mechanisms for monitoring compliance with the EMP and reporting thereon
- Specify time periods within which the measures contemplated must be implemented, where appropriate.

1.4.2 Scope of an Environmental Management Plan

The initial focus of an EMP is to promote sustainable management of the environment through the protection of its habitats. The EMP gives an overview of how the company shows its commitment to environmental sustainability through its operations and it also gives room for audits, reviews and follow-ups to ensure that all sustainable measures are kept in check. The EMP acts as a system check in the implementation of an effective Environmental Management System.

2 Management Commitment

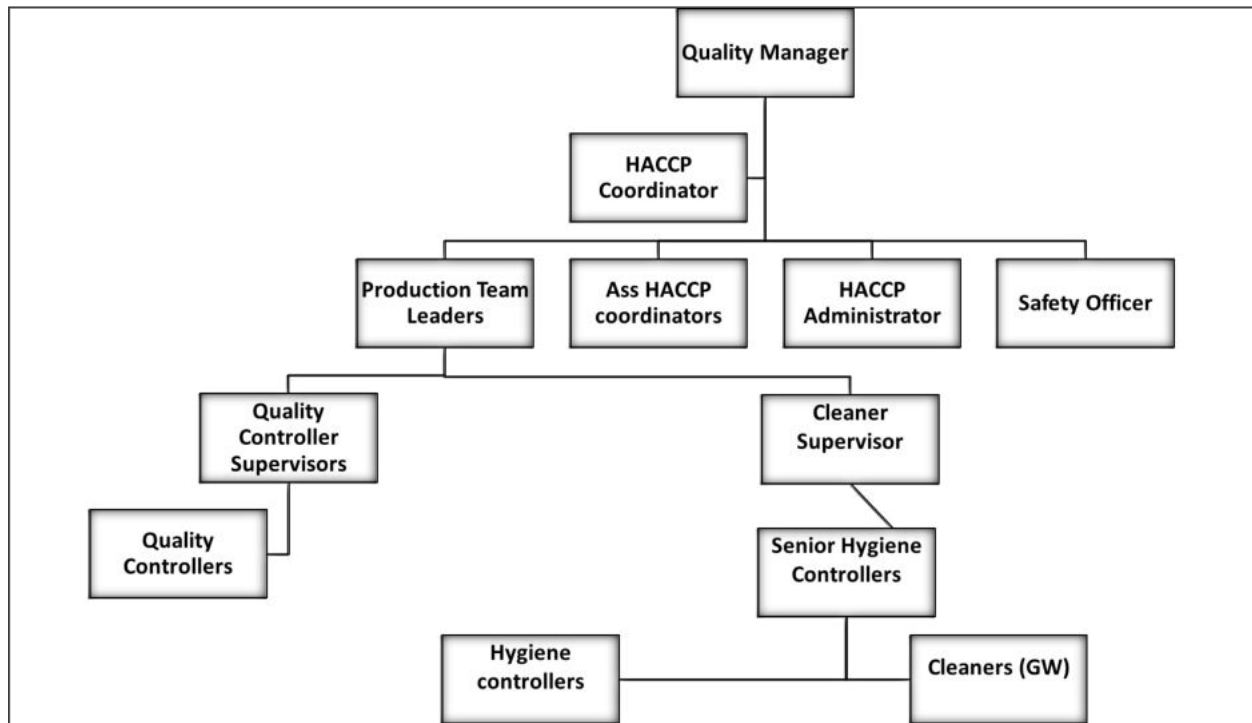


Figure 1: Environmental Management Team Organogram

Seaflower has a SHEQ department that has function of environmental management. The roles and responsibilities for environmental management are assigned to personnel within the department and well defined as follows:

2.1 Quality Manager

The Quality Manager is appointed as the environmental representative of Seaflower and below are the roles and responsibilities

- Make decisions regarding environmental management
- Review and authorize updates of the EMP
- Ensure top management commitment to the implementation of the EMP and ensure resource allocation towards the EMP requirements.
- Ensure all environmental requirements and aspects are well integrated and defined into the SHEQ system.
- Undertake environmental system reviews, site inspections, audits and other verification activities specified in the EMP to assess its effectiveness.

- Coordinate and manage environmental management initiatives such as cleaning campaigns.
- Assist in investigations and corrective and preventive measures.
- Initiate external audits.

2.2 HACCP Coordinator(s)

HACCP Coordinators are personnel responsible to administer all environmental matters relating to the operations of Seaflower.

- They are responsible to ensure that the implementation of the EMP is done accordingly and all the identified impacts and their mitigation measures are well monitored.
- Facilitate environmental induction and training.
- Maintain and update all documents and records
- Do system reviews and internal audits.
- Investigate and report all non-conformances as well as take the necessary corrective measures.
- Assess the effectiveness of the EMP and identify possible areas of improvements as required by the EMP.
- Provide support and advice to the contractors and all sub-contractors in the implementation of environmental management procedures and corrective actions.
- Ensure that monitoring programs, which assess the performance of the EMP are implemented.

2.3 Quality Controllers and Health Controllers

- Ensure adherence to all environmental requirements through continuous inspections.
- Ensure that instructions issued by the QM are all adhered to.
- Undertake daily, weekly and monthly inspections of the work area.
- Report and record all environmental incidents that can occur in the facility during operations.
- Obtain required corrective actions within specified time frames and close out all environmental incidents.
- Provide periodic checklists to the QM and HACCP Coordinators.

- Ensure that a register of all transgressions issued by the QM are well kept in the site office.

2.4 Contractors and sub-contractors

Contractors and sub-contractors shall ensure operators are familiar with, understand and adhere to the EMP during their operations. Failure to adhere to the requirements of the EMP shall be considered sufficient cause to be taken up to the QM for precautionary actions upon the employee. The QM can also mandate the removal of any equipment from the site that is found to cause continual environmental damage (e.g. leaking oil & diesel). Such measures can however not replace any legal proceedings the client may institute against the contractor.

The QM shall order the contractor to suspend part or all of the works if the contractor and/or any sub-contractor, suppliers, etc., fail to comply with both the EMP and the construction procedures supplied by the contractor. The suspension will be enforced until such a time the offending procedure or equipment is corrected and/or if required remedial measures are put in place. No extension time will be granted for such delays and all costs will be borne by the Contractor.

By virtue of the environmental obligations delegated to the Contractor through the Contract Document, all staff (including subcontractors and staff), suppliers, and service providers appointed for the project would be responsible for:

- Ensuring adherence by providing adequate staff and provisions to meet the requirements of the EMP.
- Ensuring that method statements are submitted to the QM for approval before any work is undertaken and monitor compliance with the EMP and approved Environmental Method Statements.
- Ensure that environmental problems are remedied timeously and to the satisfaction of the company operations.

3 Legal and other requirements

The Namibian Constitution has a section on principles of state policy. These principles are intended to guide the government in making laws which can be enforced. This section provides a review of applicable and relevant Namibian legislation, policies, guidelines and standards regarding the environment which were considered when implementing an EMP.

3.1 The constitution of Namibia 1990

The articles 91(c) and 95(i) commits the state to actively promote and sustain environmental welfare of the nation by formulating and institutionalizing policies to accomplish the sustainable objectives which include:

- Guarding against overutilization of biological natural resources.
- Limiting over-exploitation of non-renewable resources.
- Ensuring ecosystem functionality
- Maintain biological diversity.

3.2 Environmental Management Act No. 7 of 2007 and the Environmental Management Act Regulations of 2012

The purpose of this Act is to promote the sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment; to provide for a process of assessment and control of projects which may have significant effects on the environment, and to provide for incidental matters. The company is currently adhering to the following legal requirements. :

The Act and its Regulations requires that projects with significant environmental impacts are subjected to an environmental assessment process (Section 27). The operations of Seaflower are a listed activity and require an Environmental Clearance Certificate.

The Environmental Management Act has three main purposes:

1. To make sure that people consider the impact of activities on the environment carefully and in good time.
2. To make sure that all interested or affected people have a chance to participate in environmental assessments.
3. To make sure that the findings of environmental assessments are considered before any decisions are made about activities and this might affect the environment.

3.3. The Water Act, 1956 (No. 54 of 1956) and its requirements in terms of water supplies for drinking water and for waste water treatment & discharge into the environment

The Act prohibits the pollution of water and implements the principle that a person disposing off effluent or waste has the responsibility to care and prevent pollution (Section 3 (k)). The sections of the Water Act that relate to the discharge of industrial effluents are:

Section 21(1) which states that

- The purification of waste water shall form an integral part of water usage and
- that purified effluents shall comply with the General Standard Quality restrictions as laid out in Government Gazette R553 of 5 April 1962 and

Section 21(2) which further stipulate that this purified effluent be returned as close as possible to the point of abstraction of the original water.

In terms of this Act, Seaflower is required to have an effluent discharge permit and it has submitted an application for the renewal of its Effluent Discharge Permit with the Directorate of Water Affairs – Ministry of Agriculture, Water and Land Reform.

3.4. Environmental Assessment Policy of Namibia (1995)

Environmental Assessment (EA's) seek to ensure that the environmental consequences of development projects and policies are considered, understood, and incorporated into the planning process, and that the term ENVIRONMENT (in the context of IEM and EA's) is broadly interpreted to include biophysical, social, economic, cultural, historical, and political components.

All listed policies, programmes, and projects, whether initiated by the government or private sector, should be subjected to the established EA procedures. Apart from the requirements of the Environmental Assessment Policy, the following sustainability principles needs to be taken into consideration, particularly to achieve proper waste management and pollution control.

3.5. Atmospheric Pollution Prevention Ordinance of Namibia No. 11 of 1976

The Ordinance governs the control of harmful or offensive gases and prohibits processes without registration certificate. A certificate must be issued if it can be demonstrated that the best practical

means are being adopted for the prevention or reducing the escape into the atmosphere of noxious or offensive gases produced by the scheduled process.

The Ordinance also requires best practical means for preventing or reducing the escape of harmful or offensive gases produced by any process into the atmosphere. Best practices would be to notify the Ministry of Health and Social Services about emissions, but it is not a legal requirement.

3.6. Hazardous Substance Ordinance 14 of 1974

This Ordinance applies to the manufacture, sale, use, disposal, and dumping of hazardous substances as well as their import and export. The Ordinance also aims to prevent hazardous substances from causing injury, illness, or death to human beings.

3.7. Public and Environmental Health Act No. 1 of 2015

Provides a framework for a structured more uniform public and for incidental matters. The objectives of this Act are to:

- Promote public health and wellbeing.
- Prevent injuries, diseases, and disabilities
- Protect individuals and communities from public health risks.

4. Organizational/operational activities

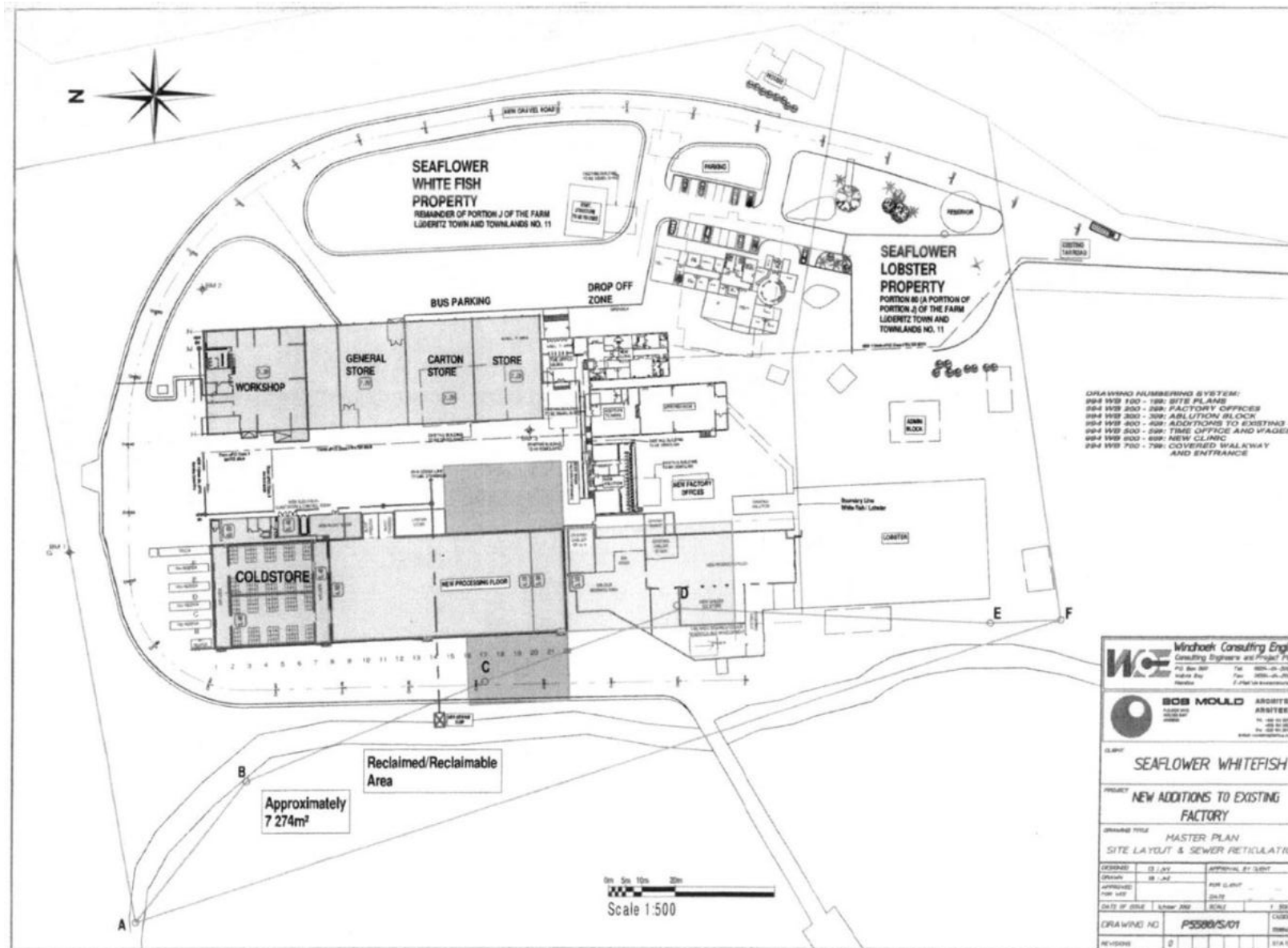


Figure 2: Factory Layout

The Seaflower Fish Processing Facility has been operating for 26 years on the same site. The fish processing plant is composed of the following:

- Administrative Offices
- Clinic
- Mess room
- Production factory
- Chiller Rooms
- Bin Storage
- Cold Store
- General Store
- Workshop

4.1. Fish processing activities

The operational activities of the fish processing include the following:

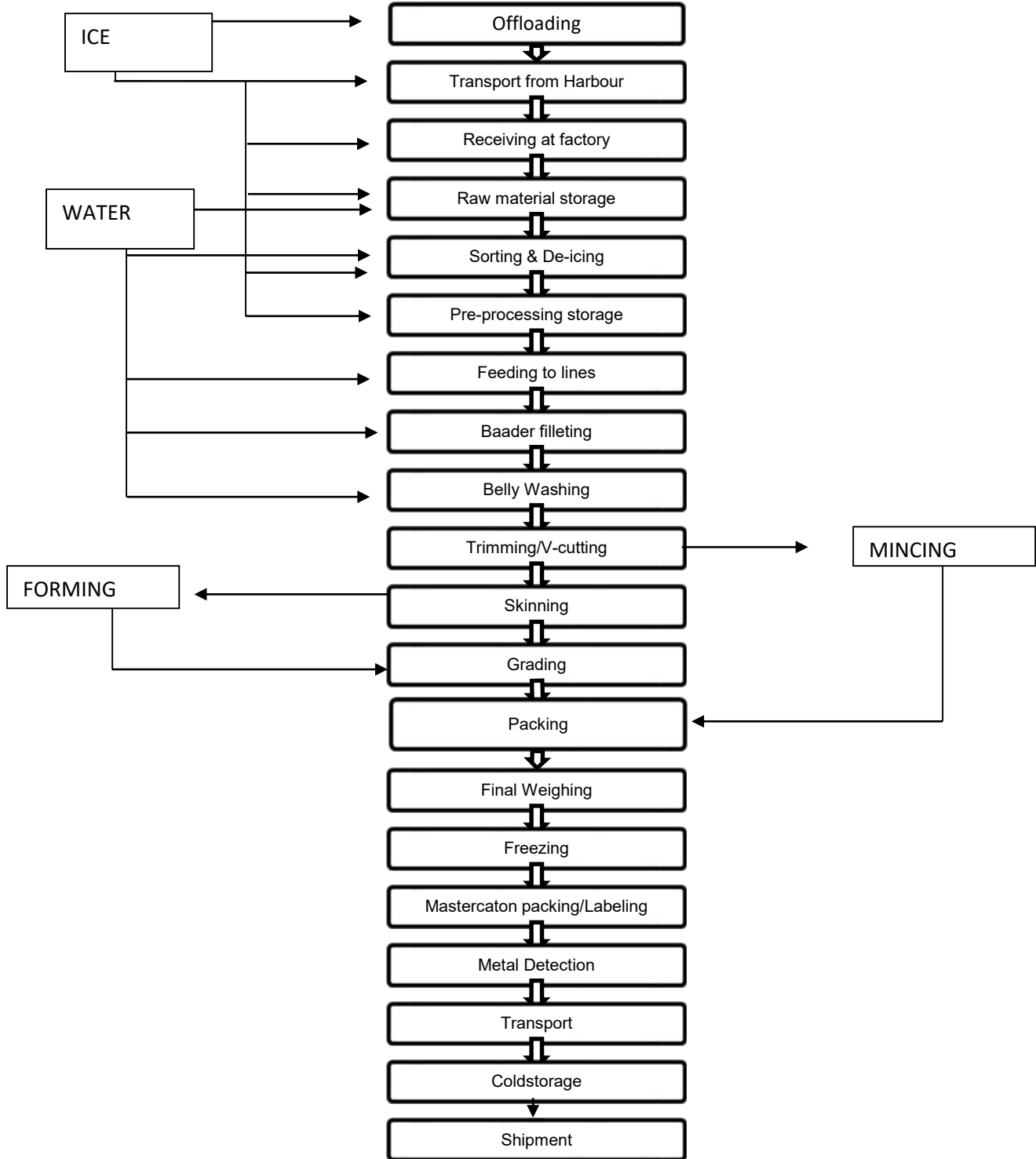
- Fish processing
- Maintenance and repairs of the processing facility and associated infrastructure.

The fish processing operations are defined and followed through the product flow diagrams.

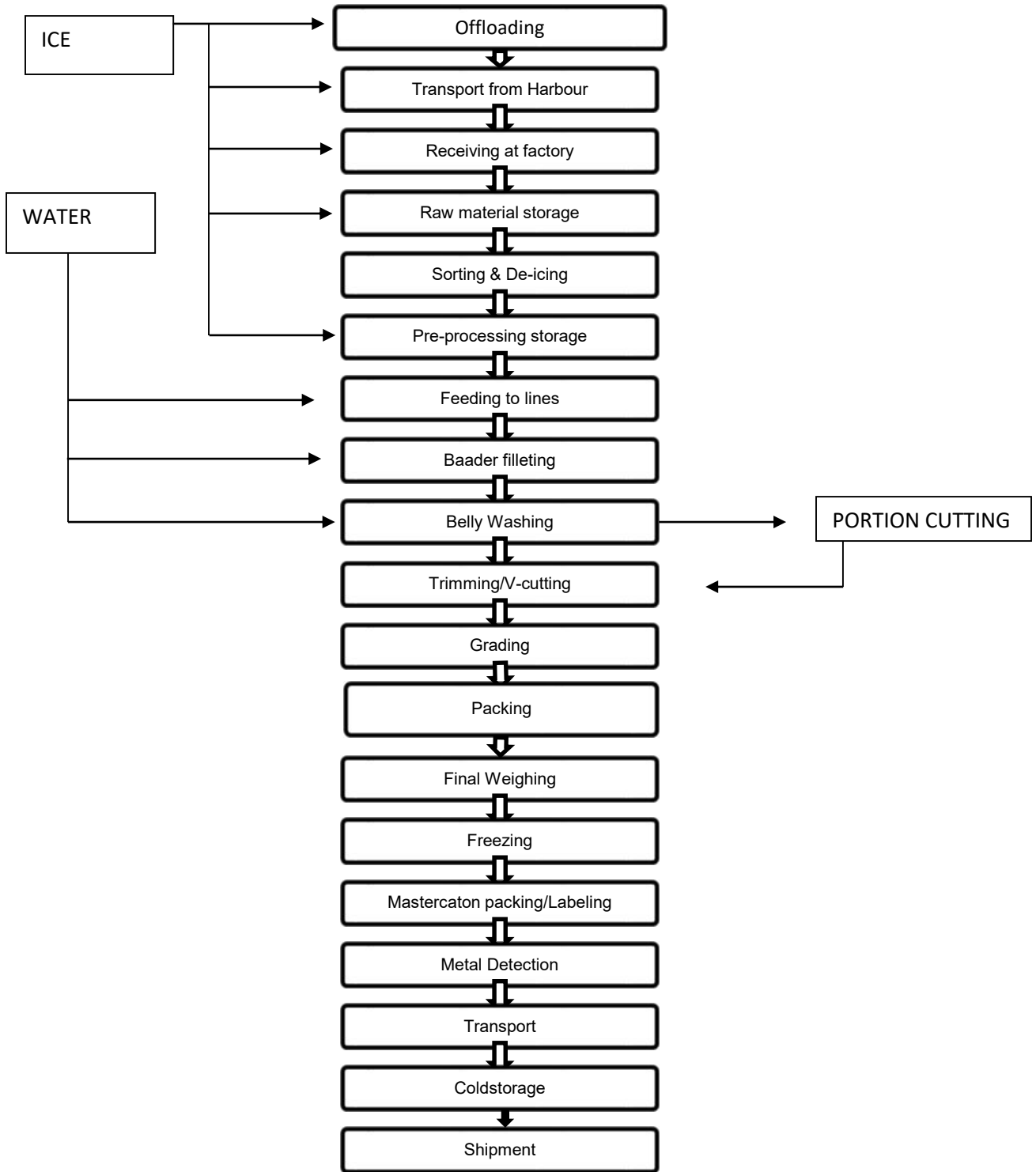
All activities associated with significant environmental aspects are well planned and considered under the HACCP and this EMP. Awareness of environmental aspects that can be caused by operational activities are done through induction and refresher trainings. There is developed and implemented SHEQ policy that serves purpose as a guideline on how the environment and the whole surrounding should be treated during daily operations. This policy sets targets and objectives of the company that are related to environmental sustainability. Therefore, operations associated with significant environmental aspects are considered within the SHEQ policy.

4.1.1. Product flow diagrams

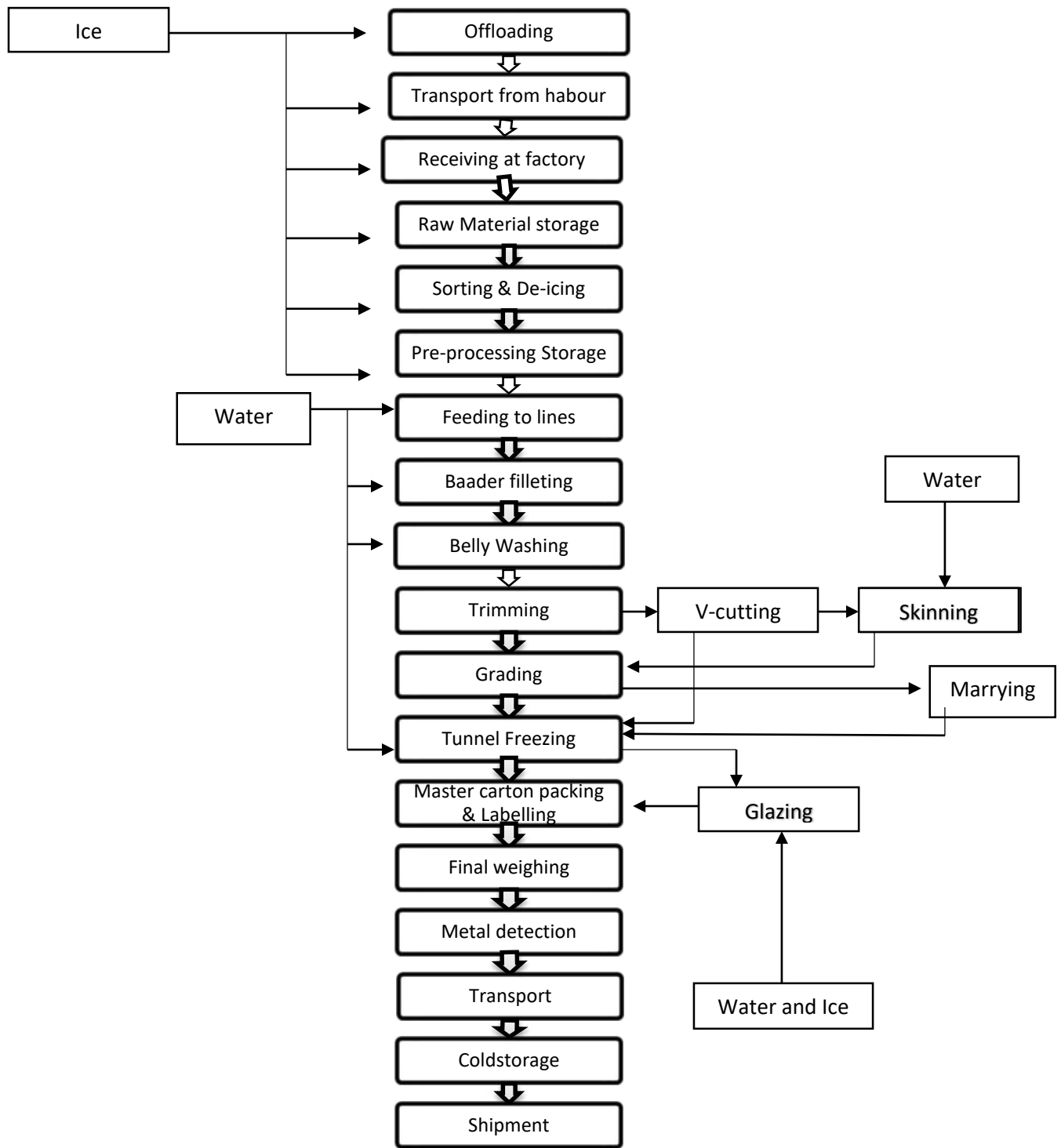
FLOW DIAGRAM FOR SKINLESS HAKE PRODUCTS



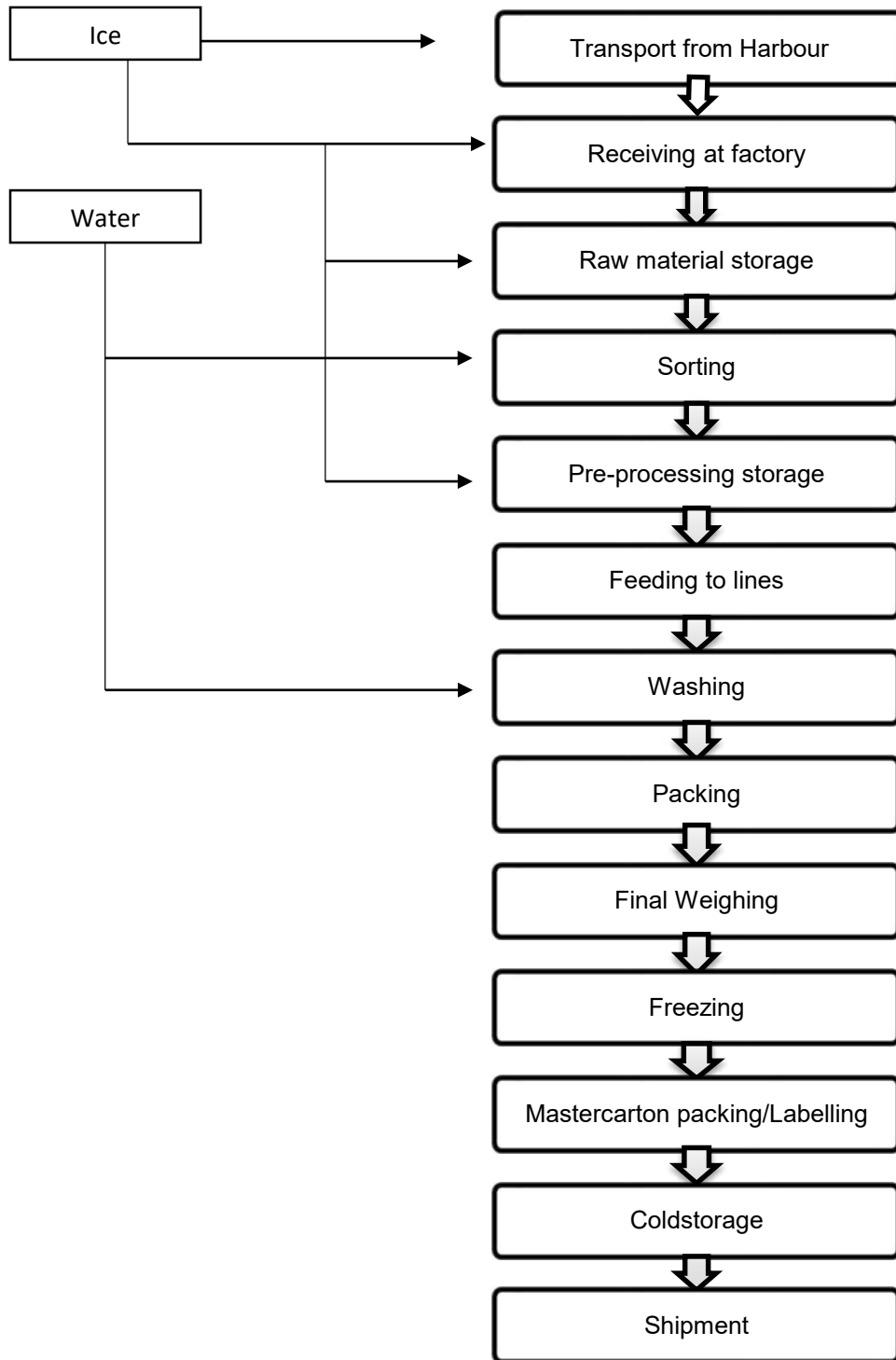
FLOW DIAGRAM FOR SKINON HAKE PRODUCTS



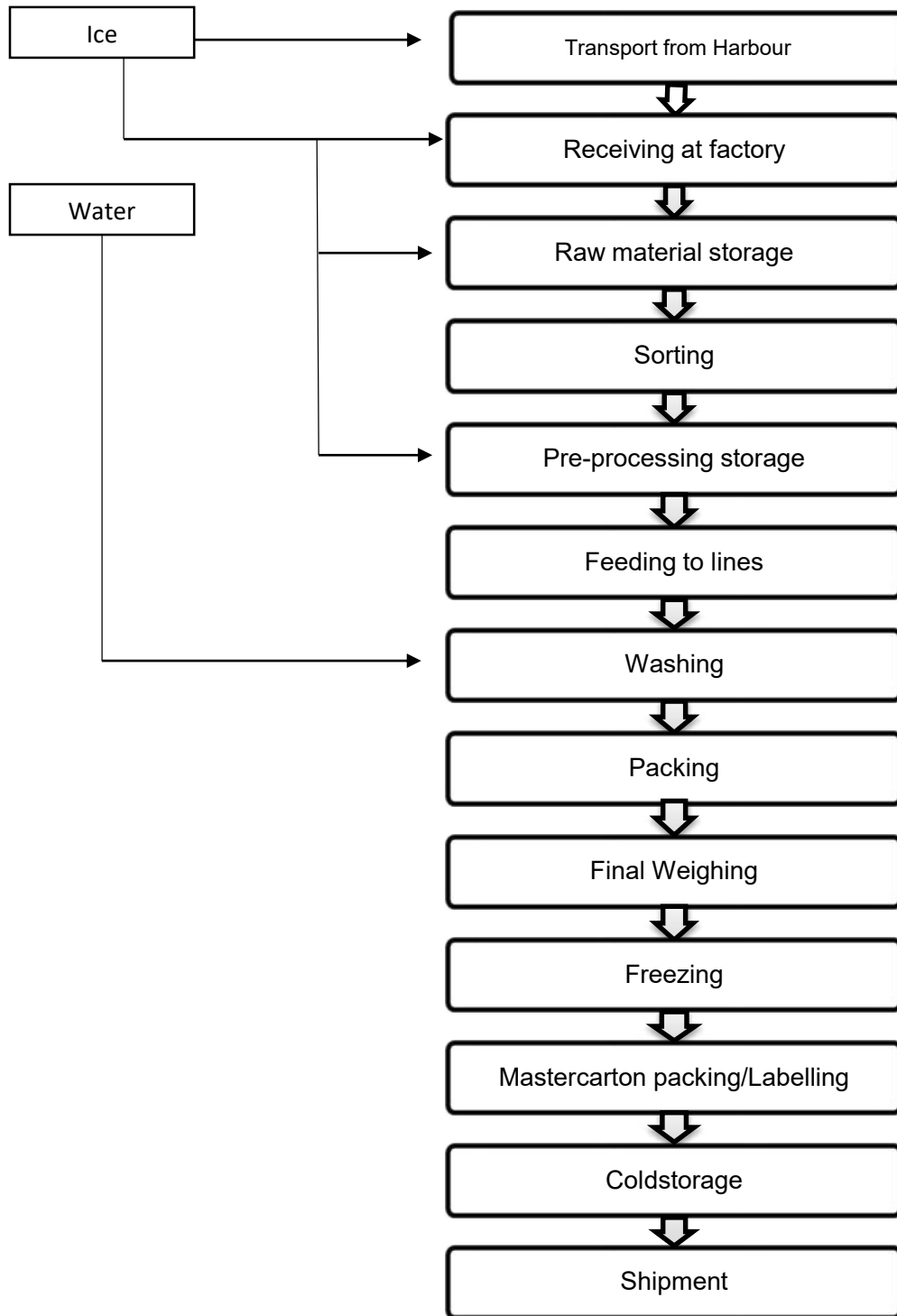
FLOW DIAGRAM – (I.Q. F.) PRODUCTS AND MARRIED FILLETS



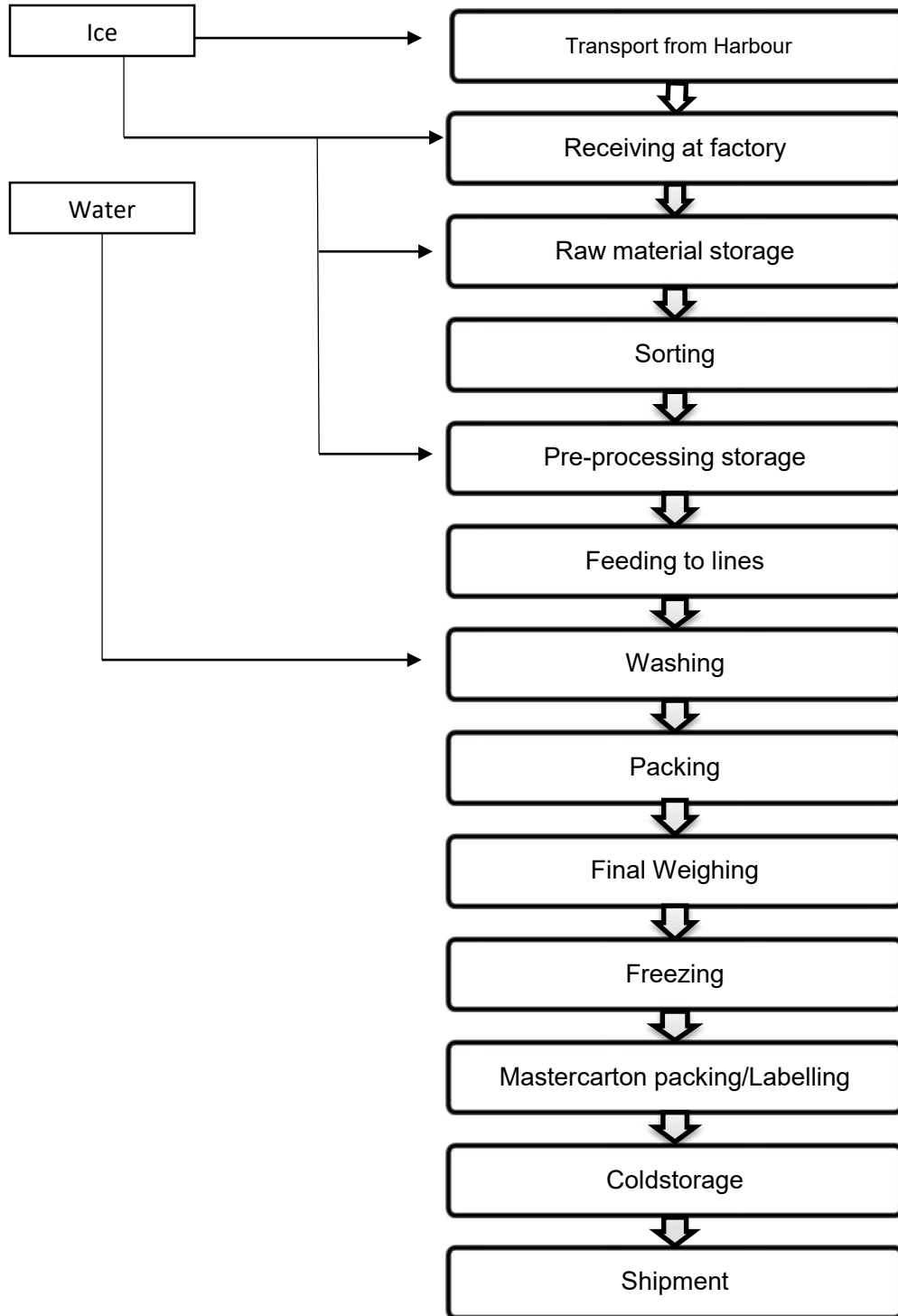
FLOW DIAGRAM – SKINON H&G HAKE



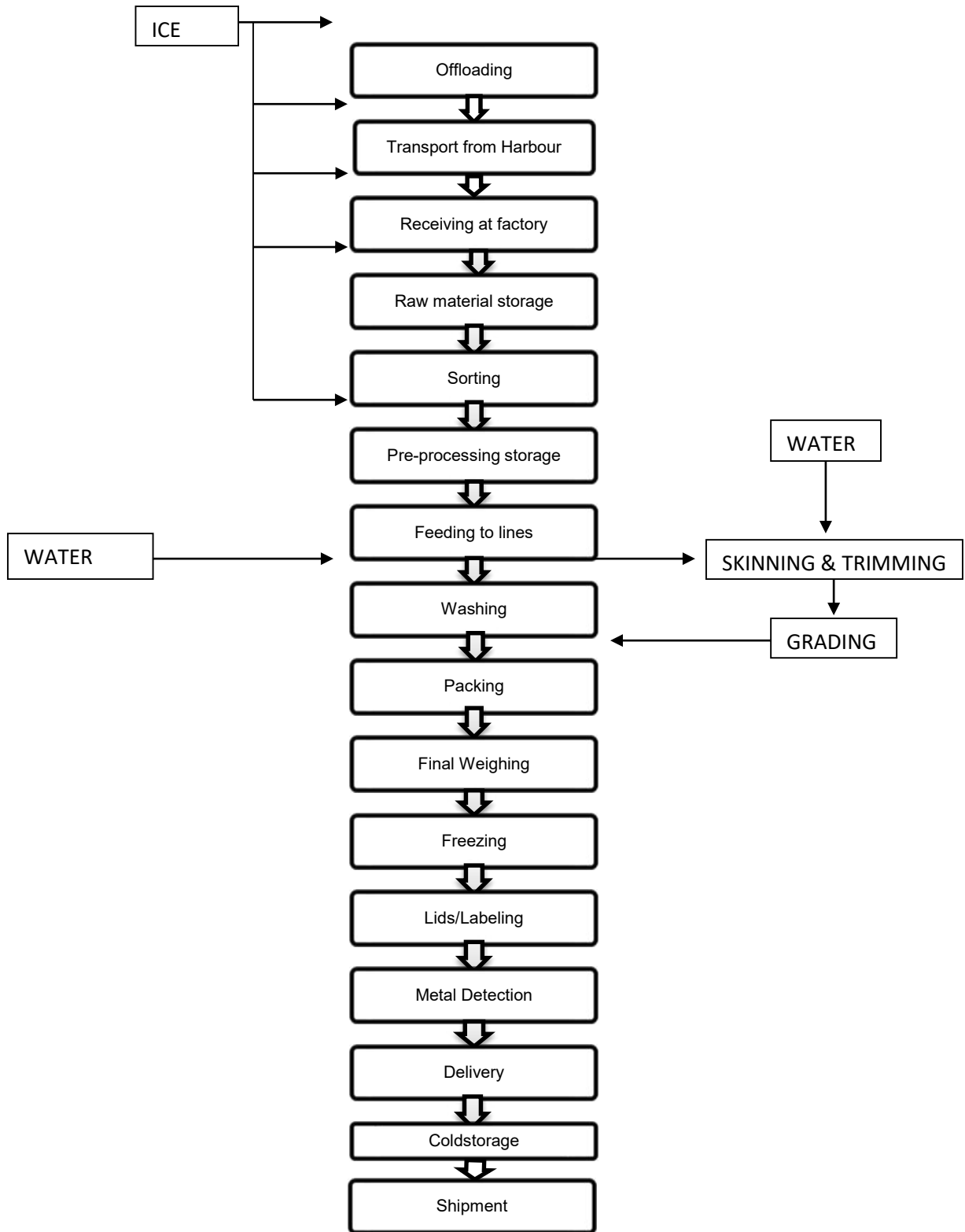
FLOW DIAGRAM – H&G KINGKLIP



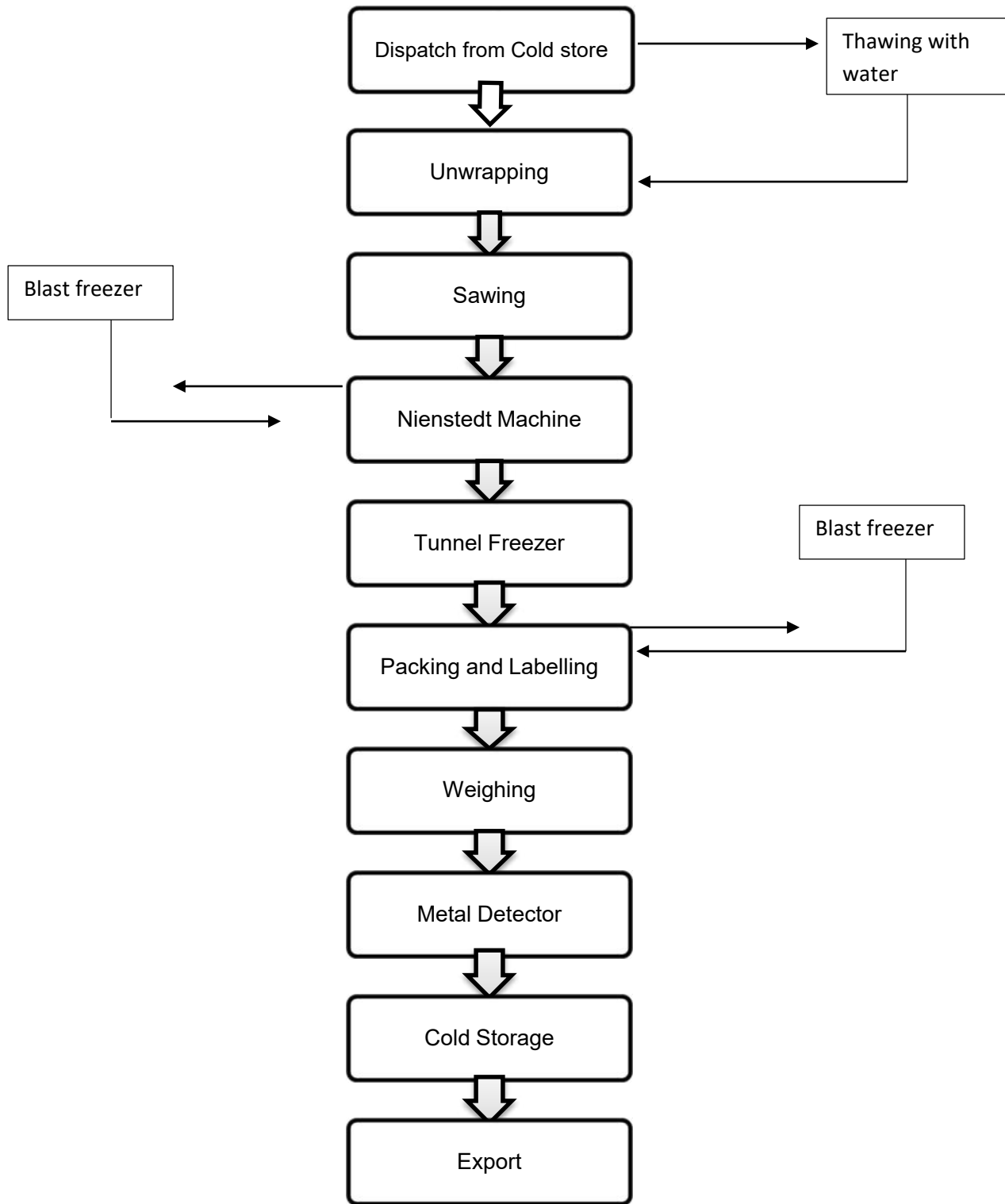
FLOW DIAGRAM – H&G KINGKLIP



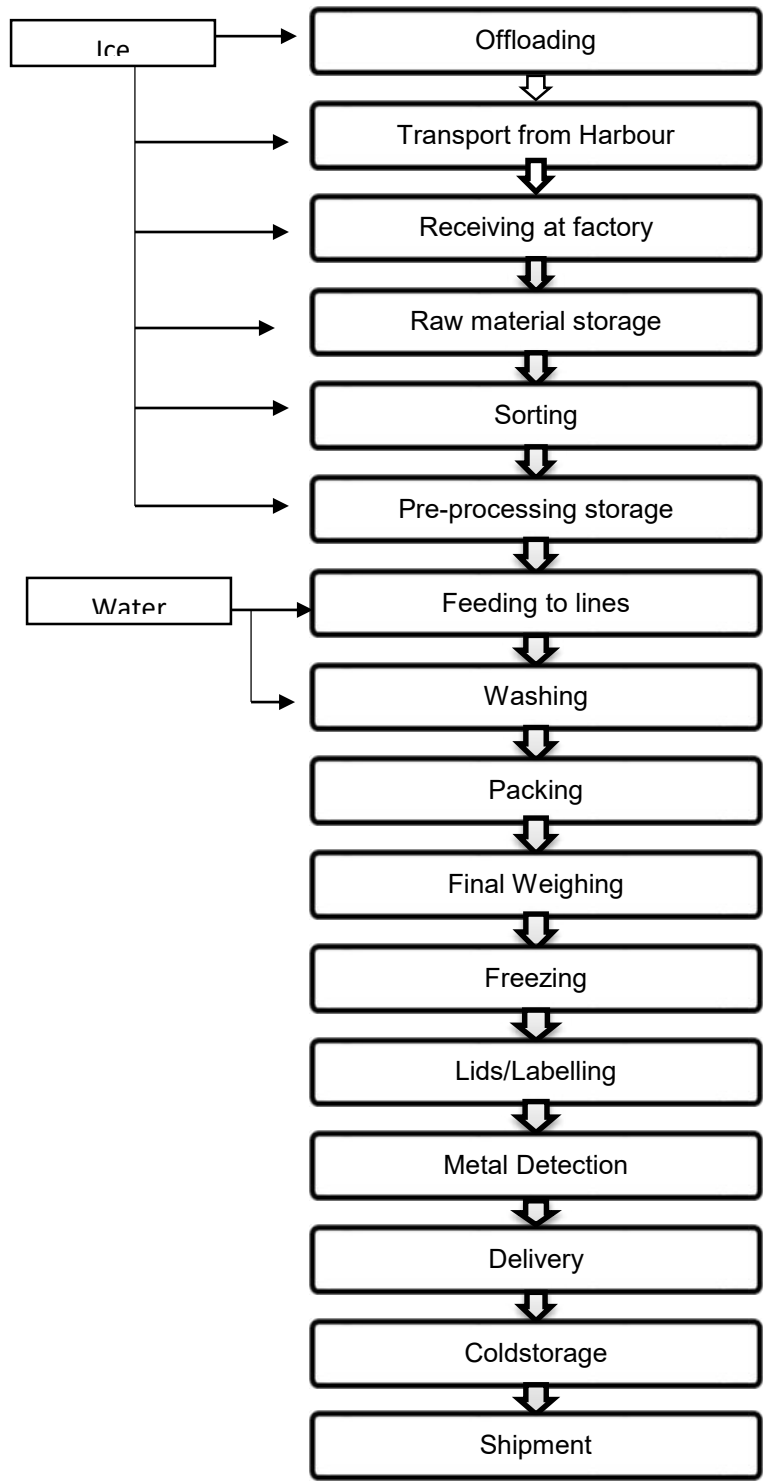
FLOW DIAGRAM – MONKFISH & SKATE WINGS



FLOW DIAGRAM – SHAPED LOINS (MINCE/BITS AND PIECES REPROCESSING INTO SHAPED LOINS)



FLOW DIAGRAM – SOLE



4.2. Provisional services

The factory is supplied with electricity and water by the Luderitz Town Council for all its operations and it will continue doing so. The facility's sewer system is currently connected to the main sewage network of the Luderitz Town Council. The existing fish processing facility is expected to pose minimal stress to the existing system with its existing ablution facilities. Up to date there was no complaining of the facility's sewer operations from the Town Council.

4.3. Other operational facilities

4.3.1. Construction and maintenance

The facility has a construction and maintenance operations which takes place around the factory as repair and maintenance of property and equipment due to wear and tear. Some maintenance activities can take place at the maintenance workshop depending on the nature of the work. All construction and maintenance activities are carried out in an environmentally safe manner or procedures ensuring that both the safety of the people in the working environment as well as of the environment is carefully considered.

In cases where maintenance is carried out by the contractor, is given the necessary awareness and training to ensure that labour and materials are used and stored in the rightful manner on the facility ground unless agreed with the QM.

4.3.2. Ablution facilities

The facility has male and female ablution facilities for all operational buildings. These facilities are in continuous use. The facilities are cleaned daily to ensure a clean health environment. The Luderitz Town Council is contracted with responsibility for the sewer as the ablution facilities' sewer lines are connected to the main sewer line that belongs to the Town Council.

4.3.3. Canteen and other eating areas

The facility has a canteen that is used by employees as their eating place during their tea and lunch breaks. Different offices within the facility are also provided with small eating areas to be used by employees that cannot use the canteen. These areas are cleaned daily, and waste produced during the usage of these areas is well managed by carefully disposing them off into waste bins provided in each area.

4.3.4. Handling and storage areas

Seaflower's operations allow the company to own a chemical and product storage facilities. These storage areas are both onsite and are managed and maintained by the appointed and responsible personnel within the company. The chemical store is used for the storage of chemicals that the company uses for all cleaning and disinfections. The chemical is kept and maintained by the Hygiene Team, and the team ensures that the store is kept always locked and chemicals in the store are well identified with Material Safety Data Sheets (MSDS) for the safety of the users. Every member of the Hygiene Team that is directly in contact with the chemicals is given the necessary training. The chemicals are supplied by an external supplier.

The product storage is also within the company and are maintained and managed by appointed responsible personnel. These personnel are also given the necessary training regarding the operation and management of such a storage. Cleaning and housekeeping of the store is done by the personnel assigned at this area and operations associated with environmental aspects are carried out under specified conditions.

4.4. Waste Management

The facility's operations create different wastes such as plastics (hard and soft), cardboard, metal, wood, used oil, fish offal, effluent water etc. Currently, waste removal of fish offal is collected by a contracted company. Other waste disposal is currently contracted with the Luderitz Town Council. The waste disposal site(s) in Luderitz are being used by the Town council to dispose off different waste types. The company has acquired discharge and abstraction permits from the Ministry of Agriculture, Water and Land Reform for the discharge of effluent into the sea and the abstraction of seawater respectively.

5. Training and awareness

Seaflower Whitefish Corporation LTD ensures that all persons involved in any operation taking place within the company are aware of and are familiar with the environmental requirements for the project. All personnel working on the company's site, including contractors and sub-contractors receive training of a type and level of detail that is appropriate for the environmental aspects of their work.

Training is given by the HACCP Cordinators within the SHEQ department during the normal working hours of the operations, at a specified venue. All attendees are provided with an

attendance register that serves as evidence of attending the training provided. All training records, certificates and other training materials are kept and filed by the HACCP Coordinator and can be provided at any time to prove competency of the employees.

5.1. Training Plan

There is a training plan within the SHEQ department that is given to the employees at the beginning of employment, every year for a refresher and when necessary (when there is a need to refresh an employee due to an incident or a non-conformity). All personnel whose work can cause significant environmental impacts are trained for competency on how to carry out their work through the company's training plan. Contractors and sub-contractors are also given training to have a site requisite knowledge and skills on how to operate and perform their work in an environmental responsible manner.

5.2. SHEQ Policy

The SHEQ policy also serves as a training and awareness tool in the Seaflower. It is displayed at the entrance of the fish processing facility to ensure that all employees read it and remind themselves of all the Safety, Health, Environment and Quality procedures and measures and that they understand and abide to it. The policy acts as a refresher tool for all the rules and regulations that should be followed by every employee as well as sustainability measures that should be put in place always during the operations.

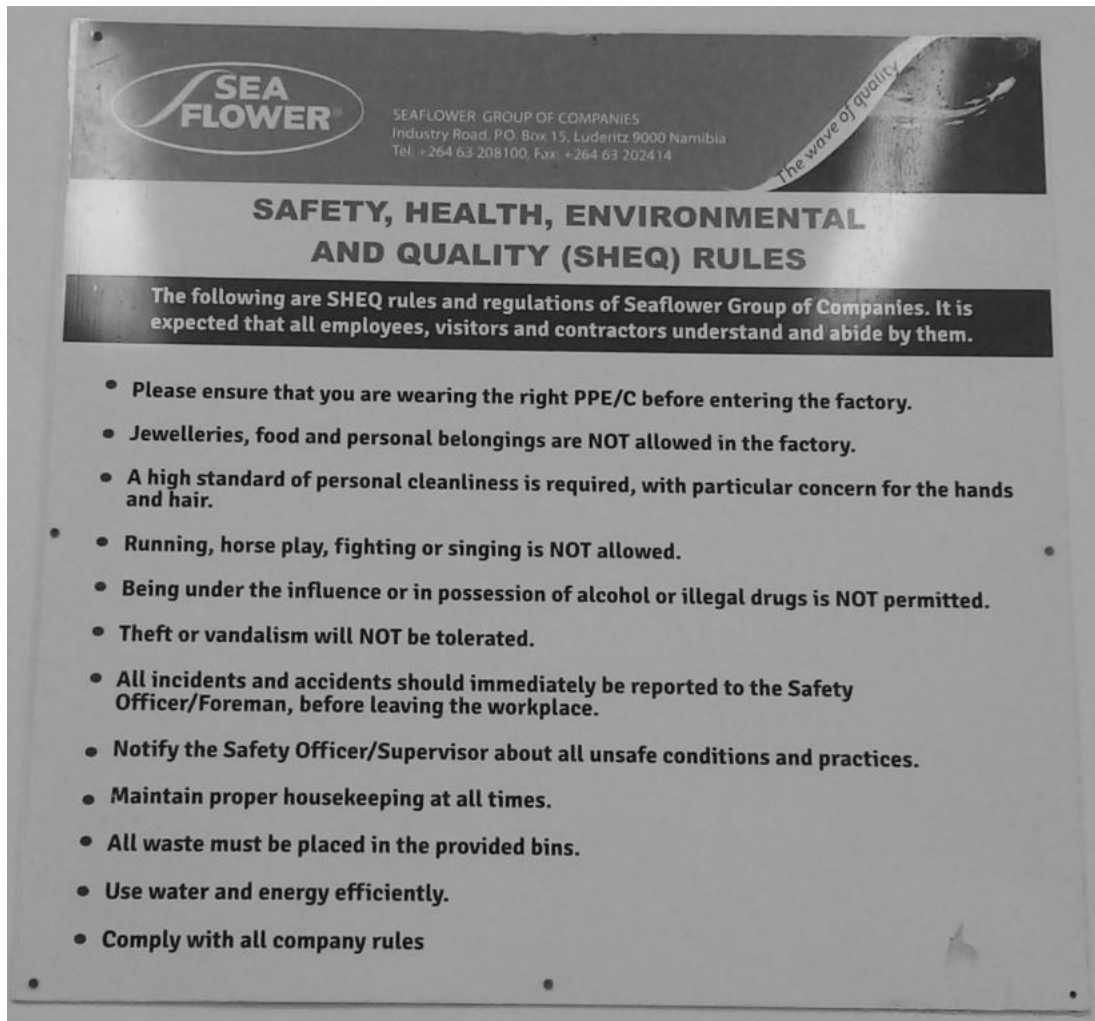


Figure 3: SHEQ Policy

6. Environmental aspects/impacts

All operational activities of the company ensure compliance with the environmental specifications and requirements and all aspects having legal and/or regulatory reporting, monitoring or operational requirements been identified as significant impacts as follows.

6.1. Dust impacts

Little to no dust impacts can be expected on the surrounding environment due to the company's operational activities. The company's surrounding is paved to avoid too much dust due to conditions that may occur as part of the town's weather conditions.

6.2. Wastewater impacts

The company is currently discharging all effluent produced in the fish processing facility into the sea. This procedure is regulated by the Ministry of Agriculture, Water and Land Reform by issuing the company with a discharge permit. The company ensures that the effluent discharged into the sea consists of harmless chemicals but only food graded chemicals.

6.3. Solid waste impacts

Solid waste resulting from Seaflower's operations is disposed into skips, offal tubs and/or waste bins depending on the type of waste that is produced at a specific area. The fish offal is collected by a contracted company while the rest of the other types of waste is contracted with the Luderitz Town Council. Seaflower ensures that waste management is made aware to all employees within the company and its important stressed. No solid waste is left unattended and unmanaged.

6.4. Impacts from hazardous or toxic material

All chemicals or material being received into Seaflower are inspected for compliance with the company regulations as well other regulations. Chemicals and other toxic materials are carefully handled by appointed and responsible personnel and disposed off carefully to ensure no harm is caused to the environment in which it was handled. All chemicals and toxic materials are received with Material/technical Safety Data Sheets (MSDS/TSDS) to ensure that handlers are aware of the instructions specified on the material.

6.5. Impact on well-being

All impacts that can influence the well-being of the workers are minimal. The temperature in which the workers work is optimum and does not impose negative impacts on their health. All operators are well trained for the job in which they will be working, and all employees are aware of the proper handling procedures to minimize or prevent risks that cause an effect on their well-being.

6.6. Pest impacts

The facility is surrounded by bait stations and flycatchers that assist in the prevention of pest's invasion into the facility. The onsite pest controller is the Senior Hygiene Controller. The Senior Hygiene Controller carries out weekly inspections of the bait stations and flycatchers and keeps the records. The pesticides used inside the bait stations and flycatchers are environmentally safe.

6.7. Transportation impacts

Impacts of transport to the environment will be minimal as few vehicles are expected in the facility site daily. Expected vehicles that are expected on the site are the personnel owned vehicles and company owned as well as contracted company vehicles. However, this does not affect the traffic and has little to no impacts on the environment.

Table 1 below gives a summary of possible potential impacts and mitigation measures that the operational activities of Seaflower can cause to the environment during the operational and decommissioning phase.

Table 1: Environmental Management Plan for Seaflower

Potential impact	Mitigation Measures	Monitoring	Responsibility
OPERATION PHASE			
Solid waste generation	<ul style="list-style-type: none"> Waste bins, tubs or skips should be set up for solid waste collection at various areas within the facility. The premises should be built with physical barriers such as fences to prevent windblown litter from leaving the premises. Waste separation protocols should be established whereby plastics, cardboards & paper, metals, wood, and fish offal is not disposed in the same waste bins. The company should seek for opportunities for companies that can collect solid waste from their premises for recycling purposes. Keep the contract for waste disposal with the Luderitz Town Council for the disposal of non-combustible and non-recyclable waste. The company should also engage in cleaning campaigns around the premises at least once in 3 months. 	<ul style="list-style-type: none"> Weekly Quality control inspections on waste management. Daily Hygiene control inspections. Regular physical inspections of whether the waste bins area is clean, and they are being used. 	<ul style="list-style-type: none"> Quality Controllers Hygiene Controllers
Risk of fire explosion	<ul style="list-style-type: none"> All fire causing devices should be kept in check as well as maintained by the responsible team. 	<ul style="list-style-type: none"> Yearly safety refresher training to be given to the responsible personnel. 	<ul style="list-style-type: none"> HACCP Admin Safety Officer

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<ul style="list-style-type: none"> • Adequate firefighting equipment such as fire extinguishers around the fish processing facility and around the premises should be maintained. • All vehicles and forklift drivers are adequately trained on firefighting. • Personnel firefighting skills should be updated and tested regularly through regular drills and maintain records. • There should be demarcated areas used for smoking that are far from fire hazard areas and environments, such as fuel storage areas and areas of dry vegetation. • There should be appropriate signage and relevant emergency contact details are on site and displayed outside all buildings. • A Safety Officer should be appointed on site that is responsible for coordinating emergency response in the event of fire according to the Emergency Response Plan. 	<ul style="list-style-type: none"> • Weekly and monthly checks of the fire extinguishers by the Safety Representatives. 	
Spillage of used oil	<ul style="list-style-type: none"> • All petroleum products, such as grease, waste oils and lubricants should be contained in containment structures (e.g. plastic liners, drip trays etc). These structures are to be used during all servicing or refueling equipment. 	<ul style="list-style-type: none"> • Weekly inspection of waste used oil around the premises by Quality Controllers and record/receipts for hazardous waste disposed. 	<ul style="list-style-type: none"> • Quality Controllers • Quality Manager

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<ul style="list-style-type: none"> • The used should be carefully disposed by the workshop personnel in such a way that it does not spill and should be transported properly for disposal. • Awareness should be enforced regarding the hazardous nature of various types of used oil. • There should be a maintenance and service plans that should be complied with. • Transportation vehicles should be equipped with sufficient equipment and material to contain and remediate any accidental spills, and to remove any contaminated soil or water. • When equipment is serviced and maintained regularly, all leaks should be properly contained and repaired immediately. • Equipment and materials to deal with spill cleanup should be readily available on site and staff should be trained on to how to use the equipment and briefed about reporting procedures. 		
Risk of health and safety of workers	<ul style="list-style-type: none"> • The facility should be furnished with a first aid kit which should be equipped with essential first aid supplies. 	<ul style="list-style-type: none"> • Monthly inspections by the Safety Officer. • Regular medical check-ups (at least yearly for all employees). 	<ul style="list-style-type: none"> • Quality Controllers • Health workers

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<ul style="list-style-type: none"> • The company should enforce the use of appropriate Personal Protective Equipment to all employees working at different areas. • There should be trained firefighters, safety representatives as well as first aiders that should be changed at least every 2 years to ensure that many of the employees are trained in safety. • There should be an implemented health awareness program and continuous information sharing sessions on health issues through lectures, posters for the awareness of all employees. • All employees are expected to be familiar with and should be ensured to adhere to the Health, Safety and Security Plan. • There should be a suitable emergency and safety signage on the premises displayed at prominent and conspicuous. • Areas which may pose a safety risk should be demarcated. 	<ul style="list-style-type: none"> • Tested drills for health and safety. • Internal audits. 	<ul style="list-style-type: none"> • HACCP Coordinators
Seawater contamination from effluent discharge	<ul style="list-style-type: none"> • Effluent discharge should be composed of food-grade cleaning chemicals that are harmless to the environment. 	<ul style="list-style-type: none"> • Daily cleaning monitoring by Quality Controllers to ensure that effluent is sufficiently diluted before discharge. 	<ul style="list-style-type: none"> • Quality Controllers • Hygiene Controllers

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<ul style="list-style-type: none"> There should be developed procedures in place that allows effluent to be diluted and ensure that it has less concentration of chemicals before being discharged into the sea. Other hazardous waste should be safely contained, transported, and disposed off by the contracted company. 	<ul style="list-style-type: none"> Adherence to the specified conditions on the permit. Please refer to Table 2 for limits. 	
Damage of macro and microorganisms in the sea through abstraction	<ul style="list-style-type: none"> Water abstraction should be authorized by the Ministry of Agriculture, Water and Land Reform. The company should adhere to the conditions that comes with the abstraction permit to make sure that the environment is not exploited. All discharge drains and channels should be checked and cleaned at least weekly. Removal of all excess sedimentation, rubble and any other waste material present in the waterway should be ensured and disposed off in a suitable manner to ensure proper drainage runoff. 	<ul style="list-style-type: none"> Regular visual inspections. Internal audits. Weekly drainage checks and cleaning. 	<ul style="list-style-type: none"> Water Treatment plant operator
Soil contamination from repairs and maintenance of	<ul style="list-style-type: none"> All maintenance work should be carried out in the workshop, and this should be where oil 	<ul style="list-style-type: none"> Weekly and monthly inspections on construction and maintenance. 	<ul style="list-style-type: none"> Quality Controllers

Potential impact	Mitigation Measures	Monitoring	Responsibility
buildings and equipment	<p>spills are completely restrained from reaching the ground.</p> <ul style="list-style-type: none"> If maintenance is done outside the workshop, there should be procedures in place to ensure that no spillage happens during maintenance work. 		<ul style="list-style-type: none"> Maintenance personnel
Disposal of defunct equipment's and replaced items as well as contaminated products	<ul style="list-style-type: none"> The company should be seek for contracted companies with opportunities for re-use of defunct items for other purposes or uses in other areas than disposal. 	<ul style="list-style-type: none"> Continuous checks on the defunct equipment 	<ul style="list-style-type: none"> Maintenance and Quality Managers
Environmental awareness	<ul style="list-style-type: none"> All site personnel, contractors and sub-contractors should be trained and made aware of their environmental obligations on site, through an environmental awareness training programme. Information posters should be provided at strategic points around the premises for all personnel. Posters should include emergency contact details, emergency procedures, and a simple list of key environmental requirements. 	<ul style="list-style-type: none"> Regular trainings and refresher trainings at least yearly. 	<ul style="list-style-type: none"> HACCP Coordinators
DECOMMISSIONING PHASE			
Transportation of construction material	<ul style="list-style-type: none"> All loads should be secured to prevent spillage during the transportation. All delivery vehicles on impermeable surfaces for delivery of materials should have a proper 	<ul style="list-style-type: none"> Regular visual inspections. 	<ul style="list-style-type: none"> Contractor

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<p>parking area that prevents contamination from spillage. If these procedures are not practical, drip trays should be used if there are any chances of fuel or oil spills from the delivery vehicles.</p> <ul style="list-style-type: none"> The company should ensure that all haul vehicles transporting fine materials have suitable covers e.g. tarpaulins if there is any chance of dust being created during transport. 		
Spills and leaks	<ul style="list-style-type: none"> Adherence to established standards on decommissioning of fish processing facilities relating to the removal of any building or related activities to prevent spills and leaks should be maintained. Prevent spillages of any chemicals and petroleum products (i.e., oils, lubricants, petrol, and diesel). Use drip trays, linings, or concrete floors when evidence of leaks is observed on vehicles or equipment. All fueling, storage and chemical handling should be conducted on surfaces provided for this purpose. Drip trays, linings or concrete floors must be used when removing oil from machinery. 	<ul style="list-style-type: none"> Regular visual inspections by the Quality Manager. Daily and weekly inspections by the Quality Controllers Records or remediations by the HACCP Coordinators. 	<ul style="list-style-type: none"> Quality Manager Quality Controllers HACCP Coordinators Contractors

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<ul style="list-style-type: none"> • Spillage control procedures must be in place according to the relevant SANS standards or better. Wastewater collection systems should be connected to these systems. • Proper environmental awareness and remedial response training of operators must be conducted for all staff working on decommissioning operations. 		
Emissions of gas, dust and noise pollution	<ul style="list-style-type: none"> • All vehicles and equipment that have the possibility of emitting unwanted gases should be kept in good condition. • Engine idling reduction should be encouraged. • Ensure that measures are in place to minimize dust generated by construction activities. • Avoid excavation, handling and transport of materials which may generate dust under high wind conditions or when a visible dust plume is present. • Use appropriate dust suppression measures when dust generation is unavoidable, e.g. dampening with water, particularly during prolonged periods of dry weather. Such measures may include the use of temporary stabilizing measures (e.g. chemical soil binders, chipping etc). 	<ul style="list-style-type: none"> • Regular visual inspections of air quality and noise emissions at the site by the Quality Manager. • Inspections on vehicle emissions by the Maintenance Manager 	<ul style="list-style-type: none"> • Maintenance Manager • Quality Manager

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<ul style="list-style-type: none"> • All vehicles used during the decommissioning phase should be ensured to have reduced noise levels. • Ensure proper maintenance is conducted on vehicles to ensure reduction of noise emission. 		
Waste storage and disposal	<ul style="list-style-type: none"> • The company should ensure that sufficient weather and vermin proof bins/containers are present on site for the disposal of solid waste. Waste and litter generated during the decommissioning phase must be placed in these disposal bins. • When possible, materials used or generated by the decommissioned buildings shall be sorted for recycling or scrap purposes. Ensure that waste generated is segregated, classified, and labelled accordingly. • No unauthorized entry into the waste storage areas. • No disposal of/or burying of waste onsite should be conducted. • No burning of waste on site. • Bins should be emptied weekly or more regularly (when required). 	<ul style="list-style-type: none"> • Visual inspections by HACCP Coordinators. • Weekly inspections by Quality Controllers. 	<ul style="list-style-type: none"> • HACCP Coordinators • Quality Controllers

Potential impact	Mitigation Measures	Monitoring	Responsibility
Disposal of hazardous waste	<ul style="list-style-type: none"> • Hazardous waste should be separated from general waste, clearly marked, and stored in appropriate containers. • Solid and liquid hazardous waste shall be stored in separate containers. • The hazardous waste storage should be clearly marked to indicate the presence of hazardous substances, and the protocols associated with handling of such hazardous waste shall be known by all relevant staff members. • All contaminated soils, and waste oils, including lubricants and grease from containment systems should be ensured to be disposed at an appropriate hazardous waste disposal site/facility. • Awareness of the hazardous nature of various types of waste should be enforced. 	<ul style="list-style-type: none"> • Visual regular inspection by the Quality Manager and the HACCP Coordinators. • Record of hazardous waste receipt should be kept. 	<ul style="list-style-type: none"> • Quality Manager • HACCP Coordinators
Contamination of seawater	<ul style="list-style-type: none"> • Contamination of seawater might occur through oil leakages from oil-using machines into the drainage system and this should be avoided. • Spillage control procedures must be in place according to relevant SANS standards or better. 	<ul style="list-style-type: none"> • Regular visual inspections by the Quality Manager and HACCP Coordinators. 	<ul style="list-style-type: none"> • Quality Manager • HACCP Coordinators

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<ul style="list-style-type: none"> • Prevent discharge of any pollutants, such as cements, concrete, lime, chemicals, and hydrocarbons into drainage system. • Direct run-off from areas with high risk of accidental releases of oil or hazardous material (e.g. fueling or fuel transfer locations, truck washing bays, concrete swills etc) into the sea should be avoided. 		
Risk of fires	<ul style="list-style-type: none"> • Ensure that sufficient fire-fighting equipment are available on site and fire fighting equipment should be suitably maintained. • Ensure that all personnel on site are aware of the location of fire fighting equipment on site and how the equipment is operated. Provide appropriate signage and relevant emergency contact details on site. • Provide adequate fire-fighting equipment at fuel storage and dispensing areas. • Establish designated smoking area(s) on site. Smoking shall not be permitted in those areas that pose a fire hazard, such as fuel storage areas and areas where flammable material are e.g. wooden pallets storage areas. 	<ul style="list-style-type: none"> • Regular inspections and approvals by the Quality Manager. • Regular reviews of the procedures by the Safety Officer. • Refresher trainings of the Safety Officer and Safety Representatives at least once year. 	<ul style="list-style-type: none"> • Quality Manager • Safety Officer

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<ul style="list-style-type: none"> • No fires are permitted on site except in areas designated by the Quality Manager. Locate such designated areas as far as possible from vegetated areas, flammable material stores and any other high fire risk areas. • Develop fire safety measures to protect the site against fires originating from outside the site. 		
Risk of health and safety	<ul style="list-style-type: none"> • The facility should be furnished with a first aid kit which is equipped with essential first aid supplies. • The company should enforce the use of appropriate Personal Protective Equipment to all employees working at different areas. • There should be trained firefighters, safety representatives as well as first aiders and such personnel should be changed at least every 2 years to ensure that most of the employees are trained in safety. • There should be an implemented health awareness program and continuous information sharing sessions on health issues through lectures, posters for the awareness of all employees. 	<ul style="list-style-type: none"> • Regular quality control inspections. • Regular medical check-ups (at least yearly for all employees). • Tested drills for health and safety. • Internal audits 	<ul style="list-style-type: none"> • Quality Controllers • Health workers • HACCP Coordinators

Potential impact	Mitigation Measures	Monitoring	Responsibility
	<ul style="list-style-type: none"> • Ensure that all employees are familiar with and are ensured to adhere to the Health, Safety and Security Plan. • There should be a suitable emergency and safety signage on the premises that should be displayed at prominent and conspicuous areas which may pose a safety risk are demarcated. 		

Table 2: General Standards for Effluents (Permits) as per the Water Act 54 of 1956

DETERMINANTS	MAXIMUM ALLOWABLE LEVELS
Arsenic	0,5 mg/l as As
Biological Oxygen Demand (BOD)	no value given
Boron	1,0 mg/l as B
Chemical Oxygen Demand (COD)	75 mg / l as O
Chlorine, residual	0,1 mg/l as Cl ₂
Chromium, hexavalent	50 Ng/l as Cr(VI)
Chromium, total	500 Ng/l as Cr
Copper	1,0 mg/l as Cu
Cyanide	500 Ng/l as CN
Oxygen, Dissolved (DO)	at least 75% saturation**
Detergents, Surfactants, Tensides	0,5 mg/l as MBAS – See Note 2
Fats, Oil & Grease (FOG)	2,5 mg/l (!gravimetric method)
Fluoride	1,0 mg/l as F
Free & Saline Ammonia	10 mg/l as N
Lead	1,0 mg/l as Pb
Oxygen, Absorbed (OA)	10 mg / l as O*
pH	5,5 – 9,5
Phenolic Compounds	100 Ng/l as phenol
Phosphate	1,0 mg/l as P - See Note 1
Sodium	not more than 90 mg/l Na more than influent
Sulphide	1,0 mg/l as S
Temperature	35°C
Total Dissolved Solids (TDS)	not more than 500 mg /l more than influent
Total Suspended Solids (TSS)	25 mg/l
Typical faecal Coli.	no typical coli should be counted per 100 ml
Zinc	5,0 mg/l as Zn

* Also known as Permanganate Value (or PV).

** In Windhoek the saturation level is at approx. 9 mg/l O₂.

Note (1) on phosphate: Phosphates are not toxic and essential for all life forms. Natural water will seldom contain phosphate; it is generally seen as an indicator of pollution and is usually accompanied by other pollutants. Wherever drinking water is combined with or consists wholly of reclaimed or recycled water, it may be expected to contain phosphate. There is no general guideline for phosphate contained in the Regulation 553. But generally it is assumed that eutrophication or algal bloom in dams is promoted by nutrient concentrations as low as 0,01 mg/l as P; generally a phosphate concentration limit for dams of 0,1 mg/l is recommended. All water that is consumed and subsequently discharged, will eventually end up in rivers, dams or groundwater – that is why for potable water, a concentration level of 1 mg/l as P is aimed at.

But, again, in many cases of waste and effluent treatment, this may be difficult to achieve technically, or the required waste and effluent treatment infrastructure is not available; as the required infrastructure is sophisticated and expensive. The current situation calls for a compromise and for this reason, this Department will judge each application individually on its merits and allow, in certain cases, a phosphate concentration level of up to 15 mg/l as P in any effluent or waste stream to be discharged into the environment. This regulation is subject to be reviewed every two years, calculated from the date of approval of this document.

Note (2) on detergents, surfactants and ten sides: The MBAS (or methylene blue active substances) – test does not encompass all surface active compounds currently, commercially available. The limit given is therefore only a guideline. Many of the cleaning agents are toxic to biological life-forms in rivers and dams.

It should be taken into consideration that some commercial products interfere with the effective removal of oil, fat and grease by grease and fat traps, by breaking up such long-chain molecules into shorter ones. These cleaning agents thus effectively allow such components to pass through the traps and land into sections of a treatment plant further down the line and interfere with the process there.

Many cleaning agents contain very powerful disinfectants, and/or biocides. Such substances may interact with biological treatment processes. They may reduce the effectiveness of such treatment or 'kill' it completely, if they land in septic tanks, bio filters or even activate-sludge plants. Their activity may be attenuated by dilution.

7. Documentation and record

The company should put a procedure in place for documentation and records of all their processes and operations and maintain it. An environmental management should have core elements of which their interaction should be recorded and described in paper or in electronic form. The documentation of these core elements should provide direction related operation or activities of the company. Documents should be reviewed periodically, such as yearly or when necessary and appropriate revision should be assigned to all documents. All current versions of all documentations should be made available at all essential locations.

Previous versions should be cancelled and their obsolete versions should be promptly removed or otherwise assured against unintended use. All documentations should be legible, readily retrievable and identifiable, and revision level and date should be clearly identified. In cases of creation modification and appropriate approval of various types of documents, it should be clearly defined in the procedures.

The maintenance and disposal of all environmental records should be well implemented and clearly identified. All environmental records should be legible, readily retrievable and assured protection against damage. For all records used within the company, their retention period should be specified, both hard copies and electronic. Records and attendance registers of environmental awareness training courses, activities and objectives should be kept and maintained. There should be a complaint register available on-site and it should be up-to-date.

8. Emergency preparedness and response

The company shall put in place and implement a procedure to identify the potential and respond to accidents and emergencies. The implemented procedures should ensure that they aid in the prevention and impact mitigation of accidents and emergencies. This procedure should be tested regularly (at least once a year) and when applicable. The facility should be furnished with emergency plans, available to all personnel for their awareness and knowledge on what is expected of them during environmental impacts of accidents and how emergency accidents are mitigated. All personnel involved in the emergency preparedness and response should be clearly defined of their responsibilities. These responsibilities should be reviewed, revised, where necessary.

9. Internal audits

The EMP should be regularly audited to check the effectiveness of its implementation. There should be an audit plan from which topics should be derived. The audit frequencies and topics should be based on the environmental importance of the activities concerned. The audit plan should also cover how results of the audits should be reported as well how results are provided to management. The internal should adequately define the scope, frequency, methods and responsibilities of the audit.

The personnel conducting the audit should be competent and, in a position, to conduct audits. These personnel should be able to audit the system fully and effectively and be able to feedback with audit reports and records other audit outcome records which should clearly indicate a reliable system. These records and reports should be legible and should carry the ability to be used as a tool in the third-party audit process.

Table 2 below is the internal audit checklist template that can be used but it is subject to change as per the operations of the company.

Table 3: Template for Environmental Internal Audit Checklist.

1. Environmental policy			
Requirements	Conformity		
	Y	N	N/A
1.1. Has the organization defined and documented its environmental policy?			
1.2. Is the environmental policy based on: Significant environmental aspects? Corporate policy?			
1.3. Is the policy appropriate to the organization's activities and their potential environmental impacts?			
1.4. Does the policy include commitments to: Continual improvement Prevention of pollution Comply with environmental legislation and other requirements to which the company subscribes			
1.5. Does the policy provide a framework for setting environmental objectives and targets?			
1.6. Is the policy documented, implemented, maintained, and communicated to all persons working for or on behalf of the organisation?			
1.7. Is the policy available to the public?			

2. Environmental aspects			
Requirements	Conformity		
	Y	N	N/A
2.1. Has a procedure been established, implemented, and maintained to identify the environmental aspects of its current and relevant past activities?			
2.2. Have aspects related to potential significant environmental aspects been considered in establishing and implementing the EMP?			
2.3. Have aspects having legal and/or regulatory reporting, monitoring or operational requirements been identified as "significant" aspects?			
2.4. Are the following environmental aspects considered in sufficient detail? Air emission Wastewater effluent Waste management Soil pollution Raw material and natural resource usage Hazardous and toxic material			

2. Environmental aspects			
Requirements	Conformity		
	Y	N	N/A
Impact on well-being (e.g. noise, smell, heat, landscape, protection) Utility, energy, and resource Other environmental specific issues on site such as housekeeping, storage, areas, piping			
2.5. Are the following operational aspects considered? Normal operating conditions Abnormal operating conditions (e.g., start up and shut down conditions, maintenance, incidents) Development of new or modified processes, products, or services Actual and potential emergency conditions and accidents			
2.6. Have significant aspects been identified?			
2.7. Are the significance evaluation criteria reasonable and adequate?			
2.8. Are all significant environmental aspects controlled by objectives, targets, and programmes, procedures, or monitoring?			
2.9. Have indirect aspects such as the following considered? Supplier evaluation Subcontractors on site Transportation Products and service-related impacts			
2.10. Have environmental aspects identified and evaluated for planned or new developments, or new or modified activities, products and services?			

3. Resources, roles, responsibility and authority			
Requirements	Conformity		
	Y	N	N/A
3.1. Is an organization chart available?			
3.2. Have responsibilities and authorities for environmental management been defined and documented?			
3.3. Has a Management Representative been assigned?			
3.4. Have the roles, responsibilities, and authorities for the Management Representative been defined?			
3.5. Are the required resources (e.g., personnel, technology, finance) for implementation and control of the environmental management system provided by management?			
3.6. Does the personnel appointed in environmental management have the required competence?			

4. Competence, training, and awareness			
Requirements	Conformity		
	Y	N	N/A
4.1. Have training needs been identified?			
4.2. Are all personnel, whose work can cause significant environmental impacts, competent based on education, training and or experience?			
4.3. Have procedures been established to assure all persons working for or on behalf of the company are aware of the Environmental Policy, actual and potential impacts, and their responsibilities?			
4.4. Has the organization ensured that personnel performing environmental specific tasks have the required knowledge (e.g., education, training experience)?			
4.5. Does the communication process ensure that business partners, suppliers and contractors are aware of the relevant requirements of the organization 's EMP?			
4.6. Do the contractors working on site have the requisite knowledge and skills or have been trained to perform the work in an environmental responsible manner?			
4.7. Are training records, certificates, and licenses available to demonstrate the competence?			

5. Communication			
Requirements	Conformity		
	Y	N	N/A
5.1. Are procedures maintained for communication of environmental issues between various levels of the organization?			
5.2. Are procedures maintained for receiving, documenting, and responding to communications from external interested parties?			
5.3. Has the organization recorded its policy and/or processes for external communications on its significant environmental aspects?			

6. Control of documents			
Requirements	Conformity		
	Y	N	N/A
6.1. Are procedures maintained to ensure periodic review and appropriate revision of all required documents?			

6. Control of documents			
Requirements	Conformity		
	Y	N	N/A
6.2. Are current versions of all required documents available at all essential locations?			
6.3. Are obsolete documents promptly removed or otherwise assured against unintended use?			
6.4. Is all documentation legible, readily retrievable, and identifiable, and revision level or date identified?			
6.5. Have procedures been established for the creation modification and appropriate approval of the various types of documents?			

7. Operational control			
Requirements	Conformity		
	Y	N	N/A
7.1. Are activities associated with significant environmental aspects planned and carried out under specified conditions?			
7.2. Have documented procedures been established, implemented, and maintained for operations associated with significant environmental aspects, policy, objectives, and targets?			
7.3. Have, during development of the documented procedure, the following elements considered? Activities where their absence could cause deviation from environmental policy, objectives, and targets Stipulating operating criteria and limits for control of the important activity characteristics Control processes of significant environmental aspects of products and services Release of new or modified processes and products			
7.4. Are, during the development of the documented procedures, other indirect impacts considered?			
7.5. Have procedures been established relating to the significant environmental aspects of materials and services purchased and used by the organization?			
7.6. Have procedures been established to communicate relevant procedures and/or requirements, regarding environmental aspects of purchased products or services, to suppliers and subcontractors?			

8. Emergency preparedness and response			
Requirements	Conformity		
	Y	N	N/A
8.1. Have procedures been implemented to identify the potential for and respond to accidents and emergencies?			
8.2. Have procedures been established to prevent and mitigate impacts of accidents and emergencies?			
8.3. Are emergency procedures tested where practicable?			
8.4. Are emergency plans available? Are procedures defined to ensure that environmental impacts of accidents and emergency situations are mitigated?			
8.5. Are the responsibility defined to review and revise, where necessary, the emergency preparedness and response procedures?			

9. Monitoring and measurement			
Requirements	Conformity		
	Y	N	N/A
9.1. Have procedures been documented and implemented to monitor key characteristics of operations that can have significant impacts?			
9.2. Has any environmental performance indicator that relates to objectives and targets been established?			
9.3. Are records available to track performance and conformity with objectives and targets?			
9.4. Are all monitoring equipment appropriately maintained and calibrated?			

10. Nonconformity, corrective action and preventive action			
Requirements	Conformity		
	Y	N	N/A
10.1. Have procedures been established to define the responsibility for handling, investigating, and controlling, and mitigating nonconformity?			
10.2. Are corrective and preventive actions timely, appropriate, and effective?			
10.3. Are procedures changed and/or updated because of corrective action and preventive action?			
10.4. Does the procedure include the fact that complaints from interested parties are to be integrated in the process?			

11. Management review			
Requirements	Conformity		
	Y	N	N/A
11.1. Do periodic management reviews take place to ensure the continuing suitability and effectiveness of the EMP?			
11.2. Does management review result in changes as appropriate to the policy, objectives, targets etc.?			
11.3. Are management reviews records retained?			
11.4. Are the reviews carried based on the following documents or information? Audit results reports Evaluations of compliance with legal requirements and other requirements to which the company subscribes Achievement of environmental management system objectives and targets Communications and complaints from relevant interested parties The environmental performance of the organization Status of corrective and preventive actions Follow-up actions from previous management reviews Changing circumstances, including developments in legal and other requirements related to its environmental aspects, and Recommendations for improvement			

10. Conclusion and Recommendation

There will be minimized unfavorable impacts on the environment if this Environmental Plan is followed and implemented accordingly. All known environmental and social risks can be minimized and managed through implementing preventive measures and sound management systems. Where impacts occur, immediate action must be taken to reduce the increase of effects associated with these impacts. It is recommended that a dissolved air floatation plant, into factory, as a method of cleaning effluent from the fish factory before it is pumped into the ocean. The DAF plant will reduce the Biological Oxygen Demand and Chemical Oxygen Demand of effluent and thus reducing any harmful impacts on the marine environment.

This EMP should be used as a reference document during operational and decommissioning phases. Auditing should take place to determine the compliance with the EMP for the proposed facility. Parties responsible for any wrongdoing of this EMP should be held responsible for any rehabilitation that may need to be undertaken. It is the responsibility of Seaflower Whitefish Corporation LTD to always initiate the update of the EMP, especially when the environmental conditions changes or when upgrade is required.

To ensure the relevance of this document to Seaflower Whitefish Corporation LTD's operations, it needs to be reviewed throughout all phases especially when there is a change in activities to enhance mitigation measures.

It is therefore recommended that the ECC to be renewed for Seaflower White Fish on condition that the management and mitigation measure in the EMP be adhered to at all times.

-Appendix A -

SEAFLOWER WHITEFISH CORPORATION LTD EMP AUDIT REPORT

Date: 08 September 2022

Time: 08:30 – 13:00

14:00 – 16:00

Auditors: Ms Rauna Nghifikwa
 Mrs Nangula T. Amatsi

Audit Scope

Seaflower Whitefish Corporation LTD was previously issued with an Environmental Clearance Certificate (ECC), which is expiring on 17 October 2022. As a result, the ECC needs to be renewed, hence the undertaking of this exercise to update and renew the Environmental Management Plan (EMP). The updating process of the EMP began with an audit exercise undertaken on 08 September 2022 at the Seaflower Factory in Lüderitz. (see attached audit forms used). The results of the audit exercise were used as basis for drafting this EMP.

The audit results/findings were presented to the SHEQ audit team after the Audit exercise 08 September 2022 . The Draft EMP was presented to the Seaflower SHEQ management on 10 October 2022.

Table 1: Interpretation of Audit Scores

Audit scores		
A	Full compliance	The company has demonstrated full compliance at the specific clause or section that was audited.
B	Point of attention	Although the company’s operations and activities are complying, attention should be given to sections given the B score. This section does not require an action plan but it should be considered important.
C	Finding/Non-conformity	This means that the company’s activities and operations are posing a deviation to the specific clause or section that is assigned a C score. All sections assigned a C score is expected to be considered in an action plan.

Audit Report

Audited Requirement	Audit Outcome	Audit Score
1. Top Management Commitment	<p>The SHEQ department has presented the organogram with reporting structures from top to bottom. The Environmental Management Plan has clearly stipulated the roles and responsibilities. However, the defined capacities in the Environmental Management Plan (EMP) do not correspond to the Organogram. The Organogram presents the Quality Manager, HACCP Coordinators (HACCP Co.), Quality Controllers (QCs) and Hygiene Controllers (HCs) while the Environmental Management Plan stipulates Environmental Manager, Environmental Control Officer and so forth. Due to this difference in defined responsibilities, the communication of the stipulated responsibilities was inadequate for the facilitation of an effective EMP.</p> <p>A management representative for the Environmental Management was defined as the Quality Manager. The Quality Manager is assisted by the HACCP Cos as well as QCs and HCs.</p> <p>Although environmental management activities are well maintained and controlled within the facility, evidence for the controls and monitoring has not been documented and the personnel involved or appointed in the environmental management could not present evidence of competence in the environmental management scope of work.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> • The capacities and roles and responsibilities of the personnel has been raised as an observation and it should be appropriately changed as per the current capacities in the updated EMP. • Once the EMP is updated, all personnel with defined roles and responsibilities should be informed of their duties for full awareness and effectiveness of the EMP. • It is also recommended to consider training the involved personnel in Environmental Management Systems for their competence. 	B

2. Legal Requirements

The company is currently adhering to the stipulated legal requirements stipulated in the EMP. In addition., the company is adhering to Namport, Ministry of Fisheries and Marine Resources, Ministry of Agriculture Water and Land Reform as well as Namibia Standards Institute regulations.

A

Although not current copies of all applicable regulatory and other requirements, the company demonstrated the adherence to regulatory requirements and showed knowledge of the importance of adhering to such rules and requirements.

3. Organizational Activities

The company has well defined product flow diagrams. As a fish factory, their flow diagrams were defined from the very step of the process to the last. This is to ensure best quality products delivered to their customers.

A

The flows of the product was also demonstrated during the walk through with the HACCP Coordinator, Ms Eugenia where she explained all the processes that happens during the production of Hake, which is Seaflower' target species.

During the walk around the factory, there were no significant environmental impacts associated with the processes identified that were not carried out under specified conditions. The developed, implemented and documented procedures for the operations associated with safety, quality and environmental aspects is made aware to all employees entering the factory by placing it at the entrance of the processing factory. The company works on a 24-hour routine which is divided in shifts, day and night.

There are QCs within the facility that controls the production process and ensures that all processes are well controlled and will not pose any significant impact to the people or to the environment itself. There are also HCs, responsible for the hygienic aspects in the facility and ensure that no process or procedure will cause a safety hazard to the staff or to the customers.

There is a chemical store for the storage of all chemicals used within the facility. This specific store is always locked, and the key is kept by the Hygiene Controller on the specific shift (day or night). These personnel are responsible for ensuring that chemicals used within the facility is correctly used and by the right appointed person. However, at the time

of the audit, the chemical store was found to store other commodities such as cleaning materials and boxes.

All chemicals should be provided with the right Material Safety Data Sheet (MSDS) or Technical Safety Data Sheets (TSDS) in the chemical store to ensure the safety of the handler as well as proper directions in case of accidental spillage or inhalation. At the time of the audit, all chemicals found in the chemical did not have their MSDS/TSDS available.

Recommendations:

- Ensure that the storage of chemicals is done separate from all other commodities, otherwise proper signage should be done to define the storage of goods.
- All MSDS/TSDS must be provided for all chemicals used. This prevents wrong dilutions or use of the chemical.
- Consider developing procedures that controls all processes with significant environmental aspects of products, services, or people as well as stipulating operating criteria and limits or control of the important activity characteristics.

C

4. Training and awareness given

There is a training plan within the SHEQ department that is as a training tool for training all employees in food safety and hygienic practices. The HACCP Coordinators gives training every year or when there is a necessity, i.e. a refresher training needed to by a worker to refresh them on their work due to the deviation caused from their work.

C

As explained by the HACCP Coordinator, contractors and sub-contractors always receive instructions on how to operate a specific job. An assigned workshop employee works alongside the contractors in carrying out an assigned task. The line manager assigns the workshop employee to work with the contractor.

Although activities that can cause significant environmental impacts are practically considered within the organization and impacts are well mitigated when they occur, the training needs related to environmental management has not been identified in the above-mentioned training plan.

Therefore, the competency and training for all personnel whose work can cause significant environmental impacts could not be provided at the time of the audit.

Recommendations:

- All training needs related to environmental management should be included in the training plan.
- All personnel whose work can cause significant environmental impacts should be trained, including contractors and sub-contractors.
- Training records, certificates and all other documents to demonstrate the competence of personnel should be kept on file and readily available whenever needed.

5. Environmental aspects	<p>There company has considered the implications that the operations and activities of the facility to the environment and aspects having legal or regulatory reporting, monitoring or operational requirements are identified as significant impacts. However, environmental aspects are not considered in sufficient detail, as there was no documented evidence of these impacts at the time of the audit.</p>	B
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Recommendations:

- Document all the environmental aspects within the SHEQ system.
- Include pest control procedures within the system.

6. Documentation and records	<p>There is a procedure within the system that is maintained to ensure periodic review and appropriate revision of all required documents. The review of the document is done yearly or when necessary by the HACCP Coordinators and documentation is legible, readily retrievable and identifiable and revision date identified.</p>	C
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Documents are appropriately approved and the retention period for all documents is 3 years.

Recommendations:

Although documents are periodically approved, the versions do not specify the version numbers. Every time a document is reviewed and amended, a new version is adopted and this should be specified on the document.

7. Internal Audits

Internal audits are done through construction and maintenance inspections, First In First Out mechanism and quality checks.

C

Such audits are not scheduled and documented with appropriate audit reports.

Recommendations:

- Develop an internal audit plan that should be followed.
- Audit frequencies and topics should be based on the environmental importance of the activities to be audited.
- Audit results should be documented and reported to management for actions.
- Auditors should be competent and in a position to conduct audits objectively and impartially.
- Use the audit template provided in the EMP

8. Emergency preparedness and response

The company has appointed and trained a Safety Officer, Safety Representatives, Fire Fighters and First Aiders that are responsible to identify the potential for and to respond to accidents and emergencies. There are drills that are performed periodically in the company in order to test for emergency procedures and check their effectiveness.

A

There is an emergency plan available that ensures that accidents and emergency situations are mitigated. Fire Fighters, First Aiders and Safety Representatives are changed after every 2 years.

Action Plan

Priority	Action
Short-term – within 1 month	
Medium-term – 2 – 3 months	<ul style="list-style-type: none"> ✓ Implement new waste management minimization and storage plan. ✓ Attend to all sections with C scores
Long-term – 6 months – 1 year	<ul style="list-style-type: none"> ✓ Implement a more sophisticated environmental management system. ✓ Set up an established framework for monitoring, implementing action plans and continual improvement with regular conducted audits.