Appendix D Selected Huon Aquaculture Standard Operating Procedures

2	DOCUMENT CODE :	AQM0005.1			
HUON	EFFECTIVE DATE :	17 September 2014	VERSION	3	Page 1 of 1
AQUACULTURE GROUP PTY LTD	DOCUMENT TITLE :	Visitor Protocols			

Welcome to Huon Aquaculture Group

As part of our site operations, we have strict safety and hygiene guidelines you must abide by while on site. Thank you for your cooperation.

Occupational Health and Safety	<u>Security</u>
 When visiting the site the following Occupational Health and Safety requirements must be followed where directed by your guide or by signage on the site: Observe all safety signs Be aware of potential slippery floors and walkways, forklifts, trolleys, crates, pallets, machinery and sharp instruments, tripping hazards. Be aware of the Emergency Action Guide – Including Evacuation Instructions. 	 Visitors must report to the site office and sign in when entering the site and sign out when leaving the site. Visitors must be accompanied by a Huon Aquaculture guide (staff member) at all times, unless otherwise approved by a manager. Materials or produce are not to be removed from waste, storage or any site facility without prior approval from a manager. Equipment, parts or other items are not to be removed from the facility without prior approval from the manager.
 When visiting the site the following requirements must be followed where directed by your guide or by signage on the site: Always use designated footbaths where directed. Always follow any disinfection or biosecurity requirements as directed by staff Always wash hands at designated hand wash stations. If you are carrying or affected by communicable disease you must report it to the accompanying staff member. This includes influenza, "gastro", salmonella typhi, salmonella paratyphi, cholera, amoebic dysentery, bacillary dysentery, hepatitis of any kind, taenia solium and tuberculosis or any other communicable disease. Any cuts or open wounds which are not covered by clothing must be covered by a coloured bandaid. Jewellery (in fish harvest area) must be removed – we will only allow plain wedding rings or sleeper earrings. This means no rings with stones, necklaces, chains, watch, earrings etc. If you have visible piercings or other jewellery that cannot be removed please ask your guide to advise. Eating, drinking or chewing gum is not permitted in harvest areas. In hatcheries do not place any objects or parts of the body (eg, hands) into water in any tanks or ponds 	 Personal Protective Equipment When visiting the site the following items of protective clothing MUST be worn where directed by your guide or by signage on the site: Personal Floatation Device (PFD) Safety Vest Ear Muffs or Ear Plugs (provided) Hard Hat Disposable visitors coat (provided) Clean boots (provided) Disposable hair net (replace daily or as required) Disposable beard net if you have a moustache, sideburns or beard (if visible growth) Other protective clothing as provided by Huon Aquaculture. Maintenance or Contract Workers If you need to bring tools or equipment onto the site these items must be checked for cleanliness and safety by your accompanying guide. Only bring items onto the site that are absolutely essential to undertake the job at hand. If for any reason you need to perform hot work or work that may create contamination of the site (drilling, cutting, welding etc) then permission must be obtained prior to commencing the work. Likewise any work involving confined spaces must be given permission by Huon Aquaculture prior to commencement. If there is any doubt about the nature of the work or any safety concerns, then this must be brought to the attention of your accompanying guide or the Manager on site. For all work requiring permits on licenses, the contractor must have copies of such permits and licenses available on the site for review where requested.

and the second s	DOCUMENT CODE :	AQM0081 Chem Storage and Handling			
HUON	EFFECTIVE DATE :	25 October 2016	VERSION 2	Page 1 of 2	

DOCUMENT TITLE : Chemical Storage and Handling Procedure

Purpose

The purpose of this document is to describe the procedures used for transport, storage, recording and handling of chemicals.

Scope

This procedure applies to all maintenance, water treatment chemicals, cleaning and sanitation chemicals, veterinary chemicals, laboratory chemicals and farm chemicals used on each site.

References

• Global GAP Section AB 3

Chemical Inventory

Chemical movements in and out of the chemical stores are controlled by the manager responsible for each store. Records of all chemical movements are to be recorded on AQF0081 Register - Chemical Movements, a copy of which is held at each store. Whenever an authorised employee accesses chemicals from the store they must on **all** occasions **accurately** record:

- the name of the chemical,
- the quantity either added to or removed from the store,
- the total quantity then held in the store once the chemical has been added or removed, and
- the purpose for which the chemical is to be used.

For all Veterinary chemicals, these are controlled by the company Vet who maintains records of quantities ordered and scripts for usage where required. Once veterinary chemicals are at the intended site precise records of their storage and use must be kept as described above.

The manager responsible for each store must conduct a regular stock take of the store to ensure that the quantity of each chemical recorded on AQF0081 Register – Chemical Movements as currently being in the store matches the actual quantity of each chemical in the store.

Material safety data sheets and specifications

All MSDS for the Chemicals are stored in a folder in the site office and/or in the vicinity of the Chemical Storage Areas.

Where chemicals are required for food contact use (ie, cleaning and sanitation of harvesting operations), specifications are obtained to confirm that the chemicals are suitable for this purpose. Refer to specifications on the approved suppliers file.

Where chemicals are used for food contact surfaces, there is avoidance of strong scented products

Identification of Chemicals

Identification of chemicals is maintained at all times by checking that labels are attached to each container of chemicals on delivery and when used on site. Chemicals must only be stored in their original containers and dispensed when needed for use on site. If there is uncertainty about the identification of any chemical, then it will not be used and place on HOLD until clear status is established.

Secure Storage of Chemicals

Chemicals are segregated according to class and securely stored with restricted access to authorised personnel who have been trained in safe chemical handling.

Each chemical store has been assessed for chemical inventory, safety equipment, dispensing equipment, safety information, spillage containment and control. Personal protective equipment used for handling chemicals should on no account be stored actually in the chemical store but must be available adjacent to the store.

Empty Chemical Containers and Non-used Chemicals

When chemical containers are emptied, they are not to be re used on site.

Empty containers are to be securely stored until they can be properly removed from the site.

Any non-used chemicals are to be either sent to an approved chemical waste contractor or returned to the chemical supplier for disposal.

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HUON	EFFECTIVE DATE :	25 October 2016	VERSION 2	Page 2 of 2
	DOCUMENT TITLE :	Chemical Storage and Handling Procedure		

Transport of Chemicals

Chemicals can be transported in a number of ways depending on the nature and quantity of the chemicals.

Road Transport

When transporting chemicals, the transport company must be approved for transporting hazardous goods where applicable. Bulk Fuel, Bulk Chemicals.

MSDS include specific storage and transport details including where placards are required.

All care should be taken to ensure that the chemicals are secured from damage or leakage during transport. Chemicals are not to be transported with Fish feed or Fish handling equipment where these could become contaminated in the event of spillage etc.

Where required, chemical transport vehicles are to be equipped with spill containment equipment and appropriate fire extinguishers.

Marine Transport

Chemicals that need transporting to marine sites including boats and barges must have specific transport arrangements in place so as not to contaminate the marine environment.

Strahan Marine Harvest

When transporting chemicals, these are placed on the vessel (Patricia) and transported to the harvest barge (Hammerhead). ASOP0043 Offloading Fuel.

MSDS include specific storage and transport details including where placards are required.

All care should be taken to ensure that the chemicals are secured from damage or leakage during marine transport.

Other chemicals are in small quantities and are securely transported in various boats to ensure no spillage or contamination of the environment or feed.

Chemical Handler Training

All personnel who are required to handle chemicals will receive training on this procedure and also additional specific training on the chemical on site according to the Hazardous Substances Register for each site.

In the event of large biomass mortality:

Contact:

- Dive Manager (coordinates diving resources)
- Operations Manager (coordinates operational resources)
- Production Manager Health (coordinates food safety and fish health response)

Operations Manager, Works Manager and Dive Manager will decide on the method and resources required to remove morts.

Options:

- 1. Divers to bag fish out. This option will require
 - one or more dive boats depending on extent of the mortality,
 - sufficient dive crew,
 - compliance with standard mort diving procedure (see ASOP0005.2.2),
 - appropriate size mort bag (1 tonne or larger)

If numbers of morts are large this option will also require:

- a works vessel adequate for the number of morts with
- mort bins and
- bin(s) with ice slurry for recoverable fish.
- 2. Sombrero to airlift morts from cage. This option will require:
 - a works vessel adequate for the number of fish to be retrieved,
 - minimum 2 crew,
 - compressor,
 - dewatering system,
 - mort bins and
 - bin(s) with ice slurry for recoverable fish.
- 3. Manual airlift by dive crew. This option will require:
 - one dive boat,
 - full dive crew qualified to operate airlift and supervise airlift operations
 - compressor,
 - dewatering system,
 - a works vessel adequate for the number of fish to be retrieved,
 - minimum 2 crew,
 - mort bins and
 - bin(s) with ice slurry for recoverable fish.

In any large mortality event, as many fish as possible should be recovered for harvest and processing. Any fish in which the gills can still bleed is potentially recoverable and should immediately be bled (by making a broad vertical cut behind the 4th gill arch – but without severing right through the ventral surface of the gill attachment to the base of the head. All recoverable fish must be kept separate and placed into an ice slurry ASAP ..

Action - Production Manager - Health or his delegate will determine whether the fish can be sent for processing.

Recovered fish in ice slurries must be clearly marked as "Rollovers" and left next to the harvest container. Action – Operations manager to contact the Harvest Manager and Factory Manager at Parramatta Creek must be contacted as soon as the number of rollovers is known.

Note that if the mortality occurs on a Friday or Saturday then the factory requires a minimum of 2 tonnes of recovered fish to arrange cost-effective processing. Action - Operations manager to contact Harvest Manager and Factory Manager at Parramatta Creek to discuss freight and logistics.

If a significant quantity of fish are not recoverable, contact Seafish to notify them of increased mort biomass. Action - Operations manager.

550	DOCUMENT CODE :	ASOP0052			
	EFFECTIVE DATE :	16/02/2017	VERSION	3	Page 1 of 1
HUON AQUACULTURE GROUP PTY LTD	DOCUMENT TITLE :	Emergency procedute to fish health	ure in the ev	ent of sig	gnificant risk

The best way of dealing with fish health incidents can vary depending on the circumstances. However, in general the protocol below should be followed in any instance where there are significant numbers of fish at risk, dying, losing balance or behaving unusually, for example during:

AGD Bath	• Tow
Swim Thru	 Red tide (or presence of problem algae)
Feeding	Jellyfish
Net Change	Oil or Chemical Spill
Net Cleaning	 Low Dissolved Oxygen (< 65% saturation)
Periods of low water flow	Smolt Transfer

1. PAUSE THE OPERATION YOU ARE UNDERTAKING

- 2. CONTACT YOUR LINE MANAGER <u>OR</u> THE WORKS MANAGER (On Duty) they will then contact/notify other appropriate staff if required
- 3. IF UNABLE TO CONTACT YOUR LINE MANAGER <u>OR</u> THE WORKS MANAGER CONTACT ONE OF THE FOLLOWING they will then contact/notify other appropriate staff if required

Dave Morehead (0418361801)	Steve Percival (0429146048)
Dave Mitchell (0427353334)	Charlie Coulson (0429294045)
Mark Garland (0429136342)	Josh McKibben (0427448327)
Adam Norris (0400025985)	Jamie Marsh (0438292313)
Philip Dayton (0427353474)	Jarrod Wells (0428253872)
Dave Wood (0428972578)	Peter Bender (0409009541)
Davey Whyte (0438590570)	

- 4. IF UNABLE TO CONTACT ANYONE QUICKLY <u>SAFELY STOP</u> THE OPERATION YOU ARE UNDERTAKING. ONLY CONTINUE IF CIRCUMSTANCES CHANGE AND THE RISK OR CAUSE OF MORTALITY HAS BEEN IDENTIFIED AND REMEDIED:
 - REDUCE STRESS/ OXYGEN REQUIREMENT
 - Release the crowd so that fish can move freely within the cage
 - Stop pumping or transferring fish
 - Stop Feeding
 - IMPROVE ENVIRONMENT

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- If DO low install a Netox Grid
- Consider venturation which may be beneficial depending on the circumstance.
 - If the problem substance is in surface water (eg. red tide, oil slick) then venturation will draw clean water from depth and move contaminated surface water out of the cage.
 - If the problem substance is throughout the water column venturation <u>should not be</u> <u>used</u>. Venturation would effectively move more of the problem substance through the gills of the fish making the problem worse.
- LIMIT EXPOSURE TO POTENTIAL TOXIC COMPOUNDS
 - Do not feed
 - Do not flush water through the cage with boat prop wash
- SPECIFIC CASES
 - If a large number of jellyfish are inside the cage, consider towing the cage slowly so that the jellyfish move to the back of the cage
- COLLECT INFORMATION
 - Collect water samples
 - Inspect moribund and dead fish
 - Take photos/videos
 - Keep notes and times of important observations
- 5. WHENEVER AFFECTED FISH ARE > 3KG, ROLLOVERS SHOULD BE BLED AND PLACED INTO ICE SLURRIES SO THAT THEY CAN BE PROCESSED IF APPROPRIATE

No.	DOCUMENT CODE :	CQM 0103 Hazardous Chemicals Policy		
HUON	EFFECTIVE DATE :	24 November 2015	VERSION 5	Page 1 of 4
AQUACULTURE GROUP PTY LTD	DOCUMENT TITLE :	Policy - Hazardous Chemicals		

PURPOSE

The Huon Aquaculture Group of Companies ("Huon") believes that:

- The safety of people and product are the highest company priorities;
- Work related injury, illness, disease and property loss are normally preventable; and
- Successful health and safety management makes good business practice.

As such, Huon is committed to providing a safe and healthy work environment through the effective management of hazardous chemicals used within the workplace including identification, storage, correct use and disposal.

<u>SCOPE</u>

This Policy is applicable and available to all workers, contractors, work experience students and visitors, and all sites and business units.

PRINCIPLES

In order to manage risk under the WHS Regulations, Huon will:

- Identify reasonably foreseeable hazards that could give rise to the risk and as required, assess the risks associated with these hazards
- Eliminate the risk so far as is reasonably practicable
- If it is not reasonably practicable to eliminate the risk, minimise the risk so far as is reasonably practicable by implementing control measures in accordance with the hierarchy of risk control
- Maintain the implemented control measure so that it remains effective
- Review, and if necessary revise all risk control measures so as to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

RESPONSIBILITES

Under the WHS Act, a **person conducting a business or undertaking (PCBU)** has the primary duty to ensure, so far as is reasonably practicable, that the health and safety of workers and other persons are not put at risk from work carried out as part of the conduct of the business or undertaking. This includes ensuring the safe use, handling and storage of substances.

The WHS Regulations include specific duties for a person conducting a business or undertaking to manage the risks to health and safety associated with using, handling, generating and storing hazardous chemicals at a workplace.

Designers, manufacturers, importers and suppliers of substances must also ensure, so far as is reasonably practicable, that the substance they design, manufacture, import or supply is without risks to health and safety. Under the WHS Regulations, manufacturers and importers must correctly classify hazardous chemicals.

The WHS Regulations also impose duties on importers, manufacturers and suppliers relating to the preparation of safety data sheets (SDS), the disclosure of ingredients, packing, labelling and supply of hazardous chemicals.

Origin date: March 2013	Prepared By:	Cheryl Shepherd	Date: 17.11.15
	Authorised By:	lan Trotter	Date: 17.11.15

N	DOCUMENT CODE :	CQM 0103 Hazardous Chemicals Policy			
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Officers, such as company directors, have a duty to exercise due diligence to ensure that the business or undertaking complies with the WHS Act and Regulations. This includes taking reasonable steps to ensure that the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks that arise from hazardous chemicals at the workplace.

Workers have a duty to take reasonable care for their own health and safety and must not adversely affect the health and safety of other persons. Workers must comply with any reasonable instruction and cooperate with any reasonable policy or procedure relating to the use, handling and storage of hazardous chemicals at the workplace.

DEFINITIONS

Hazardous Chemical

Under the WHS Regulations, a hazardous chemical is any substance, mixture or article that satisfies the criteria of one or more Globally Harmonised System of Classification and Labelling of Chemicals (GHS) hazard classes, including a classification in Schedule 6 of the WHS Regulations.

However, some hazard classes and categories of the GHS are excluded by the WHS Regulations. See the 'Code of Practice - Managing the Risks of Hazardous Chemicals in the Workplace' for further details

Dangerous Goods

Most substances and mixtures that are dangerous goods under the ADG Code are hazardous chemicals, except those that have only radioactive hazards (class 7 dangerous goods), infectious substances (division 6.2) and most class 9 (miscellaneous) dangerous goods - *(refer relevant legislation)*

COMPLIANCE

- Huon will endeavour to comply with all relevant related legislation
- Huon will provide annual notification to Workplace Standards, when the quantities of goods on its premises are in excess of Workplace Standards Notification Requirements.
- Huon will comply with Federal Government requirements for annual reporting requirements for new chemicals and Priority Existing Chemicals (PEC).
- Huon will comply with Federal Government National security directives and relevant states licensing requirements for Security Sensitive Dangerous Substances Goods (SSDS) and Security Sensitive Ammonium Nitrate (SSAN).

Prohibited and restricted hazardous chemicals

The WHS Regulations prohibit or restrict the use, storage or handling of certain hazardous chemicals in certain situations.

• For example, substances containing arsenic must not be used in spray painting or abrasive blasting, while a number of carcinogens such as 4-nitrodiphenyls are prohibited from all uses except for genuine research or analysis authorised by the regulator.

Origin date: March 2013	Prepared By:	Cheryl Shepherd	Date: 17.11.15
	Authorised By:	lan Trotter	Date: 17.11.15

W.	DOCUMENT CODE :	CQM 0103 Hazardous Chemicals Policy			
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RISK ASSESSMENT

The assessment process enables a distinction to be made between the 'hazard' of a chemical and the 'risk' to health and safety that arises from its use, handling, generation and storage. A risk assessment involves considering what could happen (consequence) if someone is exposed to a hazard and the likelihood of it happening.

Risk assessments will be conducted in consultation with workers and / or the health and safety representatives and any other relevant stakeholders and documented accordingly

REGISTERS

A register of all hazardous chemicals / dangerous substances will be kept at all places of work, as well as centrally with the Manager – WH&S office, and this must be regularly maintained and readily accessible to all persons working in the vicinity.

Registers or summaries of inventories must be immediately available to State authorities and emergency services.

An asbestos register and asbestos management plan must be kept at all workplaces where asbestos products or building materials have been identified and must be shown to all contractors and other persons who may be at risk.

<u>TRAINING</u>

Huon will provide appropriate induction and on-going training to any worker, contractor or student on work experience who is likely to be exposed to any hazardous chemical at Huon.

LABELLING

All storage vessels containing hazardous chemicals / dangerous substances will be labelled in accordance with the legislation

All labels will clearly identify the chemical / substance and provide basic health and safety information including relevant risk and safety phrases and emergency contact details.

STORAGE

The quantities of hazardous chemicals / dangerous substances stored will be kept to a minimal amount as is practicable.

All storage facilities will comply with the appropriate Australian Standards for storage of chemicals and laboratory practices.

INCIDENT REPORTING

All hazardous chemical related spills, explosions or adverse exposures will be recorded and reported directly to the immediate supervisor, (see WH&S policy)

Supervisors are responsible for carrying out an immediate investigation and ensuring that others are not put at risk.

In the event of a fatality or life threatening incident, supervisors are responsible for ensuring the area is secured; and that no plant or other thing involved in the death, injury, illness or occurrence is interfered with, unless the interference is necessary to save life or relieve suffering; or to prevent damage to property or injury to persons, without the prior permission of a government inspector.

Origin date: March 2013	Prepared By:	Cheryl Shepherd	Date: 17.11.15
	Authorised By:	lan Trotter	Date: 17.11.15



DOCUMENT CODE :	CQM 0103 Hazardous Chemicals Policy			
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WASTE DISPOSAL

All chemical waste material must be stored and disposed of in a safe and environmentally responsible manner.

Any that have not been used for long periods and which have no immediate use, should be, where possible, redistributed or disposed of in an appropriate manner.

EMERGENCY PLAN

An Emergency Plan will be developed and displayed in each area where hazardous chemicals / dangerous substances are used or stored as required.

The Emergency Plan will include procedures for spillages, fire, explosion, medical response and recovery.

HEALTH SURVEILLANCE

Health surveillance will be carried out for any workers as required by legislation

RECORD KEEPING

Records will be maintained and as per the legislative requirements

These will include risk assessments, health surveillance and training records.

Such records will also be maintained and archived as per Huon's Records Management Policy.

LANGUAGE TRANSLATION

Where a worker's preferred language is not English, a translated copy of this policy and applicable specific WH&S policies and procedures shall be provided by Huon upon request or when deemed necessary.

POLICY REVIEW

This document is to be annually reviewed and assessed for effectiveness by the relevant Officers in consultation with the Manager – WH&S, site WH&S Committees and health and safety representatives.

ACTIONS FOLLOWING BREACH

Any breach of this policy will result in investigation and the application of Huon's Counselling and Discipline policy.

DISPUTES

Where there is a dispute relating to this policy or its implementation the matter will be dealt with in accordance with the appropriate dispute resolution procedure contained within the relevant industrial instrument.

FURTHER INFORMATION

Manager – WH&S Phone: 03 6295 8131

itrotter@huonaqua.com.au

Origin date: March 2013	Prepared By:	Cheryl Shepherd	Date: 17.11.15
	Authorised By:	lan Trotter	Date: 17.11.15

1	DOCUMENT CODE :	AQM0132		
HUON	EFFECTIVE DATE :	1.01.2016	VERSION 1	Page 1 of 12
AQUACULTURE GROUP PTY LTD	DOCUMENT TITLE :	Environmental Spills Pro	cedure	



Environmental Spills Procedure

HUON AQUACULTURE Group

1			
Origin date: January 2016	Prepared By:	Adam Chapman	Date: 01.01.2016
	Authorised By:	David Wood	Date:

Title: Environmental Spill Procedure

Prepared by: The Environmental Manager: Adam Chapman

Approved by: The Quality Systems Manager: David Woods

Planned Commencement Date: 1.1.2016

Planned revision date: 1.3.2016

Environmental Spill Procedure Revision Table

EMP Rev.	Date	WMP Revision Description	Ву	Environmental Manager	Approved Quality Systems Manager
0	1/8/15	First issue	AC	AC	DW
1	01/01/16	Version 1			

Site: Hatcheries, Port Huon, Parramatta Creek

Site Address: State wide

References

Referred Legislat	Referred Legislation						
National	 Australian Standard AS 3745-2010 Planning for emergencies in facilities Work Health & Safety Act 2011 						
Tasmania	 Work Health and Safety Act 2012 Work Health and Safety Regulations 2012 Tasmania Fire Service General Fire Regulations The Environment Protection Authority (EPA) EPA Hotline 1800 005 171 Pollution of water by oil & other Noxious Substances Act 1987 						
Related Documents							
Policies	 Work health, safety & wellbeing First aid Hazard Control (Incident/near miss reporting and investigation) Counselling and discipline Training and induction 						
Procedures	 Emergency management First aid Hazard Control (Incident/near miss reporting and investigation) Counselling and discipline Training and induction 						
Forms	 CQF 0106.1 Risk Assessment & Hazard Control CQF 0106.1 Risk assessment matrix CQF 0128.1 Chemical Spill Incident Report Form CQF 0128.2 EPA Waterway Pollution Incident Notification CQF 0128.3 Fuel Spill Control Site Monthly Inspection Incident / Near miss report Hazard Report 						

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Origin date: January 2016	Prepared By:	Adam Chapman	Date: 01.01.2016
	Authorised By:	David Wood	Date:

1	DOCUMENT CODE :	AQM0132		
HUON	EFFECTIVE DATE :	1.01.2016	VERSION 1	Page 3 of 12
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Scope of Work:

The purpose of this plan is to describe the principles, procedures and management of Huon Aquacultures Environmental Spill Procedures.

Huon Aquaculture has developed this plan to manage any environmental spills that occur on its sites in a sustainable manner. This sustainable management will be provided through rigorous monitoring. The results of this monitoring will provide Huon Aquaculture with the information required to maintain best practice management of our Aquaculture facilities.

The Plan also takes into account the impact on wildlife that live in the environment surrounding Huon operations. This includes protocols for the management of mammals and birdlife.

This Plan will be reviewed and modified on an ongoing basis.

Structure

The Environmental Spill Procedure (ESP) is part of Huon Aquacultures Environmental Management System (EMS) and is to be viewed as a portion of the companies' total Environmental management.

The EMS incorporates:

Site Environmental Management Plan:

Site Operations Manual:

Site Water management Plan:

Site Waste Management Plan:

Environmental Complaint Procedure:

Environmental Spill Procedure:

Environmental Risk Assessment:

Environmental Aspects, Impacts identification

Ecological Based Management

This ESP is designed to support an ecological based management approach underpinned by adaptive management principles.

The ESP will follow the management and the principles contained within the Environmental Management and Pollution Control Act (EMPCA 1994). It has been developed following Section 4 of the Act (Best Practice Environmental Management).

"The best practice management of an activity is the management to achieve an ongoing minimisation of the activities environmental harm through cost – effective measures assessed against the current international and national standards applicable to the activity."

Environmental Management System

This plan is part of the Huon Aquaculture Environmental Management System (EMS) this system incorporates the management, Document Control, Data entry, objectives, roles,

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Origin date: January 2016 Prepared By: Adam Chapman Date: 01.01.1						
	Authorised By:	David Wood	Date:			

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responsibilities and training in relation to all environmental aspects and impacts identified by the company.

The site EMP will provide details of how the EMS is utilised to achieve these goals for environmental management on a particular site. Environmental Impacts identified within the site EMP will be managed under specific environmental Management plans, protocols and procedures. These management plans are to be utilised conjunction with the site EMP and follow the principles and management outlined within the EMP.

The EMS can be accessed within the company data base and the site EMP can be downloaded or viewed within the EMS. All management plans will be developed and follow the principles outlined within the EMP.

INTRODUCTION

This Environmental Spill Procedure (ESP) has been prepared for the Huon Aquacultures

Hatcheries, Hideaway Bay and Macquarie Harbour marine farms ,Port Huon operations and Parramatta Creek Processing Plant

The aim of this document is to provide a plan for the management of environmental spills in relation to the potential environmental Impacts that were identified during the development of the site EMP. The Environmental Spill Management Plan outlines:

• The general principles to be adopted for effective management of environmental spills.

Purpose

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The Huon Aquaculture Group of Companies ("Huon") believes that:

- The safety of people and product are the highest company priorities;
- Work related injury, illness, disease and property loss are normally preventable
- Successful environmental management makes good business practice; and
- Due to the potential risk of an environmental spill at Huon Aquacultures sites and the risk associated with the environment and aquatic life, Huon has an obligation to protect the environment in which it operates.
- The safety of people, aquatic life and the environment in a spill event is of the highest company priority.
- Setting Huon's sites up so that spills are preventable is Huon's first priority for controlling spills.

As such, Huon is committed to providing sound spill control management procedures, including planning, hazard control and appropriate training for the level of responsibility.

It is the policy of this company to make every reasonable effort to:

- Eliminate / minimise reasonably foreseeable risk of harm.
- Comply with relevant environmental legislation and guidelines.

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• Make appropriate resources available to prevent spills from occurring and appropriately respond to spills if they occur.

Scope

This environmental spill management plan / procedure applies to all workers of Huon Aquaculture (and its related entities) and to contractors, sub-contractors, suppliers, work experience students and visitors who attend our site.

Objectives

Our aim is to provide, as far as reasonably practical, a workplace free from reasonably foreseeable environmental risks, including those associated with spills.

This shall be achieved through:

- Complying with all legislation, including the environmental guidelines and Australian Standards. This also includes:
 - Design of potential storage areas.
 - Maintenance and inspection of storage areas.
 - Prevention of spills.
 - o Development of spill response plans.
 - Containment of spills
 - Testing of environmental spill procedures for all usual employees (including casual/shift workers) at least annually;
- Maintaining an Emergency Control Organisation (ECO) at each site, including:
 - Competent management/ person(s) on site.
- Providing relevant information, guidance and training for workers, contractors and visitors on spill emergency requirements where applicable;
- Each site having accessible and current contact details in case of environmental emergency;
- Regular assessment and continual improvement of environmental spill preparedness;
- Where any doubt exists, professional advice is sought as soon as possible.

Responsibilities

A person conducting a business or undertaking (PCBU) has the primary duty under the WHS Act to ensure, as far as reasonably practicable, that workers and other persons are not exposed to health and safety risks arising from the business or undertaking.

Officers, such as company directors, have a duty to exercise due diligence to ensure that the business or undertaking complies with the WHS Act and Regulations. This includes taking reasonable steps to ensure that the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks that arise in the workplace

Site Managers are responsible for:

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- Ensuring that the protection of people, marine life and the environment takes precedence over the protection of property and production at all times.
- Ensuring equipment, procedures and work practices where possible reduce the risk of spills occurring.
- Ensuring training/retraining is undertaken within the required intervals;.
- Ensure emergency response equipment is checked and in operational condition.
- Notify governing agencies to inform of any major spills in line with 'The Environment Protection Authority (EPA) EPA Hotline 1800 005 171'

Managers / Supervisors must ensure that all requirements in this procedure are adhered to at all times

The Emergency Control Organisation (ECO) is responsible for (Chief Warden / Fire Warden)

- Recommending appropriate emergency equipment, procedures and requirements.
- Liaising with the environmental Manager on preparing for, and responding to any environmental spill emergencies.
- Knowing where spill response equipment is located, the correct type of spill equipment to be used on what type of spill.

All Huon workers, contractors, work experience students and visitors must take reasonable care for their own health and safety and not adversely affect the health and safety of other persons. They must comply with any reasonable instruction and co-operate with any reasonable policy or procedure relating to health and safety at the workplace, and must participate in the implementation of this procedure and the requirements of the Hazard management policy. They are also responsible for:

- Taking all reasonable steps where possible to avoid spills occurring.
- Report potential environmental spill hazards.
- Respond calmly, quickly and safely to any environmental spill emergency situation.
- Assist others (where required) in meeting their responsibilities in an environmental spill emergency situations.
- Notify site manager initially if a spill occurs regardless of size.
- Site manager to initiate spill response plan immediately and assess the situation and take appropriate action.
- Complete environmental spill incident report form.
- Employees must report the use of spill control equipment and ensure it is restocked.

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	Authorised By:	David Wood	Date:		

Identified Environmental Impacts and Controls

Potential Impacts from: Environmental Spills

The Environmental Spills Procedure will focus on the potential impacts within the following areas.

- Incorrect Spill Response Procedures
- Incorrect assessment of spill incident level
- Incorrect Management Response
- Ineffective Spill preparation
- Failure to contact relevant people
- OH&S during response
- Contractors requirements
- Record Keeping
- Monitoring of performance

Each of the impacts above will be outlined in the ESP for the current level of management required to reduce the risk associated with potential Impacts.

The level of management currently in place may be assessed as all that is required to manage that particular impact, however as a company we will strive to improve our management of each identified impact to reduce the risk of this impact to the lowest level that can be possibly achieved in a cost effective manner.

As outlined within the site EMP each Impact and each management plan, protocol and procedure will be assessed on a minimum annual basis. Each updated version will be made available on the EMS.

In regards to Environmental Spills the above potential environmental impacts will be managed according to the plans following:

Procedure:

Prepare:

Our workplace is more likely to avoid a major environmental spill if we have prepared for such an event. The most important job is to prevent spills from occurring by having the right equipment and containing spills from getting into water ways damaging the environment and potentially fish stocks.

Each month each site must have routine maintenance scheduled to carry out the following spill prevention controls for spill control:

See environmental spill control site monthly inspection sheet, this sheet must be completed each month.

• Inspect sludge storage areas ensure they are clean and tidy.

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- Check all tanks, storage and pipework is in good working order.
- Check all spill response equipment is in place and stocked correctly.

1.01.2016

Checklist of procedures

- Immediately isolate/ stop spill or incident if possible.
- Assess incident as to level of rating (see action plan below), if unsure assume highest rating.
- Report spill immediately to Site Manager or most senior person on site.
- If you are responding to the spill make sure you are wearing the appropriate safety equipment.
- Employees will need gloves and disposable overalls as a minimum.
- No Smoking in the vicinity of spills
- Shut down all ignition sources
- If possible stop the source of the leak or spill.
- Contain the spill to the smallest area, first priority is stop it going in to water ways, cover drains, pits or divert the to prevent entering in to water ways.
- If spill enters the water try to isolate water from entering downstream environment.
- Contact government agency if spill poses a risk to the environment.
- Clean up all residues from ground or water using spill control products to contain and then absorption materials to clean, Chemical Spill Pads or socks will not absorb water based spills as they are Hydrophobic.
- If spill is large, outside agencies may be required to suck up spill due to volume.
- Dispose of any contaminated spill control product's correctly, do not place in bins.
- Restock all used spill control equipment. Assess the course of the spill and implement changes to prevent reoccurrence.
- Review response and evaluate the effectiveness of the spill response plan and implement changes as required.
- Contact Environmental Manager.
- Contact Quality Assurance Manager.

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INCIDENT	RESPONSIBILITY	ACTIONS
Low Level Incident No offsite emission Water based incident	Yours Leading Hand	Isolate – stop spill Notify Leading hand
Medium Level IncidentLow amount of offsite emissionsWater Based IncidentsMinor chemical spill – see WHSChemical Spill Plan	Yours Leading Hand Site Manager	Isolate- stop spill if possible Notify Leading Hand Notify Manager
<u>High Level Incident</u> Sludge spill Chemical spill – see WHS Chemical Spill Plan	Yours Leading Hand Site Manager Environmental Manager	Isolate – stop spill Immediately notify Leading hand Immediately notify Manager Immediately notify Environmental Manager

Duty Card - Site Manager Environmental Spill Response Plan

DUTIES	COMPLETED / ISSUES
Obtain details of product spilt and amount of spillage.	
Exact location of spill and the direction of travel of spill.	
Organize staff to respond to the spill incident and supply them with relevant PPE. Minimum gloves and disposable coverall	
Activate containment plan	
Notify company environmental officer	
Notify General Managers in the event of a major Spill that is reportable to external agency or places human, wildlife or fish health at risk.	
Coordinate external agencies if required for larger spill clean up.	
Once spill continued coordinate spill clean up and arrange disposal of contaminated products	
Ensure all stocks used to clean spill are replenished	

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EMERGENCY CONTACTS

Emergency Phone Numbers					
Environmental Manager	Adam Chapman	0497042 809	08 62663934		
Freshwater					
Operations General Manager	David Mitchell	0427353 334	03 62958109		
Marine					
Operations General Manager	David Morehead	0418 361 801	03 6239 4240		
Quality Manager	David Wood	0428 972 578	03 6295 8111		
DPIPWE (EPA)	Sarah Richards		03 61654607		
Police Department	Emergency only	000			
SES	Emergency only	132 500	132 500		
Bridport Manager	Duncan Joyce	0418 331 722	03 6356 0556		
Millybrook Manager	Matt Collins	0417 112 280	03 6377 1221		
Springfield Manager	lan Cameron	0407 851 268	03 6352 7211		
Meadowbank Manager	Mike Lynch	0429 070 985	03 6286 1262		
Lonnavale Manager	Lindsay Pettit	0428 594 467	03 6266 0066		
Forrest Home Manager	Lindsay Pettit	0428 594 467	03 6266 0066		
Port Huon Manager	Jason Ley	0488 356 154	03 6295 8111		
Processing Manager	Simon Fraser	0409 188 029	03 6422 0210		
Marine operations					
Manager south	Charlie Coulson	0429 294 045	6295 8117		

Notification of Pollution Incidents

To notify the Director, EPA of a pollution incident or to lodge a complaint, call the Pollution Incidents and Complaints Hotline number:

1800 005 171

This number is available 24 hours a day, 7 days a week.

The notification or complaint must include:

• Your full name, address and telephone contact details

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- Date, time and duration of the incident
- The type of pollutant or a description of the incident, discharge or emission
- Location of the incident, being as specific as possible
- The source and cause of pollution if known
- The extent or size of the area where the pollution is visible
- Anything else that is relevant to the incident

If you are able to take any photographs of the incident, these will be useful and can be sent at a later time.

Record Keeping

The following documents are to be retained:

- Training records for the term of the worker's employment;
- Records of practice evacuation drills
- Any other documentation relating to this response procedure / plan
 - o E.g. Hazard identification, Risk assessments, controls, reviews etc.

Further Information

Environmental Manager Phone: 0497 042 809 <u>achapman@huonaqua.com.au</u>

Monitoring Performance

Each environmental spill will require to be assessed for actions conducted and protocol and procedure adherence. This will be conducted by the Environmental manager in conjunction with the Quality assurance manager and any relevant personal.

Staff Training

Relevant staff should be trained in the management of environmental spills and be made aware of the recommendations contained within this management plan.

OH&S

Staff members are required to wear all appropriate PPE when conducting operations in regards to any spill response this includes gloves, safety glasses, and dust masks in addition to the site required PPE.

Wet weather clothing should also be worn during larger clean up operations.

Contractor Agreement:

All contractors utilised by Huon Aquaculture to conduct works onsite will be expected to fully understand and follow all aspects of the ESP.

Failure to meet all aspects of the ESP will result in the immediate suspension of contract until either the problem is resolved and or a compliant contractor can be located.

All contractors utilised by Huon Aquaculture will follow all Government and Council guidelines in regard to all aspects of environmental management at this location.

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All contractors utilised by Huon Aquaculture will follow all Government and Council guidelines in regards to OH&S procedures.

All contractors utilised by Huon Aquaculture to commence maintenance at this site will be inducted to the site and to the EMP so as to fully understand their position and their legal obligations.

Huon Aquacultures Management will inspect the work zone at the cease of contractor operations to assess sites cleanliness to return to normal use.

Monitoring of the Procedures

Monitoring of this ESP is the responsibility of the Environmental Manager with assistance from other site staff in executing the objectives of the Plan and Procedures.

Any improvements to the ESP template will be carried out in the form of a formal revision by the Quality Systems Manager and posted on the intranet as required.

Reporting of any environmental issues and status of actions will be recorded in the site meeting minutes.

Environmental Systems Audit

Auditing of the ESP for usage and compliance issues will be carried out by the Environmental Manager on a Quarterly basis. Audit results are to be filed on site with a copy forwarded to the Operations Manager, Quality Systems Manager and Site Manager for review at Divisional meetings.

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MANAGEMENT SYSTEM COMPONENT	HAZARD TYPE Refer to List in AQM0008.1	POTENTIAL HAZARDS	HAZARD RATING Probability High Critical Medium Low Major Minor	DOES THIS HAZARD POSE A SIGNIFICANT RISK? Refer to Hazard Rating Chart	JUSTIFICATION FOR DECISION	CONTROL MEASURE (S)	MANAGEMENT PLAN REFERENCE
1 Cages	1	No Hazards Identified	NA	NA	NA	NA	NA
	2	Visual impact	Low x Minor	No	All structures have to conform to requirements of Marine Farm development plans to minimise visual impact	As per Management Controls as specified in relevant Marine Farming Development Plan. All structures and equipment to be specified colour, low in profile, uniform size and shape	SP Section 3 Marine Farm Development Plans
	3	Failure of cage integrity Cage moorings and cage structure not adequately designed or maintained.	Low x Serious	Yes	If cages deform fish can be crowded in net or escape but only if a section of net becomes fully submerged	Cages and moorings are routinely checked for damage after every transaction, after storm events and annual audit of cage damage to schedule repairs	SP AQF0013.1 Cage and Mooring plans
	4	No Hazards Identified	NA	NA	NA	NA	NA
	5	No Hazards Identified	NA	NA	NA	NA	NA
	6	No Hazards Identified	NA	NA	NA	NA	NA
	7	Cage used for different year classes allowing potential transfer of pathogens between year classes	Low x Serious	Yes	Cages are emptied, cleaned and refurbished before use on a new year class.	Veterinary Health Plan Biosecurity Section Annual cage cleaning and refurbishment	SP AQM0100
	8	Failure of cage integrity	Low x Minor	No	If cages deform fish can be crowded in net or escape but only if a section of net becomes fully submerged	Cages routinely checked for damage after every transaction, after storm events and annual audit of cage damage to schedule repairs	SP AQF0013.1
	9	Waste from cage cleaning	High x Minor	No	Cleaning of cages will generate some waste which needs to be managed	All cleaning takes place on land with waste disposed of appropriately according to relevant legislation, regulations or local council by-laws	SP Marine Farm Development Plans Pt Huon Waste Management Plan
2 Nets	1	No Hazards Identified					

3 = Animal Health and Welfare 4 = Hygiene 5 = Food Defense 6 = Water Quality 9 = Waste

7 = Biosecurity

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	2	Failure of net integrity allowing fish to escape	Low x Serious	Yes	Research indicates that escaped salmon have limited ability to feed on native species. Can be significant cost to business (Abrantes et al 2010)	Regular in-water net inspection. Net inspection following storms Routine inspection of cages for chafe from biofouling On-land net inspection and repair following washing and prior to re- use	SP ASOP005.2 ASOP005.2.14 ASOP0017.8 ASOP0016.8 AQF0016.6
	2	Odour from stored nets	Low x Minor	No	Management practices ensure dirty nets are not stored on shore	Only clean nets are stored at farm sites immediately prior to re-use. Nets removed from cages are transported to the net maintenance facility where they are cleaned and repaired. The net maintenance facility has no near neighbours	SP ASOP0017.5 ASOP0017.8
	3	Selecting incorrect mesh size for size of fish could lead to entrapment of smaller fish in mesh	Low x Minor	No	Management practices ensure correct mesh size is selected	Neptune software program alerts requirement to change mesh size which is fed into weekly Planning Meetings for operational implementation.	SP Neptune Software ASOP0017
	3	Selecting incorrect net size for biomass of fish could create stocking density issues.	Low x Minor	No	Management practices ensure correct net size is selected	Neptune software program alerts requirement to change net size which is fed into weekly Planning Meetings for operational implementation.	SP Neptune Software
	4	No Hazards Identified	NA	NA	NA	NA	NA
	5	No Hazards Identified	NA	NA	NA	NA	NA
	6	No Hazards Identified	NA	NA	NA	NA	NA
	7	Transfer of pathogens from net maintenance facility to farm sites	Low x Serious	Yes	Measures are taken to reduce biosecurity risk	Veterinary Health Plan Biosecurity Section	SP AQM0100
	8	No Hazards Identified	NA	NA	NA	NA	NA

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	9	Waste from washing nets can enter nearby water course	Low x Serious	Yes	Measures are taken to contain all waste	Net wash area is bunded and all waste is treated on site prior to removal according to relevant legislation, regulations or local council by-laws	SP ASOP0017.7 ASOP0017.10 ASOP0017.14
3 Marine Leases (Sea Cages and Nets) • Feeding • Bathing (liner or well boat) • Diving • Towing	1	No Hazards Identified	NA	NA	NA	NA	NA
	2	Noise from generators/compressors	Medium x Minor	No	Generators/compressors at most leases are remote from human habitation and insulated	Generators, compressors are serviced as per MEX preventative maintenance schedule Noise Testing	SP Noise Testing MEX Preventative Maintenance Schedule
	2	Noise from boat operations	Medium x Minor	No	Vessel operations at most leases are remote from human habitation and steps are taken to reduce engine noise for OH&S reasons, eg, soundproofing, use of 4- stroke motors	All vessels are serviced as per MEX preventative maintenance schedule Noise Testing	SP Noise Testing MEX Preventative Maintenance Schedule
	2	Lights from farm installation and vessel operations impacting neighbours	Medium x Minor	No	Use of lights focussed on work activities	Schedule 3 Marine Farm Development Plan requires operators to ensure that light from farming operations does not cause a nuisance	SP Schedule 3 Marine Farm Development Plan

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	2	Exhaust gasses	Medium x Minor	No	All motors regularly serviced to maintain optimal operation	MEX Preventative maintenance Schedule	SP MEX Preventative Maintenance Schedule
	2	Cut or broken rope can enter environment	Medium x Major	Yes	Rope will at times be cut or break and end up on shorelines or possibly entangling marine life	Train staff in ASOP0013.1 Cage Set Up – Works to ensure correct knots are used to minimise cutting of ropes. Adopt a Shoreline Program to mitigate the effects of debris on shorelines	SP ASOP0013.1 ASOP0013.4 AQM0130.7 Adopt a Shoreline Program
	2	Odour from mortalities	Low x Minor	No	Mortality management minimises likelihood of odour	Mortalities immediately stored in bunded refrigerated container prior to regular collection by contractor	SP Environmental Management Plan
	2	Fuel and oil based lubricants spillage	Medium x Major	Yes	All sites/leases have fuel storage	All fuel storage is bunded and fuel spill kits available Chemical Storage and Handling Procedure	SP ASOP0081
	2	Disinfectant spillage	Medium x Minor	No	Water soluble disinfectant (Virkon) is used small quantities in diluted form according to MSDS	Bunded chemical storage Chemical Storage and Handling Procedure	SP ASOP0081
	2	Release of antibiotics into the environment	Low x Major	No	Limited use of antibiotics in marine culture. If used correct dose administered by trained staff and monitored with automatic feed system	Veterinary Health Plan Regulatory control through DPIPWE Marine Farm Development Plan Management Controls	SP AQM0100

7 = Biosecurity

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	2	Contamination of the lease site with feed residue	Medium x Major	Yes	Feed is used on each marine site and therefore needs controls in place	Automatic feed system to control feed rate so that feed is consumed prior to reaching bottom and feed system shuts off if feed is unconsumed. Verified by feed trays in base of net observed on every dive	SP Feed Quotas ASOPs 0015.1- 0015.6 ASOP0005.2
	2	Contamination of the lease site with fish waste	Medium x Major	Yes	Fish waste is part of the fish farming operations, but is assisted by initial siting, water current and fallowing	Annual lease monitoring and fallowing/site rotation regime	SP Section 3 Marine Farm Development Plans
	2	Increased nutrient load beneath cages impacting biodiversity	High x Major	Yes	Increased nutrients are a part of the farming operation but impact on diversity is assisted by water flow, fallowing	Base-line monitoring for new lease sites to ensure they are not located in inappropriate locations. Annual lease monitoring and fallowing/site rotation regime	OCP Marine Farm Development Plans Annual lease monitoring
	3	Inadequate feeding of fish	Low x Minor	No	Fish fed with automatic feed system	Automatic Feed System	SP ASOPs 0015.1- 0015.6
	3	Stocking density too high	Low x Major	No	Stocking density kept to <10kg/m ³	Neptune software program alerts requirement to change net size which is fed into weekly Planning Meetings for operational implementation. Stocking density monitored in Fish Talk database	SP Neptune Software Fish Talk
	3	Inadequate water conditions: Temperature and Oxygen levels out of limits	Medium x Major	Yes	Ambient water temperature can vary and effects oxygen levels	Monitoring of temperature and oxygen levels on a daily basis, and addition of oxygen/venturation where required and cessation of feeding	SP ASOP 0015.22, 0015.24, 0060.1

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	3	Fouling of nets reduces water quality in cage	High x Serious	Yes	Fouling will occur and can compromise dissolved oxygen	Monitoring by divers through regular net scoring on every mort dive or net inspection. Scores uploaded daily into Net Wash Planner which is used to schedule in situ net cleaning	OCP Net Wash Planner Report ASOP0005.2.2, ASOP0016.6 ASOP0016.8
	3	Fish diseases effecting the health of the fish or causing mortality	Medium x Major	Yes	Known diseases, eg AGD and other issues could occur. (also refer to 9 Mortality)	Routine fish health monitoring, sampling and testing Veterinary Health Plan	SP AQM0100 ASOP0070
	3	Salmon diseases affecting wild populations	Low x Major	No	Management practices minimise any potential impact on wild fish populations	Tasmanian quarantine regulations Vaccination Programme Veterinary Health Plan Biosecurity Section Effective control of mortalities and blood water	SP AQM0100 ASOP0005.2.2, ASOP0021, ASOP0021.1
	3	Harm to marine mammals	Medium x Critical	Yes	If wildlife is entrapped in nets or equipment then will cause injury or death. Seals can have negative interactions with farm operations and may need to be controlled using non- lethal methods which may be stressful	Cage Set Up Procedures, DPIPWE Predator Control Protocols Regulatory control through DPIPWE Marine Farm Development Plan Management Controls	OCP DPIPWE Protocols and Records ASOPs 0013.1, 0013.4, Marine Farm Development Plans

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	3	Harm to birds through entanglement in aerial netting	Medium x Critical	Yes	Most cages have aerial bird netting. If birds become entangled in these nets then injury or death may result	Entanglement minimised by correct set up of bird nets and allocation of dedicated crew to predator net installation and maintenance. Removal of entangled birds as soon as possible. Regulatory control of bird netting through DPIPWE Marine Farm Development Plan Management Controls	OCP ASOP0013.4 Marine Farm Development Plans
	3	Deformation of nets with current	Low x Major	No	Nets are weighted to maintain cage volume	Cage weighting procedures	SP ASOP0013.4, ASOP0016.3, ASOP0016.4
	3	Deformation of nets with towing	Low x Major	No	Cages weighted for towing and towed at slow speeds	Cage towing procedures	SP ASOP0001
	4	No Hazards Identified	NA	NA	NA	NA	NA
	5	Sabotage of stock or fish feed on the marine lease site	Low x Major	No	Food defence issues are dealt with further in the process. le at Harvesting	Food Defence Plan	SP AQM0140
	6	Sea water temperature and oxygen levels out of limits	Medium x Minor	No	No significant effect. Water oxygen level and temperature is only related to fish welfare.	NA	NA
	6	Fuel spillage	Medium x Major	No	All sites/leases have fuel storage	All fuel storage is bunded and fuel spill kits available Chemical Storage and Handling Procedure	SP AQM0081
	7	Transfer of disease between sites or between stock/year classes	Medium x Major	Yes	There are known issues between sites. Eg Southern Tasmania vs West Tasmania	Veterinary Health Plan Biosecurity Section	SP AQM0100

3 = Animal Health and Welfare 4 = Hygiene

5 = Food Defense 6 = Water Quality

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	8	Excessive mortality from Amoebic Gill Disease (AGD)	High x Critical	Yes	AGD is in the environment and will cause mortality if not treated	Routine gill checking Bathing	OCP ASOP0004, ASOP0004.3, ASOP0070 ASOP0005.2.14
	8	Excessive mortality from Seals	High x Critical	Yes	If seal gets into cage, will result in fish mortality	Predator netting and routine net inspections by divers. Dedicated seal officers and predator net installation and maintenance crew	OCP ASOP 0013.4, 0016.4, 0005.2.3, 0005.2.4 ASOP0005.2.14
	8	Excessive mortality from Toxic algae	Low x Serious	Yes	If toxic algae builds up, then may result in excessive mortality	Algae monitoring and venturation	SP ASOP0052, 0062 ASOP0005.2.14
	8	Excessive mortality from Jelly fish	Low x Serious	Yes	If jelly fish are kept out of cages, then risk is reduced	Mitigation of Jelly fish procedure	SP ASOP0050 ASOP0005.2.14
	8	Excessive mortality from handling Eg bathing/crowding operations	Medium x Serious	Yes	Fish need to be handled and if not done correctly will result in excessive mortality	Fish handling procedures	OCP ASOP 0004, 0004.3, 0018, 0018.1, 0018.4, 0019, 0052, 0070 ASOP0005.2.14
	8	Mortality from other reasons	High x Major	Yes	Background mortality levels are generally low	Mortality Diving SOP	OCP ASOP0005.2.14
	9	Feed waste	Medium x Major	Yes	Feed is used on each marine site and therefore needs controls in place	Automatic feed system to control feed rate so that feed is consumed prior to reaching bottom	SP ASOPs 0015.1- 0015.6

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	9	Fish waste	Medium x Major	Yes	Fish waste is part of the fish farming operations, but is assisted by water current.	Annual lease monitoring and fallowing/site rotation regime	SP Section 3 Marine Farm Development Plans
4 Smolt	1	Contamination with veterinary treatments	Low x Minor	No	Withholding periods are exceeded for all treatments	All treatments are prescribed by the company vet. Veterinary Health Plan	SP AQM0100
	2	No Hazards Identified	NA	NA	NA	NA	NA
	3	Temperature and oxygen levels out of limits during smolt transfer	Low x Critical	Yes	If oxygen level is incorrect, could result in mortality	Oxygen checks are completed as part of the smolt transfer procedures with corrective action specified	OCP ASOP0012, ASOP0012.2
	4	No Hazards Identified	NA	NA	NA	NA	NA
	5	Sabotage of the smolt transfer tanker	Low x Major	No	Food defence issues are dealt with further in the process. le at Harvesting	Food Defence Plan	SP AQM0140
	6	No Hazards Identified	NA	NA	NA	NA	NA
	7	Disease transfer from hatchery site to marine lease. Fish or Vehicle	Medium x Major	Yes	There are known issues between sites. Eg Southern Tasmania vs West Tasmania Or disease issue in hatchery transferred to marine site.	Veterinary Health Plan Biosecurity Section	SP AQM0100 ASOP0012
	8	Excessive mortality due to acclimatisation	Medium x Critical	Yes	When fish transferred from fresh water to salt water, can result in mortality	Salt water challenge test prior to transfers and post transfer dive inspections	OCP ASOP3115, ASOP0005.2.14
	9	No Hazards Identified	NA	NA	NA	NA	NA
5 Oxygen	1	No Hazards Identified	NA	NA	NA	NA	NA
	2	No Hazards Identified	NA	NA	NA	NA	NA

3 = Animal Health and Welfare 4 = Hygiene 5 = Food Defense 6 = Water Quality 9 = Waste

7 = Biosecurity

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HUON	DOCUMENT TITLE	Risk Assessment - Trumpete	er Bay

MANAGEMENT SYSTEM COMPONENT	HAZARD TYPE Refer to List in AQM0008.1	POTENTIAL HAZARDS	HAZARD RATING Probability High Medium Low Major Minor	DOES THIS HAZARD POSE A SIGNIFICANT RISK? Refer to Hazard Rating Chart	JUSTIFICATION FOR DECISION	CONTROL MEASURE (S)	MANAGEMENT PLAN REFERENCE
	3	Failure of Oxygen equipment resulting in inadequate level of oxygen when oxygenation required	Medium x Serious	Yes	If oxygen equipment fails during operations then this could affect fish health and welfare	Oxygen injection and monitoring	OCP ASOP0004.3
	4	No Hazards Identified	NA	NA	NA	NA	NA
	5	No Hazards Identified	NA	NA	NA	NA	NA
	6	No Hazards Identified	NA	NA	NA	NA	NA
	7	No Hazards Identified	NA	NA	NA	NA	NA
	8	No Hazards Identified	NA	NA	NA	NA	NA
	9	No Hazards Identified	NA	NA	NA	NA	NA
6 Fresh Water	1	No Hazards Identified	NA	NA	NA	NA	NA
	2	No Hazards Identified	NA	NA	NA	NA	NA
	3	If salinity of fresh water is not correct, then may result in ineffective bathing treatment	Medium x Major	Yes	If the fresh water treatment is not effective, then fish will continue to suffer from AGD.	Check salinity levels in fresh water prior to bathing	SP ASOP0004.1, ASOP0004.3
	4	No Hazards Identified	NA	NA	NA	NA	NA
	5	Sabotage of fresh water supply	Low x Major	No	Food defence issues are dealt with further in the process. Ie at Harvesting	Food Defence Plan	SP AQM0140
	6	No Hazards Identified	NA	NA	NA	NA	NA
	7	No Hazards Identified	NA	NA	NA	NA	NA
	8	Oxygen level in water or water depth is inadequate	Medium x Serious	Yes	If water depth and oxygen level in incorrect, then this could result in fish mortality during bathing operations	Oxygen injection and monitoring	OCP ASOP 0004.1, 0004.3
	9	No Hazards Identified	NA	NA	NA	NA	NA
7 Receive Feed	1	Feed contaminated with agricultural or veterinary chemicals	Low x Major	No	Feed suppliers are all approved with certified systems etc.	Approved Supplier Program Retention samples of feed Held in secure feed store	SP AQM 0050, 0015.1
	2	No Hazards Identified	NA	NA	NA	NA	NA

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1	DOCUMENT CODE	AQM0022.2			
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HUON	DOCUMENT TITLE	Risk Assessment - Trumpeter Bay			

MANAGEMENT SYSTEM COMPONENT	HAZARD TYPE Refer to List in AQM0008.1	POTENTIAL HAZARDS	HAZARD RATING Probability Severity High Critical Medium Serious Low Major Minor	DOES THIS HAZARD POSE A SIGNIFICANT RISK? Refer to Hazard Rating Chart	JUSTIFICATION FOR DECISION	CONTROL MEASURE (S)	MANAGEMENT PLAN REFERENCE
	3	No Hazards Identified	NA	NA	NA	NA	NA
	4	No Hazards Identified	NA	NA	NA	NA	NA
	5	Sabotage of feed supply during transport from feed supplier	Low x Major	No	Security of feed transport is with Approved transport supplier	Approved Supplier Program	SP AQM0050 and AQM0140
	6	No Hazards Identified	NA	NA	NA	NA	NA
	7	Disease transferred on the vehicle or driver from other sites	Low x Major	No	Transport vehicles could have been on other fish farming sites	Veterinary Health Plan Biosecurity Section	SP AQM0100
	8	No Hazards Identified	NA	NA	NA	NA	NA
	9	No Hazards Identified	NA	NA	NA	NA	NA
8 Store Feed	1	Feed treated with veterinary treatments mixed with non treated feed	Low x Major	No	All feed stored in designated areas and clearly identified	Procedures in place for receival and storage of feed	SP ASOP0015
	2	No Hazards Identified	NA	NA	NA	NA	NA
	3	No Hazards Identified	NA	NA	NA	NA	NA
	4	No Hazards Identified	NA	NA	NA	NA	NA
	5	Sabotage of feed supply during storage	Low x Major	No	Feed stores are locked when site unattended	Procedures in place for receival and storage of feed Food Defence Plan	SP ASOP0015 AQM0140
	6	No Hazards Identified	NA	NA	NA	NA	NA
	7	No Hazards Identified	NA	NA	NA	NA	NA
	8	No Hazards Identified	NA	NA	NA	NA	NA
	9	Incorrect disposal of bulk bags or poly woven bags	Low x Minor	No	Non hazardous materials	Waste Management Procedure	SP ASOP0015
9 Feed Distribution	1	No Hazards Identified	NA	NA	NA	NA	NA
	2	Contamination of the lease site with feed residue	Medium x Major	Yes	Feed is used on each marine site and therefore needs controls in place	Automatic feed system to control feed rate so that feed is consumed prior to reaching bottom. Feed trays in bottom of cage to verify if waste occurring	SP ASOPs 0015.1- 0015.6

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	HUON	DOCUMENT TITLE	Risk Assessment - Trumpeter Bay				

MANAGEMENT SYSTEM COMPONENT	HAZARD TYPE Refer to List in AQM0008.1	POTENTIAL HAZARDS	HAZARD RATING Probability Severity High Critical Medium Serious Low Major Minor	DOES THIS HAZARD POSE A SIGNIFICANT RISK? Refer to Hazard Rating Chart	JUSTIFICATION FOR DECISION	CONTROL MEASURE (S)	MANAGEMENT PLAN REFERENCE
	3	Inadequate feeding of fish	Low x Minor	No	Fish fed with automatic feed system	Automatic Feed System	SP ASOPs 0015.1- 0015.6
	4	No Hazards Identified	NA	NA	NA	NA	NA
	5	No Hazards Identified	NA	NA	NA	NA	NA
	6	No Hazards Identified	NA	NA	NA	NA	NA
	7	No Hazards Identified	NA	NA	NA	NA	NA
	8	No Hazards Identified	NA	NA	NA	NA	NA
	9	No Hazards Identified	NA	NA	NA	NA	NA