

**WESTERN AUSTRALIA
AQUACULTURE INDUSTRY
OCCUPATIONAL HEALTH AND
SAFETY CODE**

2002



**AQUACULTURE COUNCIL OF WESTERN
AUSTRALIA**

CONTENTS

- 1.0 Responsibilities - :Licence Holder/Owner Operator/Employer
- 2.0 Responsibilities – Licence Holder Only
- 3.0 Responsibilities – Manager of the Workplace
- 4.0 Responsibilities – Employees/Contractors
- 5.0 Responsibilities – Property Manager
- 6.0 Emergency Equipment and Procedures
- 7.0 Alcohol and Other Drugs
- 8.0 Weather Conditions
- 9.0 Clothing and footwear for vessel operations
- 10.0 Clothing and footwear for land based activities
- 11.0 Accident Reporting
- 12.0 Infectious Diseases
- 13.0 Skin Cancer/Eye Damage Prevention
- 14.0 Heat Stress
- 15.0 Housekeeping
- 16.0 Workplace Facilities
- 17.0 Plant and equipment safety
- 18.0 Fire Safety
- 19.0 First Aid/Medical
- 20.0 Hazard Analysis
- 21.0 Manual Handling
- 22.0 Vessel Safety
- 23.0 Dinghy and outboard motor craft safety
- 24.0 Tractor Safety
- 25.0 All Terrain Vehicles and Ag Bike Safety
- 26.0 Fork Lifts
- 27.0 Sea Cages
- 28.0 Dams. Ponds and Raceways
- 29.0 Plant
- 30.0 Guards
- 31.0 Electricity
- 32.0 Confined Spaces
- 33.0 Lockout/Tag out
- 34.0 Hazardous Substances
- 35.0 Personal Protective Equipment
- 36.0 Training/Inductions

RESPONSIBILITIES

1.0 LICENCE HOLDER/OWNER OPERATOR/EMPLOYER

1.1 Provide a safe system of work

- 1.1.2 Shall ensure the workplace is safe and properly equipped at all times.
- 1.1.3 Shall ensure the workplace meets all statutory requirements as applicable and as required by the Marine Act, Occupational Safety and Health Act, Fish Resources Management Act.
- 1.1.4 Shall ensure there is an appropriate procedure for reporting and rectifying hazardous equipment/situations at the workplace and that procedure is followed.
- 1.1.5 Shall ensure the work area layout does not place any person at a greater risk of an accident.
- 1.1.6 Shall ensure that all emergency drills are held at regular intervals and employees and contractors are trained in all emergency procedures.
- 1.1.7 Shall ensure that equipment is maintained to manufacturers standards.
- 1.1.8 Shall ensure that in accordance with the Occupational Safety and Health Regulations 1996, a system exists for :
 - Identifying hazards at the workplace that people are likely to be exposed to.
 - Assessing the risk of injury or harm to a person at the workplace that could result from each hazard.
 - Consider ways the risks may be reduced.

1.2 Provide information, instruction, training and supervision

- 1.2.1 Should ensure that all employment contracts are in writing and contain health and safety responsibilities for all employees and contractors.
- 1.2.2 Shall ensure that all employees and contractors are suitably qualified for the tasks required.
- 1.2.3 Shall ensure that where employees and contractors are not qualified for the tasks involved, that appropriate training is provided.
- 1.2.4 Shall ensure that the employee/contractor induction is conducted as per this Code.
- 1.2.5 Shall as far as is practicable, provide a level of supervision of employees and contractors as required depending on the skills and experience of each employee/contractor.
- 1.2.6 Shall as far as is practicable ensure that employees and contractors are aware of where hazards exist at the workplace and instruction is given on safe working practices.

1.2.7 Shall assist the employees/contractors to maintain the machinery and equipment at the workplace.

1.2.8 Shall ensure that accredited industry training programs are followed.

1.3 Consultation and Co-operation

1.3.1 Shall allow employees and contractors to discuss health and safety issues concerning the workplace.

1.3.2 Shall ensure that concerns raised by employees/contractors regarding health and safety at the workplace are dealt with to the satisfaction of all parties.

1.3.3 Shall assist employees/Contractors to become aware of their responsibilities at the workplace.

1.3.4 Shall ensure that employees contractors are involved in health and safety policy development at the workplace.

1.4 Personal Protective Equipment

1.4.1 Shall ensure that where some hazards are not avoidable, personal protective equipment and clothing is provided to all employees/contractors at no cost to the employee /contractor.

1.4.2 Shall ensure that all employees/contractors are trained in the use, care and maintenance of items of protective equipment and clothing at no cost to the employee/contractor.

1.4.3 The contractor shall only be responsible for the provision of and training in the use, care, and maintenance of personal protective equipment where a formal agreement exists.

1.4.4 Shall ensure that specific individual needs of each employee/contractor are considered.

1.5 Reporting of Fatalities, Injuries and Disease

1.5.1 Shall ensure the reporting of all injuries and disease as required by Regulations 2.4 and 2.5 of the Occupational Safety and Health Regulations 1996.

1.5.2 Should ensure a workplace injury and disease reporting system exists at the workplace.

1.6 Hygiene and Amenities

1.6.1 Shall ensure a satisfactory level of cleanliness and hygiene is maintained at the workplace.

- 1.6.2 Shall ensure that reasonable sanitary facilities are provided and easily accessible at the workplace.
- 1.6.3 Shall ensure that facilities for changing of clothes, showering, eating and drinking are provide as applicable.
- 1.6.4 Shall ensure that where employees are required to work in extremes of heat and cold that work practices and facilities are provided.

1.7 Plant and Substances

- 1.7.1 Shall ensure that employees / contractors are not exposed to hazards arising from
 - the use, cleaning, maintenance, transportation and disposal of plant and
 - the use, handling, processing, storage, transportation and disposal of substances.
- 1.7.2 Shall ensure that Material Safety Data Sheets are supplied with all chemical substances.
- 1.7.3 Shall ensure that equipment is used only for the purposes intended, within normal operating requirements.

1.8 Injury or harm to health

- 1.8.1 Shall do all that is reasonably practicable to assist where an employee/contractor is affected by an injury, illness or disease arising from work.

1.9 General duty to all and duties of persons who have control of workplaces

- 1.9.1 Shall ensure as far as is possible that **all** people at the workplace are not exposed to hazards.
- 1.9.2 Shall ensure as far as is reasonably practicable that the means of access and egress are such that persons are not exposed to hazards.

2.0 LICENCE HOLDER ONLY

2.1 Provide a safe system of work

- 2.1.1 Shall assist the manager of the workplace to keep the workplace safe and properly equipped at all times.
- 2.1.2 Shall assist the manager to ensure the workplace meets all statutory requirements as applicable and as required by the Marine Act, Occupational Safety and Health Act and Fish resources Management Act.

- 2.1.3 Shall ensure the manager of the workplace understands and adheres to the procedure for reporting and rectifying hazardous equipment or situations at the workplace.
- 2.1.4 Shall ensure the manager understands the requirement to minimise the risk of an accident from the work area layout.
- 2.1.5 Shall ensure the manager conducts emergency drills at regular intervals and that all employees and contractors are trained in all emergency procedures.
- 2.1.6 Shall ensure the manager maintains equipment to manufacturers standards.
- 2.1.7 Shall ensure the manager understands the requirement to follow the systems for hazard management in accordance with the Occupational Safety and Health Regulations 1996. These are :
 - (a) Identifying hazards at the workplace that people are likely to be exposed to
 - (b) Assessing the risk of injury or harm to a person at the workplace that could result from each hazard.
 - (c) Consider ways the risks may be reduced.

2.2 Provide information, instruction, training and supervision.

- 2.2.1 Should ensure that all employment contracts are in writing and contain health and safety responsibilities for all employees and contractors.
- 2.2.2 Shall ensure the manager engages employees and contractors that are suitably qualified for the tasks required.
- 2.2.3 Shall ensure the manager understands the requirement to provide appropriate training for employees and contractors where they are not suitably qualified for the tasks required.
- 2.2.4 Shall ensure the manager conducts the employee/contractor induction as per this Code.
- 2.2.5 Shall ensure the manager understands the requirement to provide supervision to employees and contractors as appropriate to the level of skills and experience of each person.
- 2.2.6 Shall ensure that the manager provides information to employees and contractors concerning the location of hazards at the workplace and that instruction is given on safe working practices.
- 2.2.7 Shall ensure that as far as is practicable, machinery and equipment is maintained.
- 2.2.8 Shall ensure that accredited industry training programs are followed.

2.3 Consultation and co-operation

- 2.3.1 Shall ensure the manager understands the requirement for safety and health issues to be discussed at the workplace between all parties.

- 2.3.2 Shall ensure the manager addresses safety and health concerns raised by employees/contractors.
- 2.3.3 Shall ensure the manager is aware of the need to inform employees/contractors of their safety and health responsibilities at the workplace.
- 2.3.4 Shall ensure the manager is aware of the need to involve employees/contractors in safety and health policy development for the respective workplaces.

2.4 Personal Protective equipment

- 2.4.1 Shall ensure that where some hazards are not avoidable, personal protective equipment and clothing is provided to all employee/ contractors at no cost to the employee/contractor.
- 2.4.2 Shall ensure that training is provided to employees/contractors in the use, care and maintenance of items of protective equipment and clothing at no cost to the employee/contractor.
- 2.4.3 The employee/contractor shall only be responsible for the provision of and training in the use, care, and maintenance of personal protective equipment where a formal agreement exists.
- 2.4.4 Shall ensure that specific individual needs of each employee/contractor are considered in the issue of personal protective equipment.
- 2.4.5 Shall ensure that the manager of the workplace is aware of all the above and assists where applicable.

2.5 Reporting of Fatalities , Injuries and Disease

- 2.5.1 Shall ensure the reporting of all injuries and disease as required by Regulations 2.4 and 2.5 of the Occupational Safety and Health Regulations 1996.
- 2.5.2 Should ensure a workplace injury and disease reporting system exists at the workplace.
- 2.5.3 Shall ensure the manager of the workplace is aware of and follows the company system for the legal reporting of accidents to WorkSafe and the company reporting system.

2.6 Hygiene and Amenities

- 2.6.1 Shall instruct the manager to maintain a satisfactory level of cleanliness and hygiene at the workplace.
- 2.6.2 Shall ensure that reasonable sanitary facilities are provided and easily accessible at the workplace.

2.6.3 Shall ensure that facilities for changing of clothes, showering, eating and drinking are provided as applicable.

2.6.4 Shall ensure that where employees are required to work in extremes of heat and cold that work practices and facilities are provided.

2.7 Plant and Substances

2.7.1 Shall ensure the manager understands the requirement to prevent employees/contractors from being exposed to hazards arising from

- the use, cleaning, maintenance, transportation and disposal of plant and the use, handling, processing, storage, transportation and disposal of substances.

2.7.2 Shall ensure that the Manager is provided with or has access to Material Safety Data Sheets supplied with all chemical substances.

2.7.3 Shall ensure the manager understands that equipment is used only for the purposes intended, within normal operating requirements.

2.8 Injury or harm to health

2.8.1 Shall instruct the manager to do all that is reasonably practicable to assist where an employee/contractor is affected by an injury, illness or disease arising from work.

2.9 General duty to all and duties of persons who have control of workplaces

2.9.1 Shall ensure the manager understands that as far as is possible that **all** people at the workplace are not exposed to hazards.

2.9.2 Shall ensure as far as is reasonably practicable that the means of access and egress are such that persons are not exposed to hazards.

2.9.3 Shall instruct the manager to ensure that where persons are required to use the means of access and egress to the workplace, that they are not exposed to hazards.

3.0 MANAGER OF THE WORKPLACE

3.1 Provide a safe system of work

3.1.1 Shall maintain the workplace in a safe manner and properly equipped at all times.

3.1.2 Shall as far as is practicable maintain the workplace to meet all statutory requirements as required by the Marine Act, Occupational Safety and Health Act and the Fish Resources Management Act.

- 3.1.3 Shall follow the workplace procedure for reporting and rectifying hazardous equipment or situations.
- 3.1.4 Shall maintain the workplace area layout so that no person is placed at a greater risk of an accident.
- 3.1.5 Shall ensure that all emergency drills are held at regular intervals and employees and contractors are trained in all emergency procedures.
- 3.1.6 Shall ensure that as far as is practicable equipment is maintained to manufacturers standards.
- 3.1.7 Shall follow in accordance with the Occupational Safety and Health Regulations 1996, the system for:
 - (a) Identifying hazards at the workplace that people are likely to be exposed to
 - (b) Assessing the risk of injury or harm to a person at the workplace that could result from each hazard
 - (c) Consider the ways risks may be reduced.

3.2 Provide information, instruction, training and supervision

- 3.2.1 Should ensure that where required all employment contracts are in writing and contain health and safety responsibilities for all employees and contractors.
- 3.2.2 Shall ensure that where applicable, all employees and contractors are suitably qualified for the tasks required.
- 3.2.3 Shall ensure that where employees and contractors are not qualified for the tasks involved, that appropriate training is provided.
- 3.2.4 Shall ensure that the employee/contractor induction is conducted as per this Code.
- 3.2.5 Shall as far as is practicable, provide a level of supervision of employees and contractors as required depending on the skills and experience of each employee/contractor.
- 3.2.6 Shall as far as is practicable ensure that employees and contractors are aware of where hazards exist at the workplace and instruction is given on safe working practices.
- 3.2.7 Shall assist the employees/contractors to maintain the machinery and equipment at the workplace.
- 3.2.8 Shall ensure that accredited industry training programs are followed.

3.3 Consultation and co -operation

- 3.3.1 allow employees and contractors to discuss health and safety issues concerning the workplace.
- 3.3.2 Shall ensure that concerns raised by employees/contractors regarding health and safety at the workplace are dealt with to the satisfaction of all parties.

- 3.3.3 Shall assist employees/contractors to become aware of their responsibilities at the workplace.
- 3.3.4 Shall inform the Licence holder of health and safety issues that concern the licence holder as appropriate.
- 3.3.5 Shall ensure that employees/contractors are involved in health and safety policy development at the workplace.

3.4 Personal Protective Equipment

- 3.4.1 Shall ensure that where some hazards are not avoidable, personal protective equipment and clothing is provided to all employees / contractors at no cost to the employee/contractor.
- 3.4.2 Shall ensure that all employees/contractors are trained in the use, care and maintenance of items of protective equipment and clothing at no cost to the employee/contractor.
- 3.4.3 The contractor shall only be responsible for the provision of and training in the use, care, and maintenance of personal protective equipment where a formal agreement exists.
- 3.4.4 Shall ensure that specific individual needs of each employee/contractor are considered.

3.5 Reporting of Fatalities, Injuries and Disease

- 3.5.1 Shall ensure the reporting of all injuries and disease as required by Regulations 2.4 and 2.5 of the Occupational Safety and Health Regulations 1996.
- 3.5.2 Should ensure a workplace injury and disease reporting system exists at the workplace.
- 3.5.3 Shall inform the licence holder of any serious accidents or near misses that occur at the workplace.

3.6 Hygiene and Amenities

- 3.6.1 Shall ensure a satisfactory level of cleanliness and hygiene is maintained at the workplace.
- 3.6.2 Shall ensure that the sanitary facilities at the workplace are maintained in a safe and hygienic condition .
- 3.6.3 Shall ensure that facilities for changing of clothes showering, eating and drinking are maintained in a safe and hygienic condition.

- 3.6.4 Shall ensure that where employees are required to work in extremes of heat and cold that work practices and facilities are provided.

3.7 Plant and Substances

- 3.7.1 Shall ensure that employees/contractors are not exposed to hazards arising from
- the use, cleaning, maintenance, transportation and disposal of plant and
 - the use, handling, processing, storage, transportation and disposal of substances.
- 3.7.2 Shall ensure that Material Safety Data Sheets are supplied with all chemical substances.
- 3.7.3 Shall ensure that equipment is used only for the purposes intended, within normal operating requirements.

3.8 Injury or harm to health

- 3.8.1 Shall do all that is reasonably practicable to assist where an employee/contractor is affected by an injury, illness or disease arising from work.
- 3.8.2 Shall inform the licence holder of any situation where an employee/contractor is affected by injury, illness or disease.

3.9 General duty to all and duties of persons who have control of workplaces

- 3.9.1 Shall ensure as far as is possible that **all** people at the workplace are not exposed to hazards.
- 3.9.2 Shall ensure as far as is reasonably practicable that the means of access and egress are such that persons are not exposed to hazards.

4.0 EMPLOYEES/CONTRACTORS

4.1 Following Instructions

- 4.1.1 Shall follow instructions given by the manager/employer on the correct maintenance of the workplace.
- 4.1.2 Shall maintain a satisfactory level of hygiene and cleanliness at the workplace at all times.
- 4.1.3 Shall participate in all appropriate training provided at the workplace.
- 4.1.4 Shall participate in the workplace induction process.
- 4.1.5 Shall participate in the emergency drill training.

4.1.6 Shall follow instructions on safe work methods. All workers will recognise their right to refuse to follow unsafe instructions or procedures.

4.1.7 All employees/contractors shall ensure they do not place themselves or others at risk at the workplace by the use of drugs, medication or alcohol.

4.2 Personal protective equipment and clothing

4.2.1 Shall use personal protective equipment when required, and/or as instructed.

4.2.2 Shall maintain all personal protective equipment as per the employment contract.

4.3 No misuse or damage to equipment

4.3.1 Shall not misuse or deliberately damage equipment, including emergency equipment.

4.3.2 Should use equipment for the purposes intended as normal use, within normal operating requirements

4.3.3 Shall not alter machinery (i.e. removal of guarding) unless instructed to by the manager/employer.

4.4 Reporting hazards injury or harm to health

4.4.1 Shall follow instructions for rectifying hazards at the workplace.

4.4.2 Shall report a hazard that he/she observes to the manager/employer as soon as possible.

4.4.3 Shall report to the manager/employer when employees or contractors are affected by an injury, illness or diseases that could affect their capacity to work safely.

4.4.4 Shall report to the manager/employer any personal injury including near misses to themselves and damage to plant or faulty condition to plant and equipment.

4.5 Co-operate with the employer/manager

4.5.1 Shall ensure all employment contracts with the employer/manager are in writing.

4.5.2 Should co-operate with the employer/manager in maintaining where necessary and improving the health and safety at the workplace.

4.5.3 Should where practicable attend industry endorsed training programs.

4.5.4 All employees/contractors shall ensure they are familiar with this Code and understand their responsibilities within.

5.0 PROPERTY MANAGER

5.1 Provide a safe property

- 5.1.1 Shall ensure that the means of access to and egress from the property are as far as is practicable free from hazards to users of the property.
- 5.1.2 Shall ensure that the property area used by persons for their work is as far as is practicable safe and hazards are removed or identified.
- 5.1.3 Shall ensure the property area being used for work by other persons is as far as is practicable safe and properly equipped at all times.
- 5.1.4 Shall ensure the property is maintained or kept in good repair.

5.2 Provide information and instruction

- 5.2.1 Shall ensure the identification and location of hazards that are unable to be managed safely are conveyed to the users of the property by written and/or verbal advice.
- 5.2.2 Shall ensure that any procedures required with respect to hazards are conveyed to the property user.
- 5.2.3 Should ensure that emergency procedures are organised with the property user prior to work commencing.
- 5.2.4 Shall ensure that all written formal safety and health policies and procedures that apply to the property under normal work processes are explained to the user of the property.
- 5.2.5 Shall ensure that the property user understands the requirement to contact the property owner in the event of a serious accident to any person working on the property.
- 5.2.6 Should assist the property user in the event of a serious accident on the property.
- 5.2.7 Should assist the property user in the reporting of serious accidents or diseases as required by Regulations 2.4 and 2.5 of the Occupational Safety and Health Regulations 1996.

6.0 EMERGENCY EQUIPMENT AND PROCEDURES

- 6.1 Each vessel will have the correct emergency equipment provided and readily available at all times , as per the Department of Transport requirements relevant to the vessel.
- 6.2 Crew members will be adequately trained in emergency procedures. The details of the training will be documented.
- 6.3 Good fire prevention procedures must be in place on board the vessel.
- 6.4 Each vessel will conduct regular emergency drills, with new crew members and existing crew ,members at regular intervals.
- 6.5 Emergency drills will be relevant to the vessel size and equipment.
- 6.6 Emergency drills recommended by industry are :
 - man overboard
 - life jackets
 - abandon vessel
- 6.7 All land based processes shall have an emergency procedure for the following:
 - fire fighting
 - first aid
 - ambulance or outside assistance
 - fuel spill
 - chemical accident
 - work accident
- 6.8 Where employees work in isolation from others, there shall be an appropriate emergency procedure for them to obtain immediate assistance or for the provision of first aid.

7.0 ALCOHOL AND OTHER DRUGS

- 7.1 No drugs, other than prescription medicines and first aid items will be carried or used on board any vessel or brought into any land based operations workplace.
- 7.2 When a crew member/employee is likely to be an increased risk to safety, due to alcohol or other drugs, that crew member/employee can be refused entry to the vessel/work operations.
- 7.3 Refusal of entry to the vessel/work operations must be based on the assessment of that crew members ability to do the job they have been engaged to do.
- 7.4 No crew member/employee will arrive for work, or in the course of their work be under the influence of any alcohol or drug substance so as to affect their ability to work in a safe manner.

- 7.5 If a crew member/employee is under the influence of alcohol or drugs and the safety of other employees is at risk, the employer must remove that crew member/employee from the work-process until that crew member/employee is able to work without increased risk to safety.
- 7.6 Any crew member/employee adversely affected by prescription medication may be required to undertake other duties or returned home or to his/her sleeping quarters until that crew member/employee is able to work without increased risk to safety.
- 7.7 No vehicles are to be driven whilst under the influence of any alcohol or drugs.

8.0 WEATHER CONDITIONS

- 8.1 The skipper of the vessel must ensure that the safety of the crew be considered at all times when encountering inclement weather conditions.
- 8.2 If the workplace is within a cyclone area, a Cyclone Contingency Plan must be put in place to deal with both sea and land based operations. For Cyclone Contingency Plan Guidelines see Appendix 1
- 8.3 Following heavy rain, land based operators must have safe guards in place against flooding dangers and fast flowing water.
- 8.4 During electrical storms, employees are to follow enterprise guidelines to avoid lightning strikes.
- 8.5 In extremely hot or cold weather, hypo or hyperthermia is common. Employees should be made aware of early warning signs and should be trained in how to prevent ill effects from occurring.
- 8.6 Due care should be taken when boarding a vessel or climbing ashore from a dinghy in poor weather.
- 8.7 In poor weather conditions when on board a vessel or working on a dam, personal flotation devices should be worn.

9.0 CLOTHING AND FOOTWEAR FOR VESSEL OPERATIONS

- 9.1 The ideal clothing requirements should be :
- light weight boots and/or boots one size to big
 - heavy duty rubber gloves
 - sun visor/hats where required
 - sunscreen where required
 - light weight clothing
 - apron with a quick release mechanism

- 9.2 Appropriate clothing and footwear should be worn when working in the vicinity of machinery on deck, ie. close fitting , no toggles, ties or torn edges.
- 9.3 A wide brimmed hat or cap with a flap should be worn provided it does not comprise the safety of the work being carried out
- 9.4 During day-time deck work sunglasses must be worn that comply with AS/NZS1337 & 1338.2 – wrap-around polaroid glarefoile lenses with an eye protection factor level of 10.

10.0 CLOTHING AND FOOTWEAR FOR LAND BASED ACTIVITES

- 10.1 Where there is a risk of heavy materials falling on the workers feet, safety boots shall be worn.
- 10.2 No loose clothing shall be worn when working in the vicinity of moving machinery parts.
- 10.3 Light weight non slip boots shall be worn in all wet floor areas.
- 10.4 Gloves shall be worn when handling product.
- 10.5 Appropriate sun protection shall be worn when working outdoors, ie, hat, sunscreen, long sleeve shirts.
- 10.6 During day-time outdoor work, appropriate sunglasses must be worn complying with AS/NZS1337 & 1338.2.

11.0 ACCIDENT REPORTING

- 11.1 Licence holders, owner/operators/managers shall ensure that legislative requirements for accident reporting are met. Both WorkSafe WA and the Department of Transport Maritime Division may need to be complied with.
- 11.2 Reporting procedures shall be as listed in Appendix 2.
- 11.3 Each company/business enterprise should have an internal system for accident reporting. An example is shown in Appendix 3.

12.0 INFECTIOUS DISEASES

- 12.1 The following bacteria are zoonoses which affect the health of both fish and man:
- *Leptospira* sp.
 - *Edwardsiella tarda*
 - *Yersinia ruckeri*
 - *Vibrio* spp.

- *Aeromonas hydrophila*
 - *Plesiomonas shigelloides*
 - *Clostridium perfringens* and *C. Botulinum*
 - *Erysipelothrix rhusiopathiae*
 - *Mycobacterium fortitum*, *M. chelonae* and *M. Marinum*
 - Bacteria from processing contamination such as *Salmonella* spp., *Shigella* spp., *Staphylococcus aureus*, *Pseudomonas* spp., and *Streptococcus iniae*
 - Bacteria whose action causes scombroid poisoning and other micro-organisms that produce toxins.
- 12.2 The parasites listed below can also affect the health of both fish and man:
- Nematodes – *Anasakis simplex*, *Pseudoterranova decipiens*, and *Eustrogyliodes* spp.
 - Cestode – *Diphyllobothrium latum*
 - Trematodes – *Clonorchis sinensis*, *Opisthorchis* spp., *Heterophyes heterophyes* and *Nanophyetus salincola*.
 - Protozoa – *Cryptosporidium* sp. And *Giardia* sp.
- 12.3 Always wash hands after working and before eating, drinking or smoking.
- 12.4 Cover cuts and sores with waterproof dressings and/or bandages before working.
- 12.5 If there is an accident where a cut is suffered, immediately wash the cut (soap and water/or antiseptic) and then cover it with a dressing or bandage.
- 12.6 Gloves should be worn when handling animals, product or bait.
- 12.7 Hand washing after administration of first aid is essential.
- 12.8 Personal items such as razors and toothbrushes should not be shared.
- 12.9 Work areas and floors should be kept clean with detergents or disinfectants.
- 12.10 Ensure hygienic disposal of effluent.
- 12.11 Many infectious disease/zoonoses must be reported to WorkSafe WA. Occupational Safety & Health Act - Regulation 2.5(2)

13.0 SKIN CANCER / EYE DAMAGE PREVENTION

- 13.1 Wear a broad brimmed hat or cap with a flap.
- 13.2 Wear a shirt with long sleeves and collar to ensure protection of the back, shoulders and arms, and long trousers to protect the legs.
- 13.3 Use a 15+ broad spectrum sunscreen - layer sunscreen on. Re-apply sun screen at regular intervals and remember noses, lips, ears, bald heads, necks and backs of hands require extra protection.

- 13.4 Where possible wear sunglasses with an eye protection factor 10, polaroid glarefoil lenses with 99.9% glare reduction. To safe guard against cataracts and eye cancer.
- 13.5 Make use of shade areas wherever possible in the high risk hours of 10.00 – 4.00.
- 13.6 Use a tractor with shade protection fitted.
- 13.7 Provide shade areas in shell cleaning and fish processing areas.
- 13.8 See your doctor at the first signs of any skin cancer.

14.0 HEAT STRESS

- 14.1 In hot weather increase ventilation to low temperature by providing fans or install air conditioning. Insulate roof, walls or heat making equipment. Install extraction ventilation around heat producing equipment.
- 14.2 Provide shaded rest areas.
- 14.3 Provide an ample supply of cooled, non-alcoholic drinks and ensure they are readily accessible.
- 14.4 Re-schedule heavier work for cooler times of the day.
- 14.5 If heat stroke occurs:
 - Remove person from heat to a cool area
 - Cool person down with a fine spray of water and fan them
 - Remove excess clothing
 - If conscious, give them cool, but not cold, water to drink.
 - Do not give salt or alcohol.
 - Seek medical assistance.

15.0 HOUSEKEEPING

- 15.1 Floor areas/decks will be kept free of waste and in good order.
- 15.2 Wet floor areas shall have anti slip flooring provided.
- 15.3 Any floor coverings should be firmly fixed to the floor and repaired when required.
- 15.4 Any spills of an oily or greasy nature shall be cleaned up immediately and the waste material disposed of promptly.
- 15.5 All exits, approaches to and areas immediately outside exits shall be kept free from obstruction.
- 15.6 Earth leakage circuit breakers should be fitted to the factory/workshops.

- 15.7 Portable power tools should be unplugged when not in use.
- 15.8 All extension cords shall be in good condition.
- 15.9 All gear to be stowed away on vessels when not in use.
- 15.10 All pesticides, chemicals and other substances to be stored safely.
- 15.11 Equipment switchboxes to be locked to ensure children cannot start machinery.
- 15.12 Ensure lighting is adequate in all areas.
- 15.13 All rubbish to be placed in rubbish bins which must be emptied on a regular basis.
- 15.14 Ensure there is no build up for flammable debris and rubbish on the property.

16.0 WORKPLACE FACILITIES

- 16.1 There shall be reasonable sanitary facilities (toilets, hand washing, and where possible showers) provide at the workplace.
- 16.2 These facilities shall be suitably situated, constructed, designed, enclosed, ventilated and equipped for their purposed with floors, walls and ceilings which can be easily cleaned.
- 16.3 These facilities shall have correct waste disposal and be maintained in a clean and sanitary condition. Toilet paper, soap and hand drying facilities must be provided.
- 16.4 Where required an suitable area for the changing of clothes, showering, eating and drinking, shall be provided.
- 16.5 A supply of cool clean drinking water must be readily available for use for workers at the workplace. It should not be contaminated and the supply must not be inside toilet facilities.
- 16.6 Contaminated water supplies must be marked 'unfit for human consumption'.
- 16.7 Adequate lighting shall be provided having regard to the nature and location of the work being done.

17.0 PLANT AND EQUIPMENT SAFETY

- 17.1 Loose clothing, loose jewellery or long hair must not be worn within one metre of operating plant or equipment. Long hair must be tied back at all times whilst working.
- 17.2 All machinery guards must be in place prior to use of plant.
- 17.3 All power take-off outlets and shafts must be protected by a guard.
- 17.4 Tractors must be fitted with ROPS.

- 17.5 All personal protective equipment supplied shall be worn and signs indicating what equipment is required shall be followed.
- 17.6 Emergency stop buttons on plant shall be within easy reach of the operator during normal operating conditions.
- 17.7 Are earth wires connected correctly.
- 17.8 RCDs must be installed in fuse boxes and portable RCDs used with individual power tools.
- 17.9 Electrical repair work to be carried out by a qualified electrician only.
- 17.10 Use a tagout/lockout procedure when plant is being serviced/maintained/repaired.
- 17.11 Oxyacetylene cylinders should be vertical and secured in place.
- 17.12 Children and visitors must not be permitted into areas of working plant and equipment. Suitable fencing may be required. Keys should be locked away when equipment/machinery is not in use.

18.0 FIRE SAFETY

- 18.1 All extinguishers shall be in place, clearly marked for the type of fire, be in service and tagged. Extinguishers should be checked and maintained at regular intervals.
- 18.2 Sufficient firefighting facilities including water pumps, independent of electrical power supplies shall be provided near all dams and other water storage facilities.
- 18.3 All employees shall receive appropriate training in fire prevention and firefighting strategies.
- 18.4 If fighting a fire, select escape routes before entering a fire zone
- 18.5 Building exits shall be kept clear of all obstructions.
- 18.6 Emergency evacuation procedures must be put in place.
- 18.7 Fire drills for land based operations shall be carried out on a regular basis.
- 18.8 Fire drills on vessels shall be carried out by the skipper on a regular basis.
- 18.9 Materials should be stored to reduce the risk of a fire starting.
- 18.10 Flammable debris and rubbish to be removed regularly to ensure no additional fire hazard exists.
- 18.11 All hazardous goods and substances must be stored correctly to reduce fire risk.
- 18.12 All combustion engines must have adequate exhaust systems or spark arresters.
- 18.13 In rural areas, all employees must know the procedure and contact details for contacting the area fire control officer.

19.0 FIRST AID/MEDICAL

- 19.1 All factory and/or workshop areas shall have a first aid box/cabinet.
- 19.2 All vessels shall carry a first aid kit.
- 19.3 The contents of that box/cabinet should include those items listed in Appendix 4 and must include items that are required for the known hazards in that particular workplace.
- 19.4 The first aid box/cabinet shall be located for easy access by all persons.
- 19.5 The first aid box/cabinet should be clearly labelled.
- 19.6 Every work area shall have an area that is uncontaminated, clean and hygienic where injured employees can be treated .
- 19.7 At all times, there shall be access to a person who has a current first aid qualification for treatment of injured workers. If a trained person is not readily available at the workplace, then they should be readily available by telephone or a 2-way radio.
- 19.8 All employees shall be trained in how to contact the nearest medical service and give directions of the location of the workplace in case of an emergency. A list of emergency contact numbers must be placed near the first aid box.
- 19.9 Records must be kept:
 - Accident Record Form must be completed for every work related injured/harm to health employee.
 - Incident/Medication Record Book must be kept with each first aid box and completed by attending first aider.
 - Workers Compensation Claim Form to be completed by appropriate person.
 - WorkSafe WA (and if at sea, the Department of Transport, Maritime Division) must be notified of accidents and diseases as listed in Regulations 2.4 and 2.5.
- 19.10 An accident investigation must be carried out if the injured employee requires further medical attention, such as hospital treatment. Any fatality or serious injury must be reported to WorkSafe WA immediately and if at sea, to the Department of Transport, Maritime division within 24 hours.

20.0 HAZARD ANALYSIS

Occupational Safety and Health Regulations 1986 - regulation 3.1 states:

A person who at the workplace, is an employer, the main contractor, a self employed person, a person having control of the workplace or a person having control of access to the workplace must, as far as is practicable:-

- (a) Identify each hazard to which a person at the workplace is likely to be exposed;**
- (b) assess the risk of injury or harm to a person resulting from each hazard, if any, identified under paragraph (a); and**
- (c) consider the means by which the risk may be reduced.**

20.1 Each workplace shall establish a hazard analysis program to incorporate the points a, b and c above.

20.2 The methods used to identify workplace hazards include hazard checklists; walk through surveys, analysing unsafe incidents or near misses, accident and injury data, analysing work processes and consulting with employees and contractors.

21.0 MANUAL HANDLING

Definition: manual handling is any activity where a person exerts a force to lift, lower, carry, push pull, move or restrain any object. Manual handling activities include lifting, pushing, pulling, holding, grasping, throwing and carrying.

21.1 The licence holder/owner operator/employer shall ensure that manual handling tasks are assessed in the course of normal operations.

21.2 Assessment of manual handling tasks must consider the following factor:

- do workers have to overreach or reach above shoulder height?
- do workers have to twist while lifting?
- does the object require an awkward grip?
- are the objects being handled sharp edged?
- is the lifting task repetitive?
- is the lifting task done over a long time?
- what is the weight of the object?
- is the lifting in a confined space?
- do the workers have to carry the load over a long distance?

21.3 Methods for reducing the risk of manual handling tasks

- redesign the task considering how and where the job is done,

- assess whether mechanical lifting equipment is necessary
- worker training in lifting techniques.

22.0 VESSEL SAFETY

- 22.1 All vessels shall conform to Department of Transport safety requirements and equipment as appropriate.
- 22.2 Proper lookout to be maintained at all times.
- 22.3 No unnecessary gear left loose in the vessel liable to cause tripping.
- 22.4 During fishing operations that are conducted in hours of darkness, sufficient lighting should be provided to enable crew to work safely.
- 22.5 Adequate footwear should be worn dependant on the deck surface and deck surface debris.
- 22.6 All those on board, should be on guard against crew falling overboard.
- 22.7 The selection of the vessel launching and retrieval site shall be the best available site considering fishing operation requirements, environmental conditions, personnel involved and the location of other land users.
- 22.8 Where vehicles are used to haul vessels, no person will stand behind a vehicle and vessel being reversed.
- 22.9 No person shall stand behind a winch cable used on an electrical winch , in case of the cable snapping.
- 22.10 A safe method of loading the vessel will be employed to prevent overloading.
- 22.11 Tanks or other hatches (especially those flush with the deck) should be closed whenever possible/practical.
- 22.12 In poor weather conditions the skipper and crew working on the deck shall determine the use of a personal flotation device and/or auto inflating jacket.
- 22.12 In poor weather conditions the skipper shall ensure that the crew are adequately watched and the vessel is manoeuvred with additional care.

23.0 DINGHY AND OUTBOARD MOTOR CRAFT SAFETY

- 23.1 The vessel's motor size must comply with the AS 1799.1
- 23.2 Stow fresh water and required safety gear in dinghy/small craft before leaving mooring or unloading from trailer.
- 23.3 Ensure a set of oars/paddles and bail implement on board for emergency use.
- 23.4 Calculate fuel required for trip and store additional fuel safely.
- 23.5 Distribute and secure load prior to starting motor.

- 23.6 Travel at safe speed according to load in dinghy/small craft and water/weather conditions.
- 23.7 Set and retrieve fishing gear in a safe manner to ensure that you do not fall overboard, tilt or sink the vessel. Never transport a load that is too heavy for the vessel.
- 23.8 Always use the correct manual handling techniques to reduce risk of injury.
- 23.9 Distribute and secure load safely in dinghy/small craft.
- 23.10 Transfer load from dinghy/small craft to shore or other vessel in a safe manner.
- 23.11 If working alone you must wear a flotation device.
- 23.12 If working in an isolated area you must leave a trip plan with supervisor or other appropriate person.
- 23.13 Communication facilities must be available on board the vessel and if working in an isolated area.
- 23.14 Employees must receive training in basic outboard motor maintenance, emergency repairs and dinghy/small craft handling.

24.0 TRACTOR SAFETY

24.1 General

- 24.1.1 Read and follow safety procedures in the manufacturers manual.
- 24.1.2 Ensure an approved cab or roll-over protective structure (ROPS) is fitted (See Appendix 5 for details on ROPS and Cabs).
- 24.1.3 You must fit and use a seat belt on tractors with ROPS. (See Appendix 5)
- 24.1.4 If there is a risk from falling objects, fit a fall-on protective structure (FOPS) (see Appendix 5).
- 24.1.5 Where long hours are spent in the tractor, to reduce the risk of back strain, fit a seat with side restraints and a back rest and that has vibration absorbing suspension.
- 24.1.6 Wear hearing protection. Where cabs are fitted hearing protection may still be required.
- 24.1.7 Keep children away from tractors and machinery.
- 24.1.8 Remove starter keys when tractors are not in use.
- 24.1.9 Have an up to date maintenance schedule.
- 24.1.10 Ensure the operator is properly trained for each type of tractor work carried out.
- 24.1.11 Always mount and dismount on the tractors left side to avoid controls, always using the access provided and face towards the drivers seat.

- 24.1.12 When mounting and dismounting, take a firm grip with your hands to avoid falling and avoid clothing entanglement.
- 24.1.13 Never dismount from a moving tractor.
- 24.1.14 Adjust the seat so that all controls are safely and comfortably reached.
- 24.1.15 Keep all guards in place, including the power take-off.
- 24.1.16 Operate the self starter from the operator position only.
- 24.1.17 When crank-starting tractors pull the crank handle upwards – DO NOT push it downwards; and DO NOT curl your thumb around the handle. Ensure brake and gears are safe before attempting to crank start a tractor.
- 24.1.18 If jump-lead starting a tractor ensure it is out of gear and brakes applied.
- 24.1.19 Tractors carrying passengers shall conform to Occupational Safety and Health Regulation 4.44 (7) (See Appendix 6)
- 24.1.20 Be aware of any overhead high tension powerlines which cross the property especially if towing tall machinery or a radio antennae is fitted to the tractor.
- 24.1.21 Each tractor should carry a first aid kit.
- 24.1.22 Ensure there are adequate mirrors to provide all round visibility

24.2 Operating a tractor

- 24.2.1 Wear close fitting clothing.
- 24.2.2 Always sit on the seat when riding on the tractor.
- 24.2.3 Do not run the tractor engine in a confined space.
- 24.2.3 Take short brakes regularly when working long hours.
- 24.2.4 Keep all guards in place.
- 24.2.5 Stop the engine before greasing and refuelling.
- 24.2.6 Drive at speeds slow enough to retain control over unexpected events.
- 24.2.7 Reduce speed before turning or applying brakes.
- 24.2.8 Watch out for ditches, logs, rocks, depressions and embankments.
- 24.2.9 On steep slopes, without a trailed implement, reverse up for greater safety.
- 24.2.10 Engage the clutch gently at all times, especially when going uphill or towing.
- 24.2.11 Use as wide a wheel track as possible on hillsides and sloping ground.
- 24.2.12 Descend slopes cautiously in low gear, using the motor as a brake.
- 24.2.13 Never mount or dismount from a moving tractor.
- 24.2.14 Ensure the park brake is on and operating effectively before dismounting.

24.3 When towing implements

- 24.3.1 Fit attachments according to the manufacturers instructions.
- 24.3.2 Always attach implements to the draw bar or the mounting points provided by the manufacturer.
- 24.3.3 Never alter, modify or raise the height of the draw bar unless provided for by the manufacturer.
- 24.3.4 Regularly check safety pins on towed lift-wing implements, to ensure they are not worn.
- 24.3.5 Ensure all guards on towed implements are in place before operating.
- 24.3.6 Never hitch above the centre link of the rear axle , around the axle housing or to the top link pin.
- 24.3.7 Never adjust or work on implements while they are in motion.
- 24.3.8 Never attach implements unless the power take-off [PTO] shaft is guarded.
- 24.3.8 When parking always lower the three point linkage and towed implement.
- 24.3.9 When reversing tractor to the implement to be attached be aware of any person who may be nearby or helping.
- 24.3.10 Engage the clutch gently when towing.
- 24.3.11 When pulling heavy loads or another vehicle, use reverse gear and pull from a low hitch point at the front of the tractor, this prevents tractor rearing over backwards. When pulling reverse use lowest gear ratio.

24.4 Guarding the Power Take-off [PTO]

- 24.4.1 Ensure PTO shaft, drive and input connections are properly guarded.
- 24.4.2 PTO guards should enclose the entire length of the input shaft from above and on either side. Allow sufficient clearance between guard and tractor parts and PTO to prevent fouling of limbs or clothing.
- 24.4.3 Where guard revolves with the shaft, it should be capable of being stopped by hand.
- 24.4.4 Ensure the control lever is easily accessible.
- 24.4.5 When operating power implements, do not turn too sharply as this will damage PTO guard.
- 24.4.6 If trailing implement requires attention, ensure power drive is disengaged and the tractor engine stopped.

24.5 Obstructions, ditches and steep slopes

- 24.5.1 Beware of striking objects as this could result in tractor overturning.

- 24.5.2 Drive carefully, especially on unfamiliar surfaces.
- 24.5.3 Drive with caution near edges, ditches, embankments or ground depressions – keep away from the edge of trenches and ditches.
- 24.5.4 Back up steep slopes – if the rear wheels slip or spin abandon the attempt.
- 24.5.5 The danger of a tractor overturning on hills and sloping ground is greatly increased, therefore:
 - Engage clutch gently when going forward uphill.
 - Do not park tractor on a steep slope.
 - Descend slopes cautiously with tractor in low gear.
 - For crossing slopes, wheel tracks should be increased for great traction and stability.
 - Abort any operation on a slope if the tractor starts to slip or slide.

24.6 To avoid strain injury

- 24.6.1 Adjust the tractor seat for back support and comfort.
- 24.6.2 When buying a tractor, ensure seating is safe and comfortable.
- 24.6.3 Check seat height, seat depth, back rest height and angle, fore and aft movement, seat tilt, firm padding, partial pivoting (if you have to spend long periods looking behind you) and vibration absorbing suspension.
- 24.6.4 When riding the tractor for long periods, dismount every hour or so and spend 5 or 10 minutes doing something active.
- 24.6.5 Plan for your next tractor to include suitably low steps, hand grips, adequate doorway and cab space and a safe mounting platform.
- 24.6.6 Dismount by climbing down - not jumping down - and use each provided foot and hand hold.

24.7 Tractor Maintenance

- 24.7.1 Routinely adjust brakes, clutches and drives, according to the manual.
- 24.7.2 Ensure steering, exhaust system and brakes are in top condition.
- 24.7.3 Stop the motor before refuelling, servicing or greasing and, if possible, wait until the engine is cold before refuelling.
- 24.7.4 Never remove or replace belts while pulleys are under power.
- 24.7.5 Keep steps and working platforms free of grease and oil to avoid slips and falls.
- 24.7.6 If the engine overheats, allow time for it to cool off before removing the radiator cap.

When jacking a tractor:

- 24.7.7 Jack on a flat surface.

- 24.7.8 Where practicable, avoid working alone.
- 24.7.9 Refer to the manufacturers manual on safe jacking.
- 24.7.10 Where jacking points are not identifiable, jack from the lowest possible point.
- 24.7.11 Use jacks that comply with Australian/New Zealand Standard 'AS NZS 2693 1993 Vehicle Jacks'.
- 24.7.12 Use vehicle stands that comply with Australian Standard 'AS 2538 - 1985 Vehicle Support Stands', and are designed for the load to be suspended.

Blocks and chocks

- 24.7.13 Ensure wooden blocks for jacking are of hardwood, with a surface area that will support the tractor's weight on soft soils.
- 24.7.14 Chock all wheels that will remain on the ground using big wooden chocks at the front and rear of each wheel.
- 24.7.15 Chock all wheels on articulated vehicles to stop them twisting sideways during jacking.
- 24.7.16 Before jacking, apply brakes, place in gear - or automatic park - and switch ignition off.
- 24.7.17 Stay clear of the tractor while operating the jack.

When removing wheels

- 24.7.18 Loosen wheel nuts before the wheel is off the ground, to avoid any movement that could dislodge the tractor.
- 24.7.19 Before removing a tractor tyre from a rim, release all water and air pressure.
- 24.7.20 Use safety equipment and procedures to avoid serious injuries from split rims.
- 24.7.21 Never jack more than one wheel off the ground at a time .
- 24.7.22 If both wheels have to be removed, work on a flat concrete floor in the workshop.
- 24.7.23 When removing rear wheels, ensure the front wheels are immobilised by fixing wedges between axle and body.

24.8 CHILDREN AND PASSENGERS

- 24.8.1 Children and visitors should not be in the workplace, particularly where tractors are kept or are likely to be working.
- 24.8.2 No passengers are allowed to travel on a tractor without specific passenger protection.
- 24.8.3 A passenger may ride on a tractor if it has a ROPS or cab that totally encloses the passenger and is fitted with a safe and secure seat belt and adequate foot rests and hand holds..
- 24.8.4 Exercise extreme caution when operating a tractor or any attached equipment when children are in the area. Clear all-round visibility is essential to avoid children and animals.
- 24.8.5 Never leave the motor of an unattended tractor running.
- 24.8.6 Never leave the tractor in a position where it can roll.
- 24.8.7 Never leave a tractor jacked up in the vicinity of children.
- 24.8.8 Never leave three-point linkage machines or front-end loaders in the raised position.
- 24.8.9 Remove tractor starting keys when not in use.

25.0 ALL TERRAIN VEHICLES [ATVs] & AG BIKE SAFETY

- 25.1 Ensure any attachments are designed for use on an ATV.
- 25.2 Be aware of potential hazards when riding such as rocks, bumps, irrigation pipes and wildlife.
- 25.3 Take extra care when operating a bike on unfamiliar or rough terrain, where possible use familiar tracks.
- 25.4 Do not drive an ATV on a paved or bitumen surface as they are difficult to control on smooth surfaces.
- 25.5 Do not ride an ATV on a public road.
- 25.6 Do not carry a passenger on an ATV.
- 25.7 Do not allow children to operate an ATV without training and appropriate supervision.
- 25.8 Do not attempt stunts, jumps or wheelies on an ATV.
- 25.9 Ride at an appropriate speed for the terrain, experience and the visibility conditions..
- 25.10 An ATV must be safely maintained and used in accordance with the manufacturer's specifications.

25.11 Employees must be trained in the use of an ATV and appropriate protective gear must be worn.

26.0 FORK LIFTS

26.1 All fork lift trucks shall conform to AS 2359.2 – 1995, and shall have an FOPS conforming to AS 2359.1 and a lap type seat belt conforming to AS 2359 Section 1.

26.2 The fork lift shall have guards in place, and all controls shall be labelled.

26.3 A safe system of work procedure shall contain:

- Clearly defined traffic areas
- Speed restrictions
- Mirrors and visual aids at blind corners and obscured hazards
- Loading areas isolated from high traffic areas where applicable
- Fork lift maintenance and reporting procedures
- Parking area restricted to authorised people

26.4 Fork lift trucks can only be driven by persons over the age of 18 who hold a competent training certificate.

26.5 An operators manual shall be kept with the fork lift at all times.

26.6 Never use a fork lift for a job that is not designed to do or lift a load that exceeds the fork lift's capacity.

26.6 Never carry a passenger on a fork lift.

26.7 Ensure that attachments are appropriate for the workplace and the job.

26.8 Ensure the warning device is sounded when going through doorways, around blind corners or starting to reverse.

27.0 SEA CAGES

27.1 Construction and maintenance of installations

27.1.1 All parts of the floating cage unit need to be designed and constructed to provide suitable anchorage, buoyancy, strength and stability.

27.1.2 The design must take into account the likely loads to be imposed on it such as equipment, fish food etc and the effect of wind and waves.

27.1.3 Regular routine inspections and maintenance of the installation must be carried out, preferably once a year and always after a major storm.

27.1.4 Clear written instructions on the operation and maintenance of the installation should be available to all operators.

- 27.1.5 Site supervisors must have ready access to the name and address of installation manufacturer.
- 27.1.6 Floating cage installations must be securely held in position by adequately designed lines, fixing points and anchors or by other suitable means. These should be able to withstand the wave height and tide ranges appropriate to the site. Correct positioning and setting up of moorings is essential.

27.2 Provision of guardrails, foot-rails and working surfaces

- 27.2.1 A suitable and secure walkway should be provided around the exterior of each fish café, recommended width being of at least 600mm, with internal walkways being at least 900mm. Where existing circular cages exist with no walkways, suitable walkways should be fitted.
- 27.2.2 Walkways can be fitted when cages are removed for maintenance, but manufacturers should confirm that the cage has sufficient strength to withstand the additional stress of a walkway.
- 27.2.3 If there is no walkway and the work is carried out from farm boats, employees should not walk on the buoyancy rings. If possible fit a 2m long landing platform at each cage/ring where no walkway exists.
- 27.2.4 Guardrails should be provided along the open edge in order to protect against falls from height or into the water. Guardrails should also be on the inside edge of cage walkways and open edges of gangways, feed or accommodation barges.
- 27.2.5 Guardrails are not required at the outside edge of cage walkways where boat landing takes place.
- 27.2.6 Guardrails should be constructed from wood, metal or other suitable material and should be rigid, smooth and able to withstand the weight of people falling against them. Where necessary guard rails may be made of taut wire or chain, but not rope.
- 27.2.7 Where guardrails on two or more adjacent installations meet each other there should be no dangerous trap points created by wave movement of the cages.
- 27.2.8 Footrails are required on the inside edge of cage walkways, and should be designed to ensure no fish food or water becomes trapped on the walkway.
- 27.2.9 Floors/surfaces need to be free-draining, non-slip and sufficiently firm and continuous to allow safe walking and transport of materials. They should be free of obstructions and splinters, protruding nails, bolts etc. No gaps should exist and any space gaps in a walkway/platform need to be kept below 50mm.
- 27.2.10 Where cages join, any gaps between cages and walkways require protecting to avoid trapping.
- 27.2.12 Boat mooring facilities need to be suitable and secure with mooring eyes positioned so that ropes or cables do not cross walkways.

27.2.13 Stairways and ladders should be sound and properly constructed including the provision of a secure handhold at the top of any stairway which is at an angle of 30 degrees or less from the vertical. Other stairways require a handrail on open sides.

27.3 Safety and rescue equipment

27.3.1 When working over water at any location, at least 2 people need to remain within sight and sound of each other at all times.

27.3.2 A moored boat or life raft must be accessible at all times.

27.3.3 Suitable ladders at appropriate locations are required to enable workers to climb from the water onto the installation. Ladders should extend below the water surface to allow for sound footing and should incorporate a secure handhold at the top.

27.3.4 Equipment such as a boat-hook can be provided to assist rescuers retrieve people from the water.

27.3.5 Where the edge of a perimeter walkway, working platform or jetty is more than 300mm above the water surface a lifeline should be fitted around the exterior to assist a person maintain contact with the installation and gain access to the ladders.

27.3.6 Lifebuoys with a suitable buoyant lifeline of adequate length attached should be available within 50m of any working position where a person could fall into the water. These are not require when a farm boat is provided.

27.3.7 Suitable personal buoyancy equipment should be provided and worn by all on an installation.

27.3.8 Training should be given on the procedures for rescuing people from the water and also on the correct fitting, maintenance and use of lifejackets.

27.4 Lighting, Electricity and Communication

27.4.1 All parts of the installation where work is carried out should be adequately lit by natural or artificial light.

27.4.2 All electrical installations and equipment should be constructed, installed, operated, protected and maintained by a licensed electrician.

27.4.3 Adequate sea cage to shore communication must be provided.

27.4.4 Each cage installation should be provided with flares stored in a waterproof container.

27.4.5 Each enterprise should have a procedure in place to deal with:

- Predatory animals/fish such as sharks, crocodiles and seals.

- Poachers and other uninvited guests.

27.5 Manual Handling/Lifting Operations

- 27.5.1 Feeding of fish must be carried out using the most appropriate mechanical means or manual handling technique available. Pellets should be distributed by air blowers or water cannons if possible. If bait is being used, the enterprise must examine the best way of distributing the feed which does not result in food being manually shovelled by workers from the farm boat. Mechanical means should be utilised wherever possible.
- 27.5.2 Where fixed lifting equipment is provided, it must be securely attached to the structure without affecting the buoyancy or stability of the cage.
- 27.5.3 Lifting equipment must be suitable for the intended use and of adequate strength. It must be positioned/installed to reduce risks from the moving load. Safe working loads must be clearly marked on lifting equipment.
- 27.5.4 Lifting equipment must be examined at least annually. Lifting accessories (chains, slings etc) and any lifting equipment used to lift people must be thoroughly examined at least every 6 months.
- 27.5.5 Records must be maintained of examinations and inspections. These records must be passed on to the new owner if the equipment is sold.

27.6 PPE

- 27.6.1 Flotation devices must be worn whilst working on a sea cage.
- 27.6.2 Suitable gloves and boots must be worn.
- 27.6.3 Dust masks may be required if feedstuffs are dry. Any inhalation risk is increased if medicated feedstuffs are being used.

27.7 Diving

- 27.7.1 Divers must follow procedures XXXX of this Code.

27.8 Navigation markers

- 27.8.1 In tidal waters, marking and lighting shall be according to the Department of Transport's requirements.
- 27.8.2 In non-tidal waters, marker buoys should be provided to indicate obstructions in the water or for other safety reasons. The buoys need to be of a suitable size, brightly coloured and designed and constructed so that navigators are made aware of potential hazards by both day and night.

28.0 DAMS, PONDS AND RACEWAYS

- 28.1 All dams, ponds and raceways should be fenced where they can be accessed by children or visitors.
- 28.2 Safe systems of work must be developed for these areas due to the slippery banks and uneven surfaces.
- 28.3 Suitable jetties and mooring areas must be provided for safe access to vessels and for the loading and unloading of equipment and stock.
- 28.4 Never face a vehicle into the dam when stopped – always park parallel to the dam.
- 28.5 Always advise others of your movements and plans when going to dams to feed or harvest.
- 28.6 When pulling or setting traps always maintain a balanced footing.
- 28.7 Always lift traps, containers or materials in the correct manner:
 - Follow the assessment listed under point 20.0 Manual Handling.
 - Avoid unnecessary bending, twisting and reaching
 - Lift efficiently and rhythmically
 - Minimise bending of the lower back
 - Knees bent but not at right angles
 - Take secure grip of object being handled, preferably with a power grip using the whole hand, minimising the use of finger grip only
 - Pull the load close to the body
 - Lift slowly, smoothly and without jerking
 - Vary heavy handling tasks with lighter work
 - Wherever possible, lift with the assistance of a colleague.
- 28.8 Always disperse feed in a suitable manner without lifting and twisting.
- 28.9 Safety procedures must be in place for members of the public who are recreational fishing in dams or ponds.
- 28.10 Care must be taken when walking on raceway walls.
- 28.11 Electrical power tools must not be used in the vicinity of any dam, pond or raceway.
- 28.12 Workers should be aware of the possibility of hydrogen sulphide gas coming from the pond bottom which may cause unconsciousness and resultant possible drowning
- 28.13 Any diving carried out on the dam must be by an experienced and fully trained diver using the correct SCUBA equipment or kink resistant hose if SSBA equipment is used. All equipment must be correctly maintained. All diving must be supervised by a qualified and experienced person.
- 28.14 Do not use pesticides or herbicides in any area surrounding the dam or pond to avoid contamination of water.

29.0 PLANT

- 29.1 All plant must have been assessed by a process of risk management to reduce/eliminate hazards.
- 29.2 Modifying plant from the original design of plant increases the risk of injury by creating new hazards and will require a new risk assessment.
- 29.3 Never modify safety features on plant.
- 29.4 Plant/machinery operators must be trained in the use of the equipment and where appropriate licensed.
- 29.5 Emergency stop buttons must be in reach of the operator at all times.
- 29.6 Ensure guards protect the operator from all hot parts, moving parts and wheels.
- 29.7 Metal gloves must be worn if using an open blade band saw during fish processing.
- 29.8 Use a lockout and/or tag out system when adjusting, unclogging or servicing/repairing plant.
- 29.9 Appropriate personal protective equipment/clothing must be available for plant/machinery operators.
- 29.10 Aquaculture processing plant employees must wear eye protection when handling fish.

30.0 GUARDS

- 30.1 Guards must be provided when there is an identified risk of an employee coming into contact with machinery and plant with hot parts, moving parts, sharp parts and wheels.
- 30.2 Where practicable interlocking guards should be used.
- 30.3 If an interlocking guard is to be practicable, the guard inspection door or cover must be clearly labelled with instructions to isolate the equipment before the guard is removed.
- 30.4 Guards must always be replaced after maintenance and before going back into service.
- 30.5 On some occasions the guarding utilised will be enclosures or fencing.
- 30.6 The size of the mesh on the guard/barrier should be sufficiently small enough to prevent any body part reaching the machinery.
- 30.7 Guards must be provided on the following types of plant:

- Any rotating shaft including joints, coupling, shaft ends and all forms of gearing.
- Run-on point of any belt, chain or cable.
- Projections on rotating parts.
- Pulleys & flywheels.
- Crushing and shearing points.
- Ground wheels and track gear which are adjacent to the operator's position.
- Rotating knives, blades, tines or similar parts of power-driven plant.
- Any component which cuts, grinds, pulps, crushes, breaks or pulverises.
- Any component which ejects foreign matter which are likely to cause injury due to speed or size.
- Any components where surface temperature exceeds 120 degrees C in normal operation
- Material hoppers, bins or chutes
- Power take-offs and power take-off shafts
- Implement power input connections.

31.0 ELECTRICITY

- 31.1 All hand held power tools and appliances must be connected through an RCD.
- 31.2 Only use an licensed electrician for power alterations and/or repairs.
- 31.3 Ensure equipment is grounded/earthed at all times unless it is double insulated.
- 31.4 Ensure wiring, equipment, leads and plugs are kept in good repair. Check prior to using the equipment.
- 31.5 Hand held power tools, leads and plus should be tagged for maintenance checking every 3 months.
- 31.6 Do not use electrical equipment that has damaged casing or wiring.
- 31.7 All wires around ponds and dams should be buried underground and encased in metal conduit and/or PVC piping.
- 31.8 Waterproof outlets and fittings must be used in wet areas and outside.
- 31.9 All pond workers must leave the pond before a newly installed aerator is tested.
- 31.10 When workers are working in the pond electrical power to aerators must be switched off.
- 31.11 Ensure that tall items, or items being lifted by fork-lifts/cranes/cherry pickers etc are kept well clear of overhead power lines, by at least 1 metre. They do not have to be touching the line to cause electrocution.
- 31.12 Always check the location of power lines before commencing work.
- 31.13 Always check plans and records of underground powerlines prior to digging/earthworks.

- 31.14 Never stack items or park machinery under power lines.
- 31.15 Have an observer check your position when working close to overhead power lines.
- 31.16 When replacing a fuse wire ensure it is the correct rating for the circuit.

32.0 CONFINED SPACES

- 32.1 A confined space is defined as a space of any volume which:
- Is not intended as a regular workplace
 - Has restricted means of entry and exit
 - May have inadequate ventilation and/or an atmosphere which is either contaminated or oxygen –deficient
 - Is at atmospheric pressure during occupancy.
- 32.2 Occupational Safety & Health Regulations – Division 8 must be followed when working in a confined space, and AS 2865 must be complied with.
- 32.3 Prior to any person entering a confined space, atmospheric testing and monitoring must be carried out to identify hazards and risk assessment.
- 32.4 A Permit to Work must be completed prior to working in the confined space (Appendix 7).
- 32.5 Only persons trained in working in a confined space may do so.
- 32.6 The confined space must be withdrawn from service prior to entry and isolated, de-energised and locked out.
- 32.7 Cleaning and purging of the confined space must be carried out prior to entry to remove hazards.
- 32.8 Exhaust extraction and ventilation of the confined space must in place prior to entering.
- 32.9 A stand-by person must be stationed at the entrance when there is a possibility of:
- Unsafe level of oxygen
 - Atmospheric contaminants with concentrations above the exposure standards
 - Risk of explosion or fire
 - Risk of entrapment or engulfment
 - Conditions outside of the confined space threaten the safety of the people inside.
- 32.10 Suitable personal protective equipment must be provided and this may include respirators and harnesses and lines.
- 32.11 Rescue and first aid procedures must be in place and equipment at hand.
- 32.12 Never enter a confined space to rescue a person unless you are wearing self contained breathing apparatus and/or you have been trained in this procedure.

- 32.13 A confined space must be checked to ensure no personnel or tools remain in the space prior to putting back into service.

33.0 LOCKOUT/TAG OUT

- 33.1 Personal Danger Tags are to be used when work is being carried out on a particular piece of machinery or equipment. It is a red and black danger tag, and should be completed before being attached by the person who is carrying out the work. to the main isolating switch or valve.
- 33.2 Only the person who attached the Danger Tag may remove the tag at completion of the work. No other person may remove it.
- 33.3 If possible, the system should also be locked out to ensure complete isolation. If more than one person is working on that piece of equipment, each person must attach their own lock, and keep the key with them. Again, only the person fitting the lock may remove it.
- 33.4 When isolating a piece of equipment it is essential to de-energise the complete system, and where necessary to manually chock any moving parts.
- 33.5 Out of Service Tags are to be used when a piece of equipment is out of service for repairs and alterations. The tag must be completed prior to affixing to item.
- 33.6 A supervisor may remove an Out of Service Tag if the situation has been assessed as safe to do so.

34.0 HAZARDOUS SUBSTANCES

- 34.1 Ensure that a Material Safety Data Sheet [MSDS] is available for every chemical and hazardous substance kept on the premises.
- 34.2 Ensure that all hazardous substances are stored according to the MSDS and the Dangerous Goods Act, and inaccessible by children and/or visitors. All containers must be labelled. The storage area must be well ventilated, free from direct sunlight and carry notices to indicate flammable contents.
- 34.3 Ensure that all substances are decanted and/or diluted according to the suppliers instructions.
- 34.4 Ensure the first aid kit contains the correct antidote for each substance, and that a readily supply of water is available when using chemicals to enable washing off of chemicals or flushing out chemicals from the eyes.
- 34.5 Ensure that all substances are handled in a safe manner and by following the MSDS.
- 34.6 Ensure that substances and empty containers are disposed of in a safe manner.

- 34.7 Ensure that correct personal protective equipment and clothing is used at all times when handling/using hazardous substances, the MSDS contains PPE requirement information.
- 34.8 If the workplace uses shrimp preservatives – sodium metabisulphite, ensure workers are aware of the dangers when dry sodium metabisulphite is mixed with water and acid it can produce sulfur dioxide which can be fatal.
- 34.9 Only approved chemicals should be used in aquaculture.
- 34.10 Training must be given to all employees working with both veterinary or agricultural chemicals.
- 34.11 Never store chemicals in a food or drink container. All containers must be correctly labelled.
- 34.12 Flammable goods must be stored at a safe distance from any running engine or naked flame.
- 34.13 Gas fuels should only be handled by qualified persons, identified by a certificate of competency.
- 34.14 Liquid petroleum gas cylinders must be tested every ten years.
- 34.15 All gas cylinders must be handled/transported:
- Carried in an upright position
 - Well secured during transportation
 - Not tampered with at either the cylinder or valve level
 - Located a minimum of 20 metres from a source of ignition if they are thought to be leaking from the safety valve
 - Fixed, when empty, if there is a belief that there may be a fault
 - Kept away from source of ignition or heat
 - Safety valves and gauges are kept free of grease
 - Secured to a trolley at all times
 - When free standing, must be held in place by chainage to ensure cylinder cannot fall over.
- 34.16 All pressure gauges and supply and applicator hoses must be checked before each usage.
- 34.17 Do not store hazardous goods in an area liable to flood.
- 34.18 Appropriate fire extinguishers and fire fighting equipment must be situated near the storage area.

35.0 PERSONAL PROTECTIVE EQUIPMENT

- 35.1 Personal protective clothing and equipment must comply with relevant Australian Standards:
- Safety Helmet AS 1801

- Eye Protection AS/NZS 1337 & AS/NZS 1338
- Gloves AS 2161
- Footwear AS/NZS 2210
- Skin protection (sunscreen) AS/NZS 2604
- Clothing to protect skin against Burns by heat/fire As 2375
- Clothing to protect skin against Toxic/volatile chemicals AS 3765

- 35.2 Suitable footwear should be worn at all times, never wear thongs or sandals.
- 35.3 Appropriate personal protective equipment must be worn if work procedure states so. Gloves must be worn when handling chemicals and hazardous substances.
- 35.4 Hearing protection must be worn when noise levels exceed the prescribed limit.
- 35.5 All employees must be trained in the selection, use and maintenance of personal protective equipment and clothing.
- 35.6 All personal protective equipment/clothing must be checked regularly for damage and replaced if necessary. All equipment/clothing must be maintained and cleaned regularly.
- 35.7 All items of protective clothing and equipment shall be stored in bags in a clean dry place as close to the work area as practicable.
- 35.8 Respiratory protection shall be stored in a sealed bag when not in use.

36.0 TRAINING/INDUCTIONS

- 36.1 All new employees will receive a safety induction prior to commencing work. The induction should include:
- General workplace instructions
 - Safety policies and procedures of the workplace
 - Hazardous work processes/area identification and advice
 - Reporting of hazards procedure
 - Emergency evacuation and first aid facilities
 - Fire fighting procedure
 - Personal protective equipment/clothing
 - Procedures for reporting accidents/illness and emergencies
 - Safety Representatives/Committee (if applicable)
 - Issue Resolution
- 36.2 On the job training must be carried out by a supervisor, leading hand or vessel skipper.
- 36.3 Training must be carried out on the introduction of new plant/equipment and/or a new work process.

- 36.4 Certificates/licenses must remain current.
- 36.5 Records must be kept of training undertaken.