



NSW Food Authority

safer food, clearer choices

Food safety program for wild harvest of shellfish

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Commitment to food safety

All personnel involved in the production, harvesting and treatment of shellfish by

(Business name) _____

are committed to:

- 1) producing shellfish in accordance with the NSW Shellfish Program, and
- 2) maintaining a food safety program that
 - a) complies with requirements of the
 - *Food Act 2003* (NSW)
 - Food Regulation 2010
 - Food Standards Code
 - *NSW Shellfish Industry Manual*, and
 - b) enables the end product to be of the highest possible standard.

Each page of this food safety program has been reviewed by the licensee and current activities are accurately reflected.

Signed _____

Date _____

Name _____

Position _____

Food safety program team

The team responsible for maintaining the food safety program, analysing and improving procedures and implementing effective controls to manage food safety risks is:

Team leader: _____ Position: _____

Team member: _____ Position: _____

Team member: _____ Position: _____

Team member: _____ Position: _____

Scope

This food safety program covers all activities, procedures and hygiene controls used in the harvesting, dry storage, packaging, transport and delivery of wild harvest shellfish to co-operative.

The program has been prepared in accordance with the principles and guidelines in the Food Standards Code and the Food Regulation 2010.

Note: If product is being wet stored the Wet storage food safety plan must also be implemented.

Purpose

The purpose of this food safety program is to ensure that all shellfish harvesters/farmers in this food business are aware of the legal requirements they must meet when operating their business.

Procedures outlined in this food safety program have been developed to certify that all shellfish sold are safe for consumption by customers.

Product descriptions and intended use

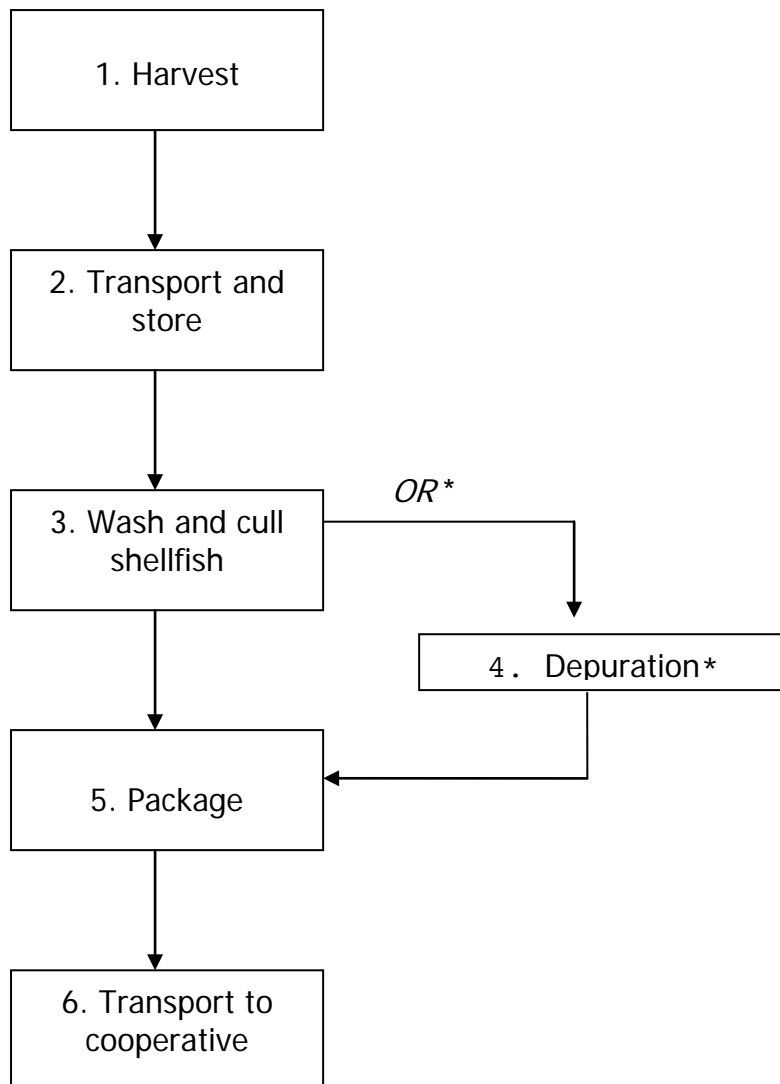
Common products

Product name	Pipi (<i>Donax deltoids</i>) Surf Clam (<i>Dosinia caeulea</i>) Blue Mussel (<i>Mytilus edulis</i>)	Sydney cockle (<i>Anadara trapezius</i>) Blood cockle (<i>Anadara granosa</i>)
Form	Unopened live product	
Packaging	Clean waxed cardboard boxes Clean fish boxes Food grade bags	
Labelling	In accordance with the NSW Shellfish Program	
Storage and transport	All wild harvested shellfish After depuration / harvest are placed at less than 10°C within 24 hours	
Intended use	To be eaten raw or lightly cooked	
Consumer	General consumption	

Other products (*complete or delete as required*)

Product name	
Form	
Packaging	
Labelling	
Storage and transport	
Intended use	
Consumer	

Flow diagram: Wild shellfish harvest



* If depuration of your product is required please refer to the *Food Safety Program for Farmed Shellfish* depuration components.

Depuration of product is required when harvesting from conditionally restricted harvest areas.

Hazard analysis worksheets

Product: Wild harvested shellfish

Process step	Hazard	Control measure	CCP decision
1. Harvest	Microbial contamination and biotoxin contamination	Check that area open for harvest Follow Shellfish Program requirements and procedures for the harvest area	Yes
2. Transport and storage	i) Growth of microorganisms ii) Contamination from outside sources	i) Proper storage (all wild shellfish placed at less than 10°C within 24 hours) ii) Pest control iii) Stored off floor, or in dry area, or in impervious container	Yes
3. Wash and cull	i) Contamination from dead or sick shellfish ii) Contamination from wash water	i) Remove dead or sick shellfish ii) Use potable water under high pressure to prevent shellstock opening during wash process	No No
4. Depuration process	Ineffective depuration resulting in the presence of microorganisms in excessive numbers after depuration	Load shellfish no more than 8cm deep in crate. Visual inspection of plant operation and monitoring of water salinity and temperature—adjusting as necessary UV lamp replaced in accordance with specifications Depuration conducted for 36 hours	Yes
5. Package	Contamination from packaging material.	Use clean packaging material. Closed containers with drainage holes	No
6. Transport	i) Growth of microorganisms ii) Contamination from outside sources	i) Proper storage (all wild shellfish placed at less than 10°C within 24 hours) ii) Pest control	Yes

Hazard audit tables

Process step	Hazard(s)	Control measure	CCPs	Critical limits	Monitoring procedures	Corrective actions	Records
Harvest	Presence of excessive numbers of pathogenic microorganisms and biotoxins	Harvest only when area is open for harvest Follow Shellfish Program procedures	Yes	Area open. Advice via the Local Coordinator or NSW Program Manager	What: Area status How: Contact Local Coordinator or NSW Program Manager When: Prior to harvest Who: (insert name)	No harvest when area is closed. If area is closed during harvest or retrospectively closed, harvest will cease and shellfish returned to water	<i>Product Record Book</i> – Harvest section
Storage and transport	Growth of microorganisms	Storage time and temperature	Yes	Storage after harvest All wild shellfish placed at <10°C within 24 hours	What: Time and temperature How: Thermometer and clock When: 1. End of depuration, then 2. Twice daily if stored for more than 12 hours Who: (insert name)	Cool product immediately	<i>Product Record Book</i> entry at the end of the depuration process, and then <i>Temperature Log Sheet</i>
Depuration process	Ineffective depuration resulting in the presence of microorganisms in excessive numbers after depuration	Comply with <i>NSW Shellfish Industry Manual</i>	Yes	Product must be depurated for 36 hours. Comply with <i>NSW Shellfish Industry Manual</i>	What: Depuration process How: Visual inspection, monitor temperature and salinity, correct depuration time When: Start and end of process and otherwise as required Who: (insert name)	Shellfish must be returned to water	<i>Product Record Book</i> – Depuration section

1. Maintenance program

It is our responsibility to ensure that all premises and equipment used to produce shellfish comply with the requirements outlined in the Food Standards Code, Section 3.2.2.

To ensure that the premises comply, we complete the following activities:

- Conduct regular inspections of the premises and all equipment
- Identify any issues that may require repair to ensure that product safety is not affected
- Schedule repairs—all issues scheduled for repair are documented and provided to NSW Food Authority staff when requested

Any issues that directly effect food safety are repaired or rectified as soon as possible.

2. Hygiene and sanitation program

All equipment that is used in connection with shellfish harvesting storage and transport activities is cleaned and maintained in an acceptable condition at all times.

All buildings and sheds are maintained in a tidy and clean condition at all times. All waste and other materials no longer required are removed from these areas.

Areas of high importance that are cleaned regularly include:

- **Shellfish baskets**
Cleaned every time they are used.
- **Transport vehicles**
Cleaned every time they are used and maintained in a satisfactory manner.

Cleaning is sufficient that it ensures there is no contamination between different batches of shellfish and the outside environment.

3. Process control

3.1 Shellfish harvesting

Harvesting of shellfish is strictly controlled to ensure that a number of food safety requirements are complied with. Requirements include:

- **Harvest area must be open** – All shellfish that are harvested come from a harvest area that is in the 'OPEN' status. Information concerning the status of each harvest area is obtained from the Area Coordinator or the NSW Shellfish Program.
- **Shellfish must not be co-mingled** – A batch of shellfish harvested for sale are harvested from ONE identified harvest area on the same date. Shellfish harvested from different harvest areas or on different dates are recorded as separate batches to ensure that traceability is maintained.
- **Shellfish is washed prior to depuration or sale** – This washing is completed during the harvest process when the shellfish are on the lease. If this is not possible, shellfish are washed at the depot. This prevents contaminants entering the depuration process and later at processing premises.

3.2 Direct harvest

All shellfish that are harvested for the purpose of direct sale are classified as direct harvest shellfish. Shellfish do not require depuration, but must:

- be harvested from areas that have been classified as 'Approved' and in the 'OPEN' status, and
- are washed before sale to remove excessive traces of dirt, mud and other matter.

3.3 Dry storage

All shellfish after harvest are stored off the floor in a clean dry area and protected from contamination and direct sunlight.

All wild harvest shellfish are stored below 10°C within 24 hours of harvest.

3.4 Washing of shellfish

Shellfish are washed vigorously with potable water ensuring maximum removal of sediments and other debris.

3.5 Packaging

Clean food grade packaging is used.

Packaging materials are stored in a clean dry tidy area, free from dust or other contamination. All packaging material is examined for cleanliness prior to use.

List of packaging material used

Type of packaging	Supplier

3.6 Temperature monitoring

- Prior to taking the temperature, the probe is:
 - checked to ensure it is clean. If not, it is cleaned with warm water and a mild detergent and dried with a clean cloth,
 - when clean, sanitised using an alcohol swab or hot water at >77°C, and
 - allowed to air dry without touching anything.
- The temperature of the shellfish is taken by placing the thermometer within a batch of shellfish and allowing it to stabilise for one minute before reading the temperature.
- After each temperature measurement the probe is cleaned and re-sanitise as above.

After use the probe is cleaned and stored in a safe and clean area

4. Product and water testing

The NSW Food Authority has implemented a testing program for shellfish to confirm that all product being sold in NSW is safe for human consumption.

These testing requirements are always completed by all licensed shellfish farmers in order for a licence to be issued. These requirements are:

- Wild shellfish collected from an **Approved harvest area** may require testing as per direction from the Authority
- Wild shellfish collected from a **Restricted harvest area** must undergo post depuration testing as set out in the *NSW Shellfish Industry Manual*.
- Water used for wet storage must be tested in accordance with the *NSW Shellfish Industry Manual* and *Food Safety Program for Wet Storage*.

4.1 Sample requirements

All shellfish sent for analysis are shellfish that are ready for sale. The purpose of product testing is to ensure that the harvesting and/or depuration process has produced shellfish that are safe for human consumption.

The following procedures are **not permitted** when taking samples for analysis:

- Samples cannot be depurated if the remaining shellfish are direct harvest,
- A sample of shellfish cannot be harvested and depurated solely for the product test, and
- All samples must be taken from a batch of shellfish ready for sale.

This business ensures that the samples they send meet the laboratory's minimum sample size requirements. To determine how many shellfish must be sent for analysis, a team member contacts the laboratory responsible for analysing the shellfish sample.

4.2 Testing failures

In the event that the first test conducted on a batch of shellfish returns a positive result of more than 7cfu/grams of *E.coli*, the shellfish are always retrieved immediately.

In the event that a product test returns a positive result for *E.coli* above 2.3cfu/gram (but below 7cfu/gram), another four samples may be taken from the same batch of shellfish that returned the elevated result. These additional four samples must be tested immediately:

- If the results for these four samples are less than 2.3cfu/gram *E.coli*, the product does not need to be retrieved, or
- If one, or more, of the four samples returns a result over 2.3cfu/grams of *E.coli*, the shellfish must be retrieved.

If no further product tests are conducted by the business, all affected product must always be retrieved.

4.3 Notification of failures

When a failed test result is received from the laboratory, the NSW Food Authority must be notified by the business within 24 hours. This notification is given to staff at the NSW Shellfish Program. NSW Shellfish Program staff will then advise you on what actions can be taken, either through further testing or recalling product.

5. Labelling

All shellfish sold must always comply with labelling requirements set out in the *NSW Shellfish Industry Manual*. These requirements are in place to ensure all product can be effectively identified and traced in the event of a recall being required.

Labelling information must include the following:

- The name and address of the seafood business authorised including country of origin;
- A unique identifier of the batch of seafood (eg Product Record number);
- The name of the harvest area from which the shellfish were harvested;
- The date of harvest;
- The species and quantity of shellfish; and
- A statement indicating the conditions under which the shellfish should be stored.

Information is always clearly marked or attached to the shellfish bags/boxes and is always legible.

All wholesale customers are recorded in the *Product Record Book* to ensure that traceability for all wholesale shellfish is possible. This recording always states the business name and the quantity of shellfish they received.

6. Transport and storage

All shellfish transported or stored for sale comply with the following temperature requirements:

- All wild harvested shellfish are always stored at less than 10°C within 24 hours of harvest or depuration.

All shellfish are always transported or stored in a sealed, clean container to limit the risk of contamination.

7. Calibration

All equipment used at the premises is calibrated and maintained in working order.

7.1 Thermometer calibration

Hand-held thermometers are always calibrated every 12 months by:

- Ensuring thermometer is at ambient room temperature,
- Fill a small container with crushed ice made from potable water (eg tap water) and adding a small amount of water to ice. Tip off any excess water,
- Place thermometer in the centre of the container ensuring probe is in contact with ice;
- Allow thermometer to reach a stable reading (approx 10 min), and
 - If the thermometer is accurate it should read 0°C, or
 - If the temperature is more or less than 0°C. (eg +1°C or -1°C, etc), the difference is noted in the temperature reading and any such difference when reading a temperature for monitoring purposes is allowed for. It is recommended that thermometers with a deviation of more than 1°C should be discarded or returned to the manufacturer.

7.2 Chiller/Freezer gauges

Once the handheld thermometer is calibrated it can also be used to check the accuracy of any temperature gauges on equipment such as coolrooms and freezer. This should be done at least 6 monthly and can be done by:

- Placing the thermometer in the coolroom/freezer for at least 5 minutes (making sure not to open the door during this period).
- After this period, read the temperature on the thermometer (taking into account any difference noted during the calibration of the handheld thermometer).
- Read the temperature on the gauge and determine any difference between the handheld thermometer reading and the gauge, as above.

8. Staff training

All staff are trained to enable them to perform their job safely and competently. Training is conducted internally or by an external organisation.

All staff are trained in:

- personal hygiene,
- food handling procedures, and
- cleaning and sanitation for applicable staff.

Staff training is recorded in the staff training matrix in the records diary.

Personal hygiene practices

All staff are given information on good personal hygiene practice and know how to wash their hands properly.

Food handling procedures

All staff are given training and shown good food handling practices relevant to their job.

Demonstrate to any new staff how they should perform their duties to ensure good food handling procedures are followed.

Cleaning and sanitation procedures

All staff are given training on how to clean and sanitise the equipment they use. This includes:

- correct storage and handling of chemicals,
- correct make up of the chemicals, and
- procedures for cleaning.

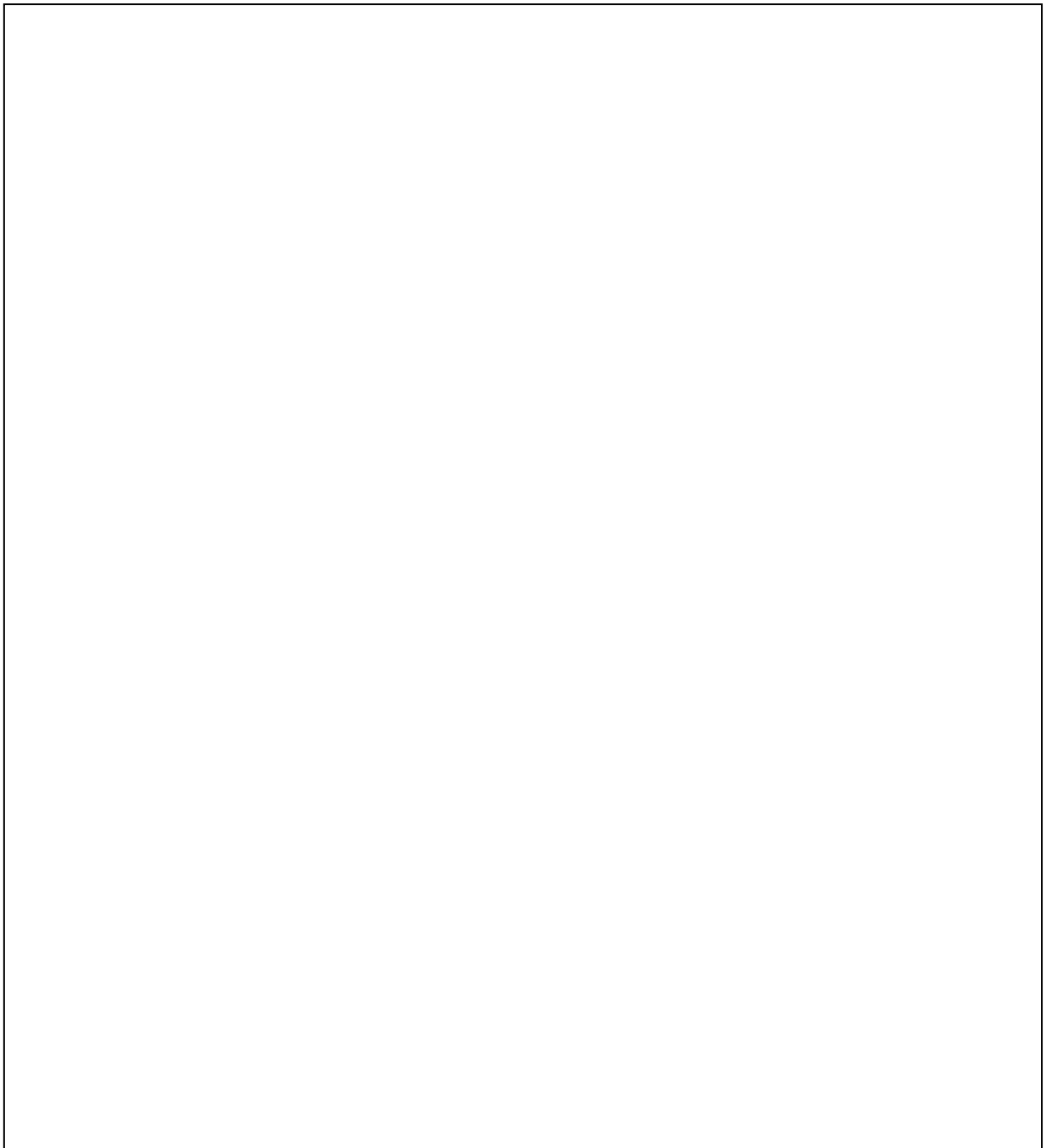
10. Pest control

Animals and pests including insects and rodents are always excluded from the premises. Any evidence of pests is recorded and action taken immediately to treat the premises.

All premises have a system of baits surrounding buildings and sheds at all times to ensure that there is some protection from pests.

The location of all rodent and insect bait stations located within the premises is identified on a floor plan. The frequency at which these baits are inspected and replaced is also recorded on this floor plan.

In the space below, the outline of this premises is provided with marks where bait stations are located.



No chemicals are permitted to be used in depuration plant rooms or where they can come into contact with product.

All chemicals used for pest control are suitable for use in food premises and are stored away from food handling areas.

All chemicals used are listed below:

Chemical used	Date placed	Location	Signature	Comments

11. Internal audit

An internal audit of this manual is conducted every 12 months. This is to ensure that procedures and practices used at the business are being controlled adequately according to what is documented in this manual and in the records associated with this manual.

Any corrective actions or non-conformities are brought to the attention of staff in charge of recording or performing these actions.

12. Product retrieval

Product retrievals are carried out by the business that voluntarily retrieves any sold product from a customer.

This process may be carried out for a number of reasons:

- Product test results do not comply with NSW Food Authority requirements (result exceeds the 2.3cfu/gram *E.coli*). Further testing may be conducted on this product to validate that it meets food safety requirements but many farmers choose to retrieve any affected product to avoid a product recall,
- Product does not comply with farmers or buyers specifications, or
- Product may not have been processed correctly.

The business only initiates a retrieval if the product has not yet reached the public markets. Normally product is retrieved through transporters, processors or other businesses who further process or sell directly to the public.

Once the product reaches the public markets, a recall maybe ordered by the NSW Food Authority and FSANZ. A public recall involves advertising and notification procedures that list the farmers details, the product affected and the reason(s) for the recall.

13. Product recall

A product recall is when unsafe product that has been distributed to other businesses and/or the consumer is immediately withdrawn from sale to protect the consumer.

Product may need to be recalled if it:

- is not from an approved source,
- is contaminated with harmful micro-organisms,
- is contaminated with harmful chemicals,
- is contaminated with physical matter such as glass or wood, or
- has been tampered with.

A recall may be required based on a customer complaint. In this instance a customer complaint form will be completed and can be found in the *Records Diary*.

In the event of a product recall, the recall program will be controlled by the manager or delegated employee of the business.

In the event of a product recall, the system as defined in the *Food Recall Protocol* prepared by Food Standards Australia New Zealand (FSANZ) will be used.

13.1 Recall procedure

When product is required to be recalled, this business may receive advice from the NSW Food Authority regarding:

- a decision whether a recall is necessary and if further tests should be performed:
 - management collates and evaluates all information immediately available and the nature and extent of the problem,
 - the recall classification is then made based on these findings (Class 1 or Class 2), and
 - the quantity of affected stock is established as well as the location of that stock:
 - if the product is on site or in company delivery vehicles, it is isolated immediately, or
 - if the product has been dispatched to customers, management will liaise for recall from customers. Delivery records can be used for this and can be recorded on the *Receipt and Despatch Monitoring Form* from the *Records Diary*.

13.2 Classes of recall

Class 1

Where there is a reasonable probability that the use of or exposure to the product will cause adverse health consequence. For example, presence of *E. coli*, toxic chemical contaminants or harmful foreign bodies.

Class 2

Where use or exposure of the product is not likely to cause adverse health consequences. For example, incorrect labelling, physically undesirable product or product deterioration.

If a Class 1 recall is necessary, NSW Food Authority officers are notified immediately by the business. If it is appropriate to the circumstances, information is also sent to the media.

Details notified include:

- classification of the hazard,
- description of the product—product type, batch number, best before date,
- quantity of affected product,

- distribution and sales dates,
- method for consumer identification, and
- contact name and telephone number.

The necessity for storage, isolation and disposal of the product is determined by management.

A written record of events and actions is always kept.

NSW Shellfish Program

The *NSW Shellfish Industry Manual* has been prepared by the NSW Food Authority in accordance with the requirements of the Food Regulation 2010.

The manual provides operational parameters for the NSW shellfish industry as required by the regulation and is a reference document for all parties involved in the implementation and management of the NSW Shellfish Program. It applies to all bivalve molluscs commercially grown in and harvested from NSW waters.

The manual does not include the specific details of individual harvest area classifications and management plans, but provides the requirements for such management plans for areas where shellfish are harvested or collected for human consumption.

The *NSW Shellfish Industry Manual* links with the Australian Shellfish Quality Assurance Program (ASQAP), and definitions, procedures and methodologies are consistent with those used in that manual.

Revision of the manual is the responsibility of the NSW Food Authority in consultation with the NSW Shellfish Committee. Accordingly, details may change from time to time, subject to approval of amendments by the Chief Executive Officer of the NSW Food Authority.

The *NSW Shellfish Industry Manual* is available on the NSW Food Authority website at: <http://www.foodauthority.nsw.gov.au/industry/>

Harvest area management plans

Each harvest area is the subject of a management plan formulated in accordance with the NSW Shellfish Program. Management plans specify the conditions under which harvest may be conducted in the relevant harvest area and all other criteria to be applied in managing shellfish safety for shellfish contained in the area.

Monitoring forms

- Staff training records
- Harvest and storage log
- Pre-operational checklist
- Internal audit checklist
- Manual amendments and incident sheet
- Thermometer calibration log
- Contact details

Pre-operational checklist

Complete at the commencement of each shift/day (processing only).

Record in the comments column when disinfection method replaced.

Satisfactory (✓) Unsatisfactory (✗) and complete correction action/comments column

Completed by: _____

Date									Corrective action /Comments
Food contact surfaces clean									
All equipment clean									
All packaging material stored correctly									
Food transport vehicles clean and tidy									

Completed by: _____

Date									Corrective action /Comments
Food contact surfaces clean									
All equipment clean									
All packaging material stored correctly									
Food transport vehicles clean and tidy									

Completed by: _____

Date								Corrective action /Comments
Food contact surfaces clean								
All equipment clean								
All packaging material stored correctly								
Food transport vehicles clean and tidy								

Completed by: _____

Date								Corrective action /Comments
Food contact surfaces clean								
All equipment clean								
All packaging material stored correctly								
Food transport vehicles clean and tidy								

Internal audit checklist (every 12 months)

Tasks		Corrective action required/taken
Management responsibility <ul style="list-style-type: none"> • Is the food safety statement still current? • Is the scope and purpose still current? • Are the members of the HACCP team still current? 	Y/N	
HACCP plan <ul style="list-style-type: none"> • Are the product specifications still valid? • Is the flow diagram still correct? • Is the <i>Risk Analysis</i> still valid? 	Y/N	
Premises and equipment <ul style="list-style-type: none"> • Has the <i>Monthly Maintenance Checklist</i> been completed? • Has the <i>Temperature Monitoring Sheet</i> been completed? 	Y/N	
Supplier approval program <ul style="list-style-type: none"> • Is the <i>Supplier Approval List</i> up to date? 	Y/N	
Food handling procedures <ul style="list-style-type: none"> • Has the <i>Product Dispatch Monitoring Sheet</i> been completed? 	Y/N	
Testing and calibration <ul style="list-style-type: none"> • Have all thermometers and temperature gauges been calibrated every 6 months? 	Y/N	
Cleaning and sanitation <ul style="list-style-type: none"> • Has the <i>Pre-operational Checklist</i> been completed? • Are the chemicals listed still used? 	Y/N	
Pest control <ul style="list-style-type: none"> • Are procedures still correct? • Are pest company records available? 	Y/N N/A	
Personal hygiene <ul style="list-style-type: none"> • Have all staff been briefed on personal hygiene? 	Y/N	
Product identification and traceability <ul style="list-style-type: none"> • Is the list of customers up-to-date? • Are invoices for each sale available? 	Y/N	
Comments :		
Internal audit carried out by: Signed Date		

Calibration record – Thermometer calibration

Date	Reference temperature	Thermometer temperature	Signature

If the thermometer temperature is more than 1 degree Celsius outside the temperature of the reference, a new thermometer is purchased.

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