

# STANDARD OPERATING PROCEDURE

<b>DEPARTMENT</b>	FISH HEALTH & DISEASE MANAGEMENT
<b>SUBSECTION</b>	DISEASE TREATMENT PROCEDURES
<b>SOP NAME</b>	Bath treatment procedures
<b>DOCUMENT REFERENCE CODE</b>	DM.SOP.15
<b>ISSUE NUMBER</b>	01
<b>DATE OF ISSUE</b>	01/01/2020
<b>REVIEW DATE</b>	01/01/2021
<b>APPROVED BY</b>	A. Rainsden



## **Objective**

To provide employees of OSH details of the procedures put in place for carrying out bath treatments on livestock. The aim is to ensure all employees involved have a clear understanding of how the treatment is carried out and who is responsible for different elements of the procedure.

## **Bath treatment procedures (chemotherapeutant)**

### **Planning a bath treatment;**

The farms manager, fish health manager or a relevant OSH director are permitted to plan bath treatments for livestock. All plans should;

1. Be underpinned by a veterinary health report, indicating a preferred method of treatment, dosage amounts/required quantities etc.
2. Have an associated prescription for the medicines/chemotherapeutants due to be used.
3. Take into account water quality / environmental conditions, general fish health status, length of time remaining before planned harvest dates and also consider the effects of such a treatment on the organic status of the livestock.
4. Take into account relevant discharge consents (as defined with CAR licence for the farm).
5. Inform all staff involved with details of treatment start/stop dates & times, giving all necessary notice for managers to amend staffing levels as necessary to facilitate the treatment.
6. Include a pre-treatment net inspection (by diver or ROV) ensuring the containment systems in place are acceptably functional to minimise the risk of escapes during such crowding events.
7. Provide sufficient time for mortality removal within 24 hours of treatment start time.

# STANDARD OPERATING PROCEDURE

## Conducting a bath treatment;

### Tarpaulin –

1. Froyer ring to be lifted in two stages by capstan or crane via 24 connected “dyneema” down-ropes. Each rope is to be lifted individually through the guiding eye on the walkway of the pen (located alongside the stanchion marked with a blue ring). Once the down-ropes have been lifted to the point where the green coloured eye comes through the walkway, they are to be secured using a shackle. Staff must ensure the shackle is secured with the pin supplied for use with that shackle.
2. Prior to crowding, an oxygen injection system should be placed within the pen and secured in a suitable location to maximise oxygen diffusion within the pen.
3. Section 1 of OSH.PRO.06 – fish crowding records should be completed at this point. The following steps should be recorded within section 2 of this recording sheet as the treatment progresses.
4. Once the weight has been lifted away from the net, the slack netting should then be lifted by hand (using “net claws” or fingers) and secured to the handrail of the pen using metal hooks and/or rope ties. This netting should be taken up in gradual bites, with best effort made to work around the pen in a clockwise direction until the desired level of crowding has been achieved. Note: staff should be aware of any cleanerfish populations and/or salmon that are at the edge of the pen – making sure they do not entangle any livestock during the net lifting stage.
5. Tarpaulin ropes to be run – identify stanchions / no. of ropes
6. If environmental and behavioural parameters fall within acceptable levels, the treatment can now begin as per details laid out within OSH.PRO.06.
7. Shoot tarp from workboat – describe method, crowding begins once tarpaulin encircles the net.
8. An OSH representative should now introduce therapeutants as described within the associated veterinary prescription, either by hand or using a suitable distribution system.
9. OSH.PRO.07 – fish treatment records should be completed at this stage – with only the “OSH finish time” to remain blank until the treatment has been completed and the fish are released.
10. Upon completion of the treatment, the OSH treatment representative should call for staff to untie the tarpaulin and discharge the medicated water.
11. Recover tarpaulin with capstans/crane
12. livestock in the pen should now be released from the crowd by dropping the lifted net back into the water to the original depth.
13. Froyer ring is to be lowered back into original position by lifting the down-ropes as per step 1 of this SOP, moving the shackle back to the original eye of the lifting rope.

# STANDARD OPERATING PROCEDURE

## Wellboat –

1. Froyer ring to be lifted in two stages by capstan or crane via 24 connected “dyneema” down-ropes. Each rope is to be lifted individually through the guiding eye on the walkway of the pen (located alongside the stanchion marked with a blue ring). Once the down-ropes have been lifted to the point where the green coloured eye comes through the walkway, they are to be secured using a shackle. Staff must ensure the shackle is secured with the pin supplied for use with that shackle.
2. Once the weight has been lifted away from the net, the slack netting should then be lifted by hand (using “net claws” or fingers) and secured to the handrail of the pen using metal hooks and/or rope ties. This netting should be taken up in gradual bites, with best effort made to work around the pen in a clockwise direction until the desired level of crowding has been achieved. Note: staff should be aware of any cleanerfish populations and/or salmon that are at the edge of the pen – making sure they do not entangle any livestock during the net lifting stage.
3. Harvest/treatment float-line is to be introduced to the pen between the outside of the net and the supporting stanchions (inside of walkway). The leading end of the float line should be walked/pulled around the edge of the pen until the entire float line is in position around the unit due to be treated. Note: it may be easiest/practical to tie off the tail end of the float line at the wellboat before crowding commences – to ensure maximum control is maintained over the crowd by the receiving vessel.
4. Prior to crowding, an oxygen injection system should be placed within the pen and secured in a suitable location to maximise oxygen diffusion within the pen.
5. Section 1 of OSH.PRO.06 – fish crowding records should be completed at this point. The following steps should be recorded within section 2 of this recording sheet as the treatment progresses.
6. The wellboat capstans may begin drawing the float line in, gently crowding the fish to a point where they can efficiently guide the livestock through a loading pipe that is lowered into the crowd.
7. Prior to loading commence, maximum accepted loading speed should be conveyed by site staff to the wellboat as 85,000kg/hr for all OSH livestock handling events.
8. If environmental and behavioural parameters fall within acceptable levels, loading can now begin as per details laid out within OSH.PRO.06.
9. Once loading has finished, any remaining livestock in the pen should be released from the crowd by untying the float line from the wellboat and immediately dropping the lifted net back into the water (and ending the crowding event).
10. The oxygen injection system may now be removed.
11. the fish should be given sufficient time to settle down / acclimatise within the well and for oxygen to stabilise before the addition of pharmaceuticals to the well containing fish may occur. OSH.PRO.07 – fish treatment records should be completed at this stage – with only the “OSH finish time” to remain blank until the treatment has been completed and the fish are released.

## STANDARD OPERATING PROCEDURE

12. Communication between the bridge of the treating vessel and OSH staff should be maintained at all times, with any sudden changes in behaviour and/or significant negative welfare indicators are observed.
13. In the most suitable manner for the boat being used for the treatment (confirm with skipper), the pharmaceuticals, as detailed within the prescription should then be administered by an OSH representative.
14. Upon completion of the treatment, the overseeing OSH representative should give verbal confirmation to the treating boat to discharge the livestock back into the pen (or any other pen as indicated).
15. Froyer ring is to be lowered back into original position by lifting the down-ropes as per step 1 of this SOP, moving the shackle back to the original eye of the lifting rope.

### Recording a bath treatment;

1. All medicines used are to be recorded within the site-specific medicine records (OSH.PRO.10)
2. Details of all treatments carried out are to be recorded within fish treatment records (OSH.PRO.07).
3. All treatments should have an associated fish crowding record (OSH.PRO.06).
4. All treatments should be registered digitally on the “Mercatus” platform by the site manager, farms manager or fish health manager as soon as practically possible after the event.

RESPONSIBILITY MATRIX		
TASK	PERSONS RESPONSIBLE	FREQUENCY

