

Employee Training Handbook



Fuerste Vaccination Services

Season 2019 - 2020

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Welcome to the Crew!



We are excited to have you join our Crew of hard working and fun individuals for our upcoming 2020/2021 season.

You are officially an employee of an award-winning company and leader in the aquaculture industry.

Fuerste Vaccination Services works hard to be an employer of choice and provide a safe and happy place for you to work.

We hope you have a rewarding season with us! Please don't think of the end of the season as the end of your employment with us, but rather a pause in work. We work hard to have our valued employees return each season

Employee Resources

Staff Page

Fuerste Vaccinations provides a private staff page located on the company website.

To access the Staff Page, go to www.fuerstevaccination.com, click on “More” and “Employee Login”. The **password is “fish”**.

Here you will find useful information such as:

- The staff schedule which is kept up-to-date and current as possible
- Policies & procedures
- Personal medical form
- Timesheets
- Training log
- MSDS
- Vaccinating best practices
- Job postings
- Vaccine sign out sheets

Staff are encouraged to login regularly to check updates and changes to schedules and available resources.

If you have any issues navigating or accessing the site, please contact Jennifer, HR & Payroll Generalist.

Staff Information

Breaks

After five hours of continuous work, staff are entitled to one 30-minute unpaid lunch. Although not required by the Employment Standards Act, we do our best to provide two paid 15-minute coffee breaks per full shift when possible. Typically, one is taken in the morning and one in the afternoon of a full shift. These breaks are meant to help alleviate fatigue and repetitive strain. These breaks must be kept to 15 minutes including removal and donning of gear.

Staff are entitled to one 30-minute unpaid lunch break per full shift. Although not required, we will do our best to provide two paid 15-minute coffee breaks per full shift when possible.

Stretch pauses are also provided and should occur at the Crew Leader's discretion, but not less than once every two hours. These pauses are not coffee breaks and people should be stretching, not going to pick up more vaccine or other tasks.

Smoking is to be done in designated areas only. Please properly dispose of cigarette butts and wash your hands after smoking out of respect for the hatchery and your fellow crew mates. E-cigarettes are considered the same as tobacco cigarettes, as such, the same rules apply. Smoke breaks are to occur only at scheduled coffee breaks and lunch breaks.

Time Off Requests

All requests for time off must be submitted in an email to Kim Kirschner with a CC to the Crew Leader/Supervisor. Days off will be given if possible; however, production must take precedence. Generally, there will be time off every few weeks so please schedule your appointments according to the work schedule.

Please remain flexible in your availability. Ideally, we will only be working a regular shift, but the fish take priority and we may need to work longer hours. Please do not assume you will be off work the same time each day. Make sure to schedule evening appointments later in the day to allow lots of time.

Resignation of Employment

Not having a fully staffed crew can have a negative impact on the rest of the Crew Members.

For this reason, we ask that if you need to give your resignation before the end of the season, that you please provide us with at least two weeks written notice.

Written notice can be sent to hr@fuerstevaccinations.com.

Payroll & Timesheets

Crew Member's weekly hours are updated on a live document for HR & Payroll every day. The Crew Leader/Supervisor or Lead Vaccinator is responsible for entering or submitting this information.

Paydays are bi-weekly on Fridays with the cut off being the Sunday before. Please keep your banking and tax information up to date. Any changes can be sent to the HR & Payroll Generalist.

Overtime is earned anytime a Crew Member works over 8 hours per day or 40 hours per week and is based on 1.5X straight time. After 12 hours per day, 2X straight time is incurred. Stat holidays are paid at straight time. At a live-in site, overtime incurs at 1.5X straight time after 40 hours per week. Travel time is not paid.

You may elect to pick up additional shifts on the weekends to clean and disinfect equipment. Note that preference will be given to Crew Members who will not be constituting overtime.

Pay & Benefits

All new Crew Members will receive a starting wage of \$17.00 per hour. Each subsequent year the Crew Member returns as a Vaccinator, the rate of pay will increase by \$0.25 to a maximum of \$19.00 per hour if the probationary period was achieved the previous season.

A Health Spending Account is available to all staff once the probationary period of three months has been completed. The waiting period will be waived for all returning Crew Members if the probationary period was achieved the previous season. The eligible dollar amount for the Health

Spending Account will vary depending on the employee's position with the company.

Please note that transportation time to and from the worksites is unpaid.

Transportation Benefit

Fuerste Vaccination Services offers transportation to and from the worksites in a company vehicle. This benefit is optional to staff. If Crew Members are utilizing this benefit, please respect the meeting time and do not hold up the carpool. The Crew vehicles will only wait 10 minutes. If you are not going to be taking the carpool that day, it is your responsibility to notify another Crew Member so your fellow Crew mates do not worry and hold up the vehicle.

Staff Communication & Scheduling

The nature of our business results in varied schedules and worksites for our staff. For this reason, staff are required to check their emails and voicemails frequently and daily for messages regarding scheduling. Messages should be returned within three hours.

Work opportunities will be emailed to staff in advance. Work will be assigned to Crew Members based on first responses as well as operational requirements.

Training Materials

Biosecurity

Preventative measures are enforced in order to eliminate the transfer of disease from one hatchery to another, or from the environment into the hatchery. When staff members fish, swim or play in the ocean, they may be playing in diseased water. Wild Coho salmon are a known source of the IHN virus which can be present under your fingernails and spread to the hatcheries. Further, shoes that are worn at the beach are a potential carrier of Furunculosis. A mug placed at a vaccination table could pick up fungus and be transferred to another hatchery.

- All staff entering the hatcheries are required to step into a bath of Virkon and change their footwear when entering.
- Staff are required to use the provided hand sanitizer at every opportunity.
- Clothing, personal items and any personal equipment **must** be properly disinfected when moving between sites. This means:
 - Washing all items with soap and **hot** water
 - Drying clothing and items on **high heat**
 - This includes hats and footwear
- Items that can't be disinfected are **strictly prohibited** from entering the hatcheries. Fuerste Vaccinations does allow staff to bring headphones and a music player into the hatchery. It is important to note that once these items have entered a hatchery, the same items **cannot** enter another hatchery.

- Staff are not permitted to enter a second hatchery within **24 hours** of being in the first hatchery. Delayed entry also applies if the employee has entered a fish processing plant or handled wild fish.

Spreading disease to the fish can be devastating for all involved so our due diligence with biosecurity measures is extremely important. Please bring any questions or concerns to the Site Manager or Senior Management.

Vaccinating Best Practices

The following are some best practices that Crew Members should be aware of and put into practice when vaccinating the fish:

- Check your vaccination gun counter frequently
 - Do 100 practice shots at the beginning of each bath to ensure counter is working properly
- Ensure the vaccination gun is properly shooting by using test shots
- Check the calibration and weight of the vaccine bag frequently
- Before running out of vaccine, set up the next vaccine bag
- Change the needle at least every 1500 shots
- Ensure the needle guard is even and in the correct position

Self-Injection Best Practices

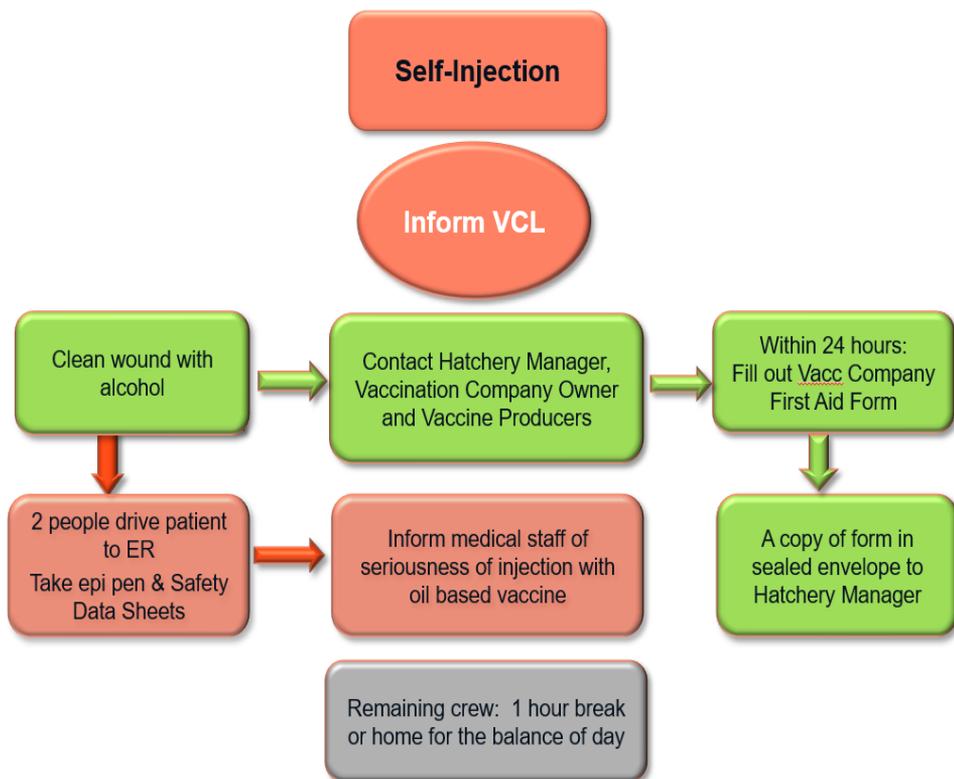
The following are some best practices that Crew Members should be aware of and put into practice when vaccinating the fish:

- Check your hands and fingers for scratches or marks at every break
- Report any scratches or marks immediately to your Crew Leader
- Report any occurrence of self-injection immediately to your Crew Leader and follow self-injection procedure
- Go to the nearest hospital immediately upon self-injection
- Go to the nearest hospital immediately if you suspect self-injection
- Carry MSDS and the vaccination card with you when transporting to the hospital



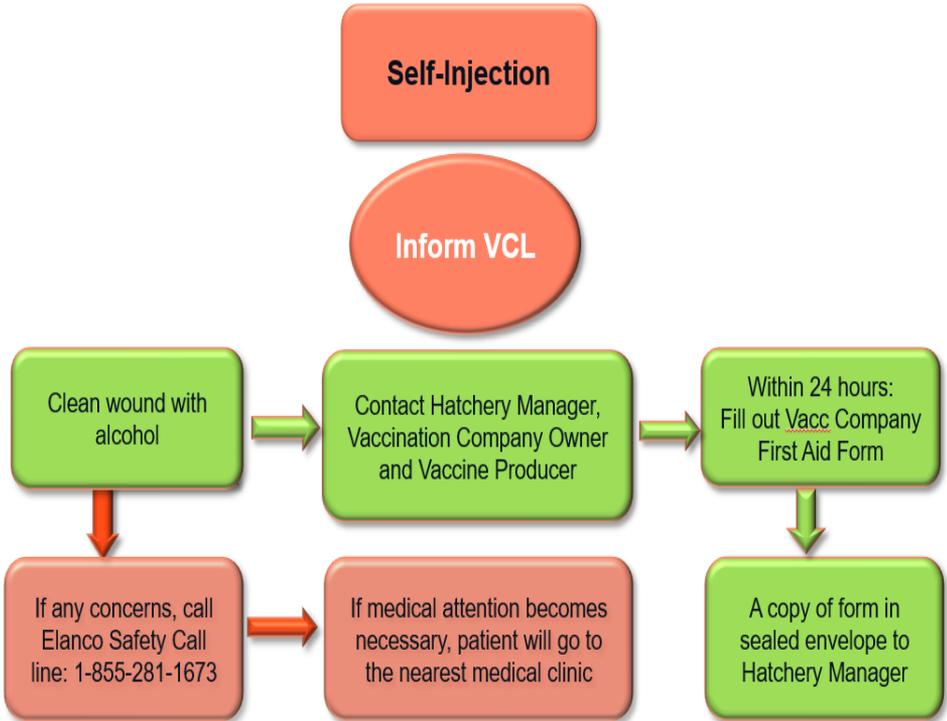
Self-Injection Procedure (Alphaject Vaccine)

The following procedure should be followed any time a Crew Member self-injects themselves or suspects that they have self-injected with the Alphaject vaccine.



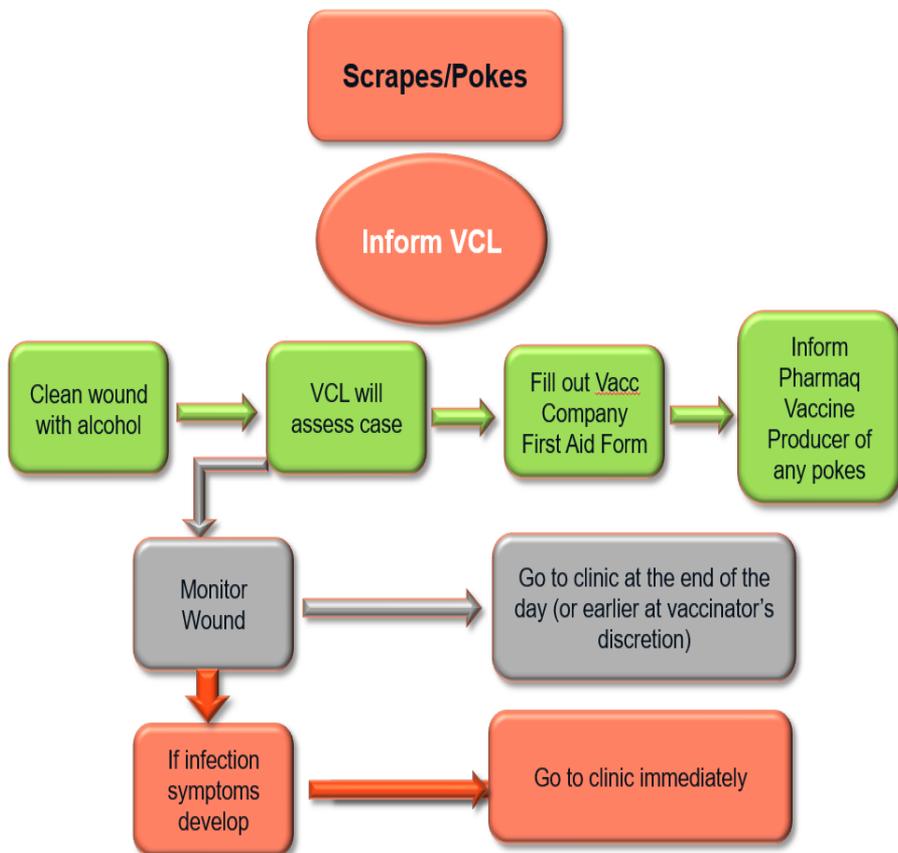
Self-Injection Procedure (Apex Vaccine)

The following procedure should be followed any time a Crew Member self-injects themselves or suspects that they have self-injected with the Alphaject vaccine.



Scrape or Poke Procedure

The following procedure should be followed any time a Crew Member scrapes or pokes themselves with a needle.



Accidental Injection of Oil Emulsion Vaccines

Novartis Animal Health, Aqua Business is a veterinary vaccine company producing vaccines for the aquaculture industry. The culture of salmonids is a growing industry worldwide. Over 50 million smolts are put to sea for the grow-out cycle in Canada each year. Infectious diseases in this industry are now being effectively prevented by vaccination of polyvalent killed bacterial and viral vaccines that are emulsified with a mineral oil adjuvant.

This is where you come in! The fish are vaccinated either manually by trained injection crews with repeating vaccination guns or automatically by machine. Manually, a dose of 0.1 – 0.15 ml is delivered to the peritoneum of 30 – 150 g anaesthetized fish while the vaccinator holds the fish in one hand and administers the vaccine with a repeating syringe with the other hand. This is when accidents can occur, as well as in the cleaning and maintenance of the needle area of the automatic injection machines.

Each vaccination season, Novartis is informed of isolated cases of a serious reaction to self-injection with an oil emulsion. This can be a most serious problem, involving an inflammatory reaction occurring in the hand and arm of the effected limb. This information is made available to those who would be treating a case of accidental self-injection. A copy of this information will be given to the safety officer of the injection crews. This information was based on recommendations on information released by leading veterinary vaccine companies marketing products of a similar nature. Their recommendations were based on consultation with several qualified physicians specializing in hand surgery. The hope is that these recommendations

can prevent a seemingly minor accident from becoming a serious and costly problem.

Injection Injuries to the Hand

If you receive an injection injury while using killed vaccines, see a doctor at once and present this material. Novartis Animal Health and Fuerste Vaccinations cannot legally recommend medical treatment to physicians. This information serves only as an informational aide to physicians, as the usual effective treatment for injury of this nature. The injection of foreign material into the fingers or palm is a potentially serious injury. Vaccines utilized to immunize fish consist of inactivated bacteria in an oil emulsion (including mineral oil) carrier. This can be accidentally injected into the fingers or hand if proper care is not taken while performing the injection.

Pathology

After entry of the emulsion into the hand, the emulsion can remain in a small area or distribute itself along the tendon sheath and neurovascular bundles far from the injection site. There is some direct injury to tissue at the time of injection but within 24 hours, there is usually an inflammatory response resulting in significant swelling and increasing pain. Subsequent problems occur with the possible onset of secondary bacterial infection and late formation of oleogranulomas (swelling resulting from chronic inflammation because of the body's response to oil emulsion). If the blood supply of the affected area remains intact, late problems consisting of continuing pain and stiffness of the involved part can be expected. One would not expect the inactivated bacteria involved to be a

problem by themselves as they do not product disease in man and are in killed form.

If an accident does occur, it is recommended that the injured be immediately referred to a hand surgeon experienced in the care of hand injuries. They should not be handled in an office setting by someone unfamiliar with the problem. Time is extremely important – do not delay treatment.

Time is extremely important – do not delay treatment

Although there is some disagreement among hand surgeons about treatment, the following is an outline of the usual course taken:

1. Zeroradiograms (special soft tissue x-rays) can help to ascertain the extent of the distribution of the oil material in the finger or hand. If little or no oil was actually injected, the inflammation may subside spontaneously over several weeks or with the use of Cortisone, even if the needle penetrated deeply into the hand. If history (no previous injury of a similar nature) and radiograms dictate a conservative approach, a period of close careful observation and functional evaluation (flexion studies) should be carried out.
2. If oil emulsion vaccine was actually injected, **an extensive debridement (opening of the affected part and removing as much of the foreign material as possible) should be carried out.** The wound is generally left open and closed later.

3. Broad spectrum antibiotics may be given in high doses for as long as two weeks depending on the clinical picture.
4. The use of an anti-inflammatory drug, such as Cortisone, should be considered.

For further information on this or any other related topic, you can contact a representative at:

Novartis Animal Health

Aqua Business Unit

37 McCarville St

Charlottetown, PE Canada

C1E 2A7

24 Hour Toll Free: [1-800-387-6325](tel:1-800-387-6325)

US Emergency Number (905) 814-0840

Email: aqua.customerservice@novartis.com



Determination of Proper Needle Size for Manual Intraperitoneal Injection Vaccination

It is important to be certain that the proper needle length is used when performing injection vaccinations. The majority of vaccination teams use reusable stainless-steel needles that lock into place with the Luer lock system. With proper needle care, the number of fish at the pre-smolt stage that can be injected before changing the needle is 1500 – 2000. This number will drop with smolts or larger fish as the scales will cause dulling of the needles. The needle must be scraped clean of scales on a regular basis to avoid shortening the penetration length. The needle bore size (diameter) recommended for use with oil-adjuvanted vaccines is a minimum of 0.6 mm. The needle bore size recommended for use with water-based vaccines is 0.5 mm.

Manufacturers of the needles have suggested needle lengths for certain sizes of fish as follows:

Fish Size (g)	Needle Length (mm)
20 – 30	3
30 – 50	4
50 – 100	5
100 – 200	5 – 6
>200	6 – 7

The lack of specificity of the size of needle to be used with a specific weight of fish is deliberate. This factor will vary with the species and stock strain of fish as there may be dramatic difference in the depth or thickness of the body wall in individual cases. It is recommended for pre-smolts and smolts that the grade be close (within 10 – 15 g) on

the fish that are to be manually injected. For machine vaccination the grade must be tightened to within 5 – 10 g allowance.

The following procedure must be completed to assure proper needle length:

A representative sample of graded fish to be vaccinated are sacrificed. Using a sharp knife or scalpel, the belly wall is cut away to expose the internal area of the injection site. The needle size intended for use is observed as it penetrates the belly wall on a 90-degree angle on the mid-line as would be done in an intact fish, one pelvic fin length ahead of the pelvic fin girdle. The depth of penetration is assessed visually on the inside of the belly wall. The needle length should be adjusted such that 1 mm from base of bevel is inside the abdominal wall. After the visual inspection has been carried out on a number of fish (10 – 20) and the chosen needle lengths deemed adequate, vaccination may proceed. It is suggested that at the onset of the operation, that a few of the vaccinated fish be sacrificed and cut open as previously described, to assure that the vaccinators technique is delivering the vaccine to the appropriate area in the peritoneal cavity. It is important that the vaccine not be deposited into the body wall or pelvic fin girdle or too far forward in the body cavity, resulting in vaccine in the pyloric caeca, mesenteric fat or other organs.

Vaccine Storage

Vaccines are sterile products that contain media that is conducive to microbial growth. After initial opening, the sterility may be compromised, and the vaccine can easily be infected with environmental contaminants. This could result in contaminated vaccine which would make the product unsafe for administration.



By following the procedures below, you can reduce the risk of vaccine contamination:

- Partial bags of vaccine must be refrigerated (between 2 – 7 degrees C) overnight or over a weekend. Longer term storage of open product is prohibited and should be discarded.

Opened vaccines are prohibited from being stored for longer than one weekend

- At the end of each day and prior to removal of vaccine transfer hose from the injector, a secure knot should be tied near the end of the hose
- After removing the partial vaccine bag from cold storage, the bag (and hose) should be thoroughly shaken similar to starting the use of a new bag of vaccine. If vaccine separation has occurred in the vaccine transfer hose, this can be drained, and new vaccine expelled into the line by applying pressure to the vaccine bag.
- Cut the vaccine transfer hose 4 inches up the hose from the initial knot to allow reattachment to the injector.



Contact Us

If you have any questions or concerns, please let us know. We are happy to help.

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