

CERMAQ

[REDACTED]
Cermaq Canada Ltd 203-919 Island Highway
Campbell River, BC, V9W 2C2
Canada

Campbell River, 11 July 2018

To Whom it May Concern,

Hello,

We would like to apply for two Emergency Drug Releases to use the Imvixa in-feed product for the purposes of lice treatment in Atlantic salmon this fall. In particular we would like to apply for enough product to treat [REDACTED] fish at 90g coming from two hatcheries. From Oceans hatchery [REDACTED] fish at 90g will be entered into two sea sites (Ross – [REDACTED]; Millar – [REDACTED]). From Boot Lagoon hatchery [REDACTED] fish also at 90g will be entered into the same two sea sites (Ross – [REDACTED]; Millar [REDACTED]). See Table with numbers, weights, and approximate dates. Note that one half of the smolt entries into Ross will end up being moved to a new site (Saranac) approximately 5 months post-entry.

All of the saltwater farms mentioned above are in the Tofino area of British Columbia. SLICE (emamectin benzoate) has been effective against sea lice in this area up until this previous spring. This past spring lice levels increased above the regulatory lice level of 3.0 motile lice / fish at these three sites due to failure of SLICE due to documented reduction in lice sensitivity to emamectin benzoate. Permits to use peroxide were applied for in the fall of 2017 but not made available until May of 2018 resulting in significant lice challenges in the region with levels as high as 55.0 motile lice / fish. Peroxide use in Tofino has been restricted to well boat use only by the provincial government due to community and environmental concerns. The affected sites mentioned above have since been harvested out and remaining sites in the area have been successfully treated with peroxide. All (3) well-boats capable of peroxide treatment on this coast are leased by either Marine Harvest or Grieg Seafood. Because sea lice treatments typically province wide occur from October through February which coincides with fish moves (due to limitations on well boats all of these boats are involved in both lice treatment, smolt entries, and large fish moves) we will not have access to well-boats for effective peroxide treatments even though we have permits to use peroxide in the Tofino area. In 2017 Cermaq commissioned an alternative sea lice treatment (a Hydrolicer) but because of ship-building limitations and time to acquire funding (12 million \$) this option will not be available until April 2019. Because of documented SLICE tolerance, an inability to secure well boat use for peroxide treatments, lack of alternative saltwater sites to receive fish, and an absent third lice treatment option (hydrolicer) before April 2019 Cermaq Canada is requesting the emergency release of Imvixa for use in British Columbia to help manage lice on fish due to be entered this fall.

s.19(1)

s.20(1)(b)

Please find attached additional documents including: 1) EDR for Invixa to be used at the Oceans Hatchery; 2) EDR for Invixa to be used at the Boot Lagoon Hatchery; 3) A summary of sea lice counts, previous treatments, and bioassay results for the two previous production cycles at Ross, Millar, and Saranac; 4) Oceans Hatchery water usage; 5) Boot Lagoon Hatchery water usage; 6) Solids waste management for Cermaq Canada; 7) Depomod information for Ross; 8) Depomod information for Millar; 9) growth information for marine sites in Tofino. If you have any questions please contact myself at my cell phone or email below. If you cannot reach me please contact [REDACTED]

Smolt Date	Hatchery	Fish #	Smolt Sea Site	Grow Out Sea Site
Sep 30 - Oct 13	Oceans Hatchery Boot Lagoon Hatchery	[REDACTED]	Millar	Millar
Oct 14 - Oct 27	Oceans Hatchery Boot Lagoon Hatchery	[REDACTED]	Ross	Ross
Oct 28 - Nov 10	Oceans Hatchery Boot Lagoon Hatchery	[REDACTED]	Ross	Saranac

Both Hatcheries
Oceans Hatchery
Boot Lagoon Hatchery

Thank you for your consideration,

Kind regards

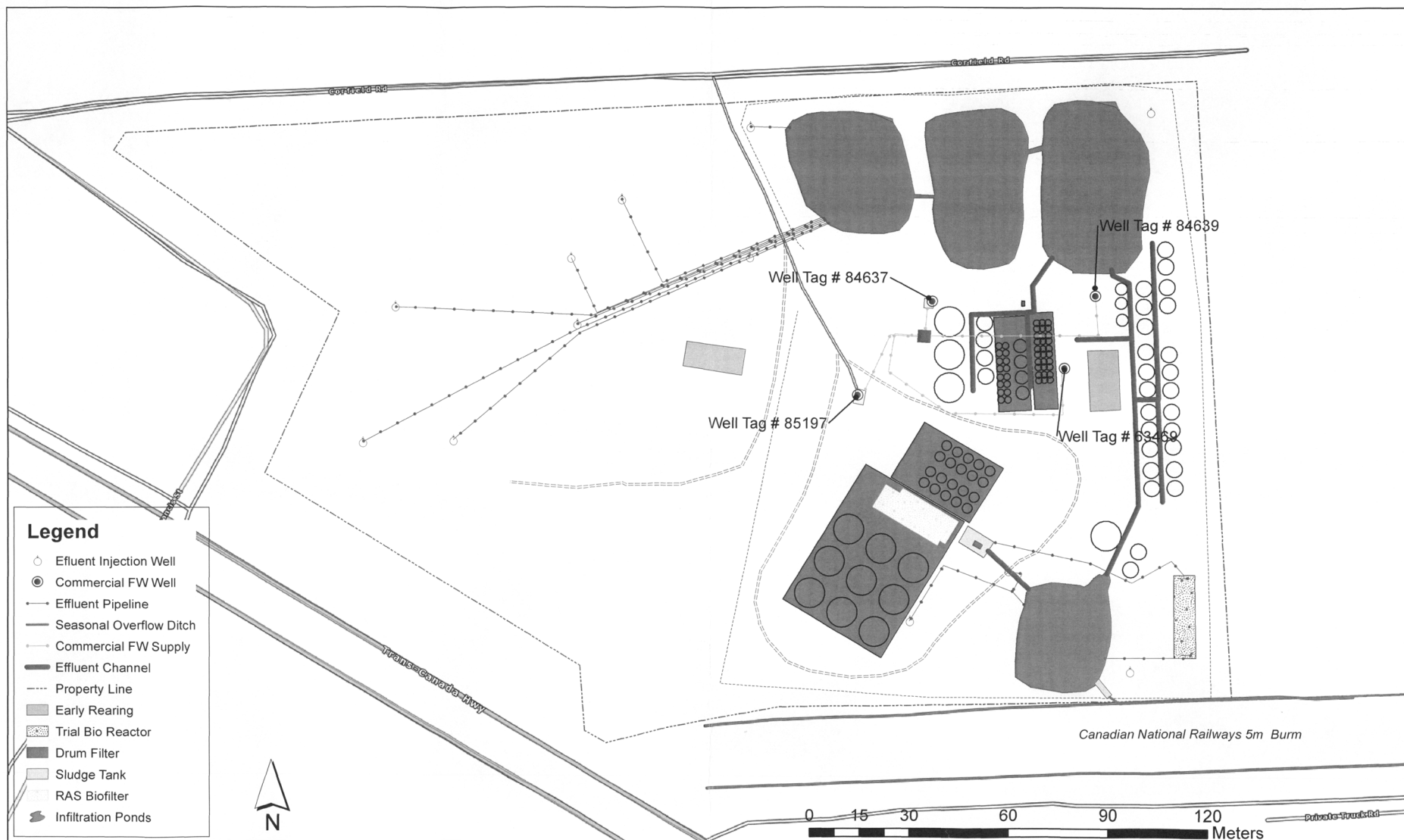
[REDACTED]

Cermaq Canada Ltd.

[REDACTED]

s.19(1)
s.20(1)(b)

Ocean Farms Hatchery Site Map

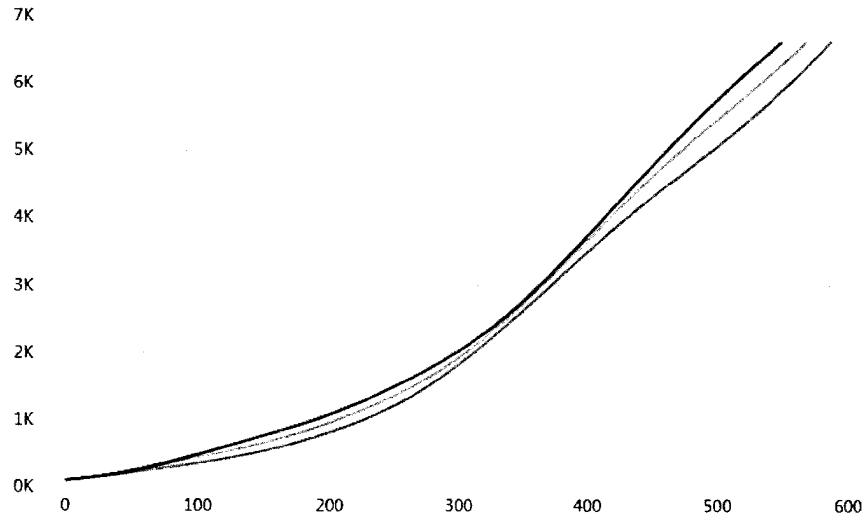


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3 different curves based on the S0 egi model with 100 gram inputs. Start of month entry's with days at sea and atu growth curves.

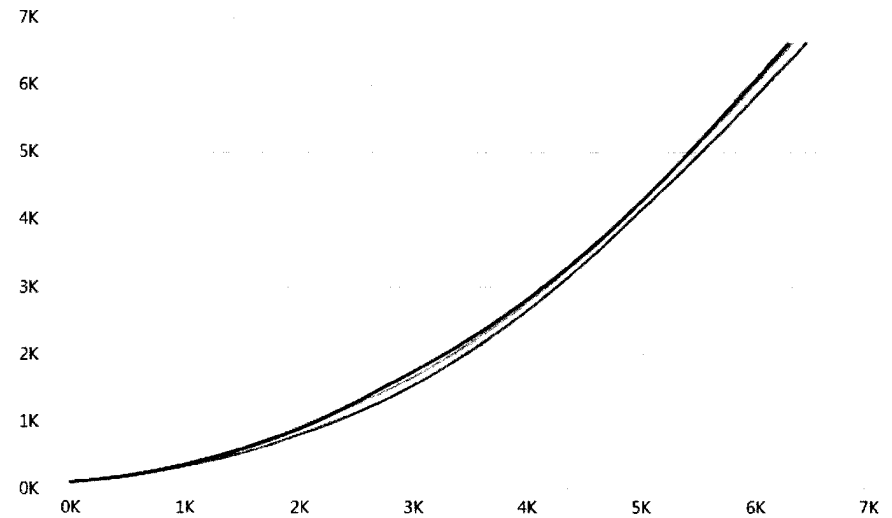
Weight [g] by Closing Days Since Input and Model Monthly

Model Monthly ● TON3 August 100 ● TON3 October 100 ● TON3 September 100

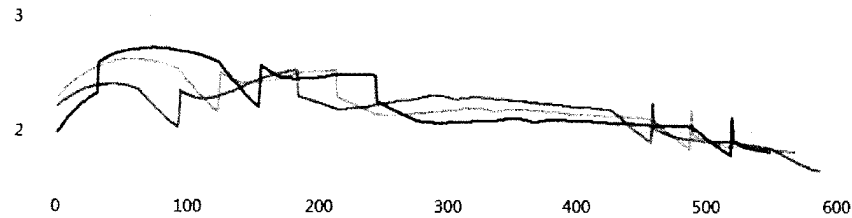


Weight [g] by ATU and Model Monthly

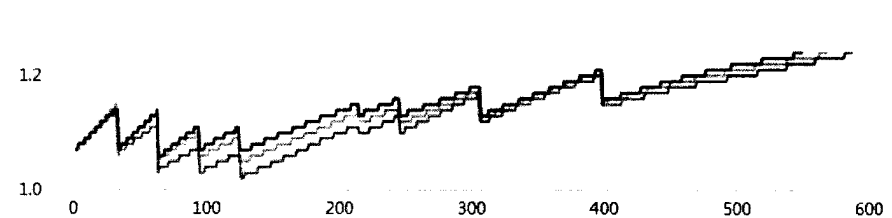
Model Monthly ● TON3 August 100 ● TON3 October 100 ● TON3 September 100



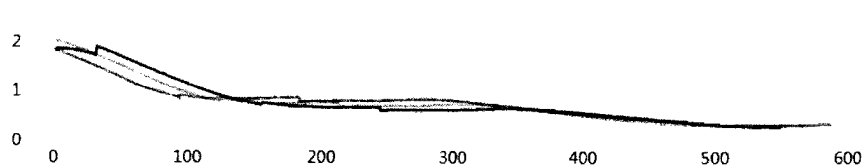
Thermal growth coefficient (TGC) by Closing Days Since Input and Model Monthly



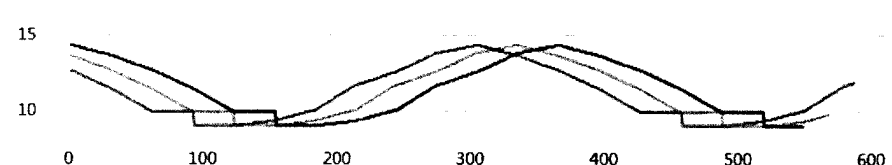
FCR and FCR by Closing Days Since Input and Model Monthly



SGR by Closing Days Since Input and Model Monthly



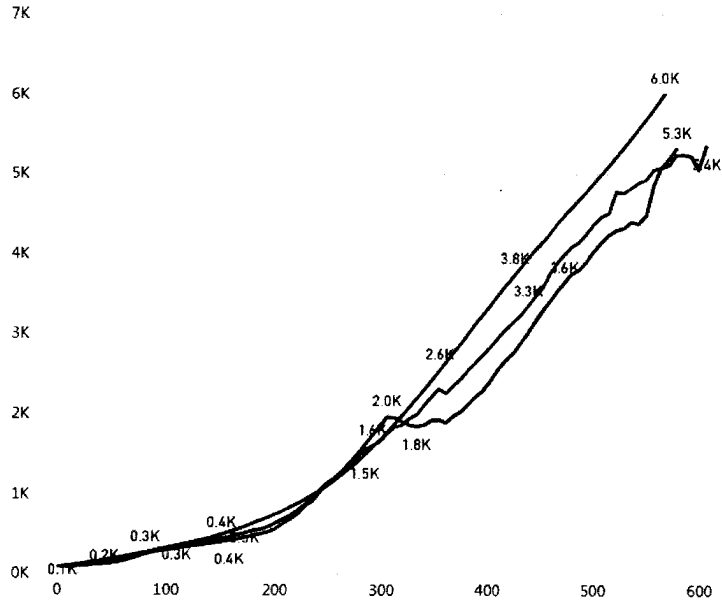
Temperature [°C] by Closing Days Since Input and Model Monthly



This is what Millar and Ross looked like this YC with a 86 gram entry in late Sep.

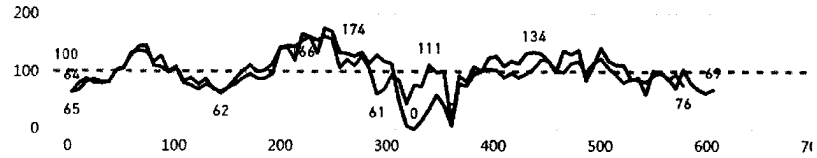
Closing Avg weight and Earliest Date by Closing Days since first input and Site

Site ● Millar 2017 ● Ross Pass 2017 ● Ross Pass Sim 2017



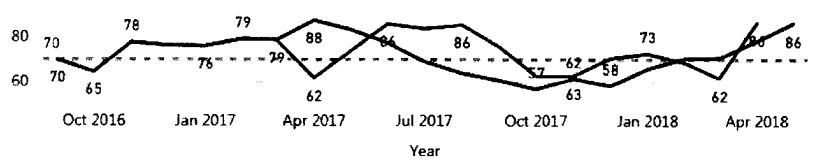
Appetite [%] in Period

Site ● Millar 2017 ● Ross Pass 2017



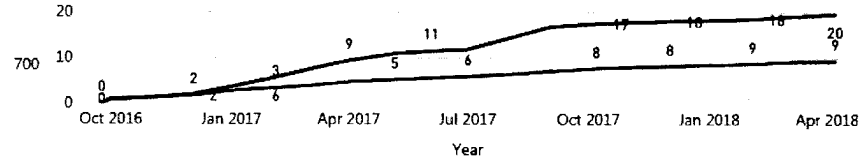
Oxygen saturation (5.0 meters) Min [%] in period

Site ● Millar 2017 ● Ross Pass 2017



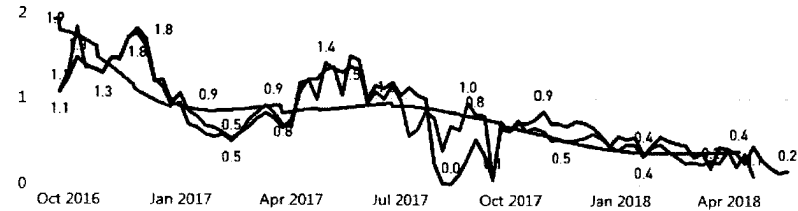
Average of Closing Mortality percent by Year, Quarter, Month and Site

Site ● Millar 2017 ● Ross Pass 2017



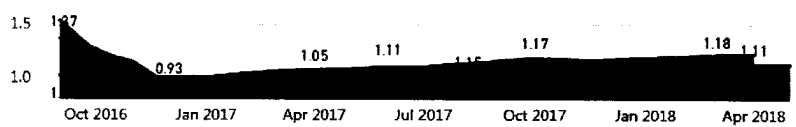
Simple SFR in period, Earliest Date and Closing Avg weight by Year, Quarter, Month, Day and Site

Site ● Millar 2017 ● Ross Pass 2017 ● Ross Pass Sim 2017



Average of Closing Biological FCR and Average of Closing Avg weight by Year, Quarter, Month and Site

Site ● Millar 2017 ● Ross Pass 2017 ● Ross Pass Sim 2017





**EMERGENCY DRUG RELEASE APPLICATION AND FEE FORM /
FORMULAIRE DE DEMANDE DE DISTRIBUTION DE MÉDICAMENTS D'URGENCE ET D'ÉTABLISSEMENT DES FRAIS**

Veterinary Drugs Directorate / Direction des médicaments vétérinaires
Holland Cross Complex, Tower A, Ground Floor, Address Locator : 3000A
Complexe Holland Cross, Tour A, Rez-de-chaussée, Indice de l'adresse : 3000A
14-11 Holland Avenue, Ottawa, ON K1A 0K9

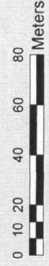
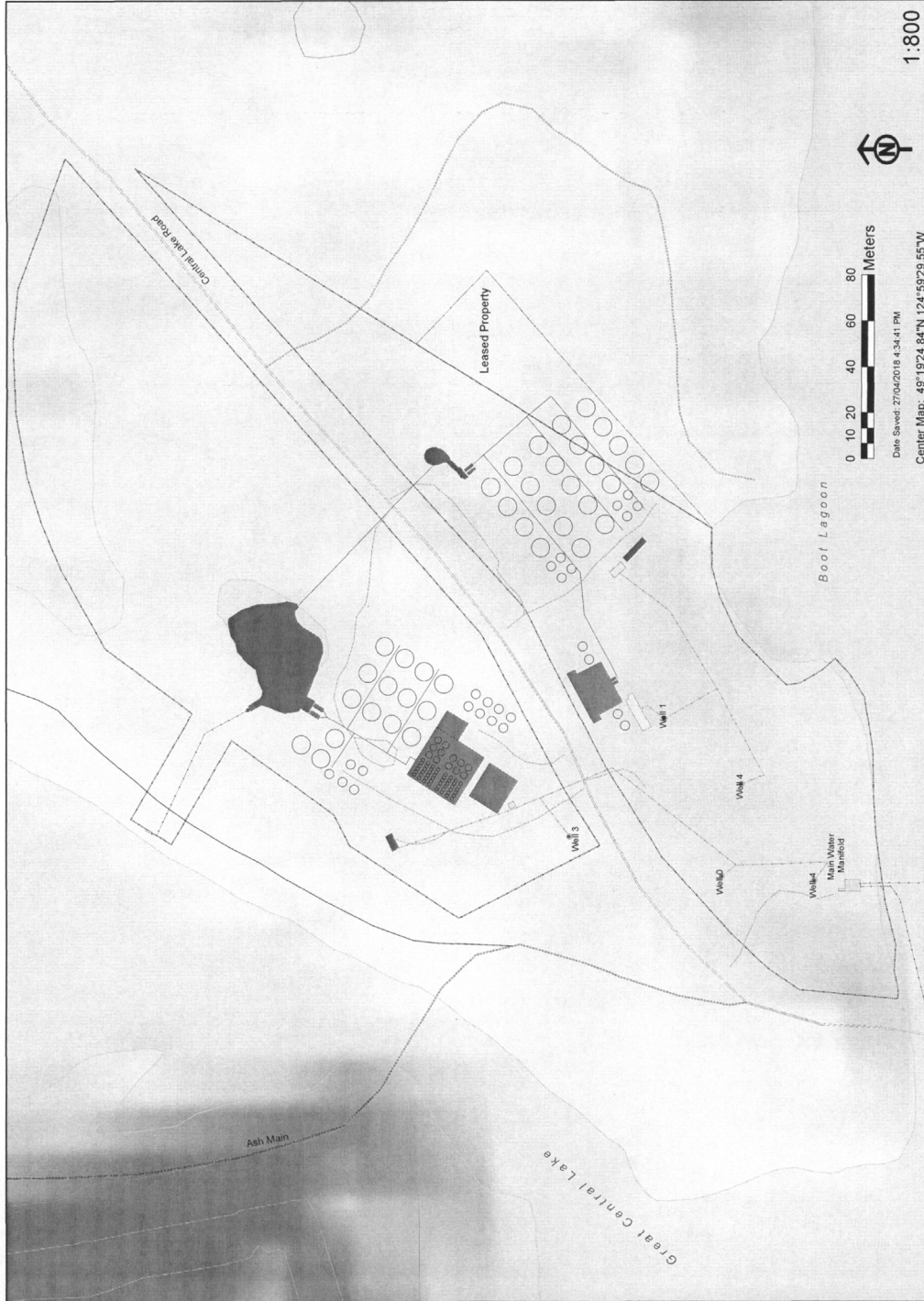
Tel / Tél. : (613) 240-3916 Fax / Télécopieur : (613) 946-1125 Email: hc.edr-dmu.sc@canada.ca

Manufacturer Name & Address / Nom et adresse du fabricant Novartis Santé Animale S.A.S., Usine de Huningue, 26, Rue de la Chapelle, F-68330 Huningue, France		Tel/Tél. : _____ Fax/Télécopieur : _____
Drug Brand Name & Strength/ Nom commercial & concentration du médicament Invixa 10%, Lufenuron 10%, oral powder		Active Ingredient / Principe actif Lufenuron
Quantity requested / Quantité demandée 30.0 kg premix	Clarify maximum for 6 month. / Clarifiez maximum pour 6 mois. 30.0kg premix	Date(s) drug will be used / Date(s) de l'utilisation du médicament Sep 30 to Nov 10, 2018
Dosage & Route of Administration / Posologie & voie d'administration 5mg/kg/day orally for 7 days		
Veterinary Practitioner Name & Address / Nom et adresse du vétérinaire Cermaq Canada Ltd, 203-919 Island Highway, Campbell River, BC V9W 2C2, Canada		Tel. / Tél. : _____ Fax / Télécopieur : 250-286-0042 E-mail / Courriel : _____
Billing address (if different) / Adresse de facturation (si différente)		Billing contact person / Personne ressource pour la facturation _____
Veterinary Situation, Disease, Justification / Justification de l'utilisation, maladie, diagnostic Lepeopcheirus salmonis infestation with reduced sensitivity to emamectin benzoate		
Species / Espèce Atlantic Salmon	Number of animals, age, weight, sex / Nombre d'animaux, âge, poids, sexe _____ @ 89g _____	
Animal's Name and Owner's Name (for pets and horses) / Nom de l'animal et nom du propriétaire (pour les animaux de compagnie et les chevaux)		
Producer's Name and address, unit (for farms and/or breeding units) / Site de production, nom du producteur et adresse, unité (pour les fermes et/ou les centres d'élevage) Cermaq Canada Ltd		
Production Site (for aquaculture) / Site de production (aquaculture) Oceans Hatchery		
Previous follow-up report / Rapport de suivi précédent : has been sent / a été envoyé _____ is attached / est inclus _____ other (explain) / autre (explication) _____ N/A		
If applicable, please provide a written statement that animals to which this drug is administered will not be used in food for human consumption. ***Si approprié, veuillez spécifier que les animaux auxquels ce médicament est destiné ne seront pas utilisés dans l'alimentation pour la consommation humaine.*** An EDR for a non food animal is \$50.00; for a food animal is \$100.00; you will be invoiced by Health Canada for your EDR request. / Une DMU pour un animal non destiné à l'alimentation coûte \$50.00 et \$100.00 pour un animal destiné à l'alimentation. Santé Canada vous fera parvenir une facture relativement à votre demande de DMU.		

VETERINARIAN'S SIGNATURE: _____

DATE: July 11, 2018

HC use only / À l'usage exclusif de la SC	EDR no. / No. de la DMU	NF	F
Customer no. / No. De Client	Invoice no. / No. de la facture	S.O. no / No. d'engagement	



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Center Map: 49°19'24.84"N 124°59'29.55"W

Legend

- Well Head & Pump
- FW Well Pipeline
- Hatchery Discharge Pipe
- Lake Water Intake Pipe
- UV Treatment System
- Effluent Settling Pond
- Property Boundary

Boot Lagoon Hatchery Water Usage

CERMAQ



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FORMULAIRE DE DEMANDE DE DISTRIBUTION DE MÉDICAMENTS D'URGENCE ET D'ÉTABLISSEMENT DES FRAIS**

Veterinary Drugs Directorate / Direction des médicaments vétérinaires
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Tel. / Tél. : (613) 240-3916 Fax / Télécopieur : (613) 946-1125 Email: hc.edr-dmu.sc@canada.ca

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Dosage & Route of Administration / Posologie & voie d'administration 5mg/kg/day orally for 7 days		
Veterinary Practitioner Name & Address / Nom et adresse du vétérinaire Cermaq Canada Ltd, 203-919 Island Highway, Campbell River, BC V9W 2C2, Canada		Tel. / Tél. : _____ Fax / Télécopieur : 250-286-0042 E-mail / Courriel : _____
Billing address (if different) / Adresse de facturation (si différente)		Billing contact person / Personne ressource pour la facturation
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Production Site (for aquaculture) / Site de production (aquaculture) Boot Lagoon Hatchery		
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