

10. **APPENDIX**

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Air Filtration Unit Description by HVAC Specialties Inc



Steve Smith

HVAC Specialties Inc.
PO Box 8055 Station A
St. John's, NL A1B 3M7

Kendall Flood

Ár n-oileán Resources Ltd.
4 Hebbard Place
St. John's, NL A1A 5J6

Dear Mr. Flood,

January 1, 2022

The Air Filtration Systems quoted for the Ár n-oileán Resources Ltd. Seal Plant located in Tors Cove, NL are equipped with 3 stage particulate filtration. The stages are as follows: First is a MERV-A 9A hydrophobic prefilter, MERV-A 14A Secondary Filtration with gasphase molecular filtration, and the third and final stage is a High Efficiency 4V 99.99% HEPA Filter. Our Filtration Systems are also equipped with Needlepoint Bipolar Ionization Equipment (GPS NPBI), needlepoint bipolar ionization technology creates and releases ions into the airstream using the filtration system as the delivery method. When these ions disperse throughout a space, they seek out and form bonds with particles in the air through a process called agglomeration. This creates a snowball effect in which particles begin to cluster together. The larger a cluster of particles becomes, the easier it is for your system to filter it out of the air. This technology also can aid in surface disinfection, and is effective against Sars CoV 2. *Global Plasma Solutions is the first air purification solution to test SARS-CoV-2, achieving a 99.4% reduction of the surface strain within 30 minutes.* This technology is also used as a line of defense against some other viruses and bacteria, we have several third party studies available that show it's effectiveness on various viruses, bacteria, and VOCs.

With 99.99% efficiency on 0.3micron particles, coupled with gas phase molecular filtration and GPS NPBI Technology, these filtration systems far exceeds today's CSA standards in surgical operating rooms in Canada. This level of care for staff and product quality is truly admirable, we look forward to working with you to achieve your indoor air quality goals.

Sincerely,

Steve Smith,

Vice-President, HVAC Specialties Inc.

HVAC Specialties Inc.

Phone: 709 895-5151

E-mail: steve@hvacspecialties.ca

Tors Cove Pond Water Use Licence



Government of Newfoundland and Labrador
Department of Environment, Climate Change and Municipalities
Water Resources Management Division

WATER USE LICENCE Commercial (Commercial Purpose)

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01

Date of Issuance: MARCH 08, 2021

No: WUL-21-11654
File: 516

Licensee: Ar n-oilean Resources Ltd.
4 Hebbard Pl
St. John's, NL A1A 5J6
kflood@nlseal.com

Attention: Kendall Flood

Re: Water Withdrawal and Use from Tors Cove Pond for Fish Plant Processing, Tors Cove

The Minister of Environment, Climate Change and Municipalities (the "Minister") hereby grants a non-exclusive water right to: **Ar n-oilean Resources Ltd.** (the "Licensee") to withdraw water from Tors Cove Pond (47.213056°N, 52.872778°W) through a water line extending from Newfoundland Power Hydro Plant as indicated in Schedule A (attached), and use it for supplying water to the Licensee's fish plant, in reference to the application dated February 3, 2021 and additional information received on February 9, 2021.

This Licence is subject to the terms and conditions, reservations, exceptions, and provisions stated herein and the *Water Resources Act* and regulations thereunder. Appendices A, B and Schedule A (attached) form part and parcel of this Licence.

This Licence does not release the Licensee from the obligation to obtain appropriate approvals, permits or licences from other concerned municipal, provincial and federal agencies.

The Licensee shall complete and return the attached Notification of Acceptance of Water Use Licence to the Water Rights, Investigations, and Modelling Section of the Department of Environment, Climate Change and Municipalities within thirty (30) days of receipt of this Licence.

A handwritten signature in blue ink, appearing to read "Kendall Flood", written over a horizontal line.

(for) MINISTER

ESA Executive Summary



Phase I Environmental Site Assessment
2 Cove Road, Tors Cove, Newfoundland and Labrador
Ár n-oileán Resources Ltd.

May 5, 2020
Pinchin File: 274297

EXECUTIVE SUMMARY

Pinchin Ltd. (Pinchin) was retained, through an Authorization to Proceed, Limit of Liability and Terms of Engagement signed by Ár n-oileán Resources Ltd. (Client), to conduct a Phase I Environmental Site Assessment (ESA) of the property located at 2 Cove Road, Tors Cove, Newfoundland and Labrador (hereafter referred to as the Site).

The Site is developed with a vacant seafood processing facility which consists of two commercial buildings, an office building, and trailer.

Pinchin was advised by the Client that the purpose of the Phase I ESA was to assess potential issues of environmental concern in relation to the potential acquisition and financing of the Site.

The Phase I ESA was completed in general accordance with the Canadian Standards Association (CSA) document entitled *Phase I Environmental Site Assessment, CSA Standard Z768-01* (reaffirmed 2016), including a review of readily available historical records, a review of readily accessible regulatory records, a Site reconnaissance, interviews, an evaluation of information and reporting, subject to the limitations outlined in Section 8.0 of this report.

Based on the results of the Phase I ESA completed by Pinchin, nothing was identified that is likely to result in potential subsurface impacts at the Site. As such, no further work is recommended at this time.

Given the years of construction of the Site Buildings (i.e. approximately 1979 and early 1990s), there is a potential for asbestos-containing materials (ACMs) to be present in the Site Buildings. Pinchin did not conduct an asbestos survey as part of this Phase I ESA, nor was any sampling or inspection for asbestos conducted as part of this Phase I ESA. The Site Representative advised Pinchin that no asbestos surveys have been previously conducted at the Site, and that an Asbestos Management Program has not been developed for or implemented at the Site.

This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.

This report has been issued without having received a response from the Newfoundland and Labrador Department of Municipal Affairs and Environment (DMAE). Once a response from this regulatory body is received, the information will be reviewed by Pinchin and a copy of the response will be forwarded to the Client under separate cover. Our conclusions and recommendations may be amended based on this information.

Seal Processing Licence Approval Letter



Government of Newfoundland and Labrador
Department of Fisheries and Land Resources
Office of the Minister

COR/2020/01745

AUG 05 2020

Mr. Kendall Flood
Ar n-Oilean Resources Limited
4 Hebbard Place
St. John's, NL A1A 5J6

Dear Mr. Flood:

I am pleased to advise you that based on the recommendation of the Fish Processing Licensing Board, approval-in-principle is hereby given to your company for a new seal primary processing licence in Tors Cove. This approval is valid until one year from the date of this letter.

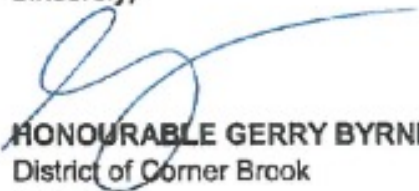
The licence for this facility will be issued when the following conditions have been met:

- (i) Receipt of proof that the facility has been issued a licence from the Canadian Food Inspection Agency; and
- (ii) A facility inspection is completed by departmental inspection staff.

The base licensing fees for the 2020-21 licence year have been waived, due to government's ongoing efforts to support businesses during the Covid-19 pandemic.

I trust this is satisfactory and wish you every success.

Sincerely,



HONOURABLE GERRY BYRNE, MHA
District of Corner Brook
Minister

- c. Ms. Lorelei Roberts-Loder, Assistant Deputy Minister, Fisheries and Aquaculture
Mr. Derrick Lockyer, Fish Processing Licensing Board Secretariat

Ammonia Safety Data Sheet

Material name: AMMONIA, ANHYDROUS
Issue date: 24-September-2021 Version #: 01

WHMIS Group #: 00010001



SAFETY DATA SHEET

1. Identification

Product identifier AMMONIA, ANHYDROUS

Other means of identification

CAS number 7664-41-7

Recommended use ALL PROPER AND LEGAL PURPOSES

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name BRENNTAG CANADA INC

Address 43 Jutland Rd.
Toronto, ON M8Z 2G6
Canada

Telephone 416-259-8231

Website <http://www.brenntag.com/canada/en/>

E-mail RegulatoryAffairs@Brenntag.ca

Emergency phone number 1-855-273-6824

2. Hazard identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 3
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Health hazards not otherwise classified	Category 1
	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

Label elements



Signal word Danger

Hazard statements Extremely flammable gas. Contains gas under pressure; may explode if heated. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Toxic if inhaled. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Presents a health hazard which is not otherwise classified.

Precautionary statement

Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing gas. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Propane Commercial Safety Data Sheet



Propane Commercial

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 05/10/2017 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form : Substance
Substance name : Propane Commercial
Product code : CA-1001-06868-1
Formula : C3H8
Synonyms : Propane, commercial / LPG (Liquefied Petroleum Gas) / LP-Gas

1.2. Recommended use and restrictions on use

Recommended uses and restrictions : Various

1.3. Supplier

Air Liquide Canada Inc.
1250, René Lévesque West Blvd. Suite 1700
H3B 5E6 Montreal, QC - Canada
T 1-800-817-7697
www.airliquide.ca

1.4. Emergency telephone number

Emergency number : 514-878-1667

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Flammable gases, Category 1 H220

Gases under pressure : Liquefied gas H280

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-CA labelling

Hazard pictograms (GHS-CA) :



GHS02

GHS04

Signal word (GHS-CA) : Danger

Hazard statements (GHS-CA) :

H280 - Contains gas under pressure; may explode if heated.
H220 - Extremely flammable gas.
OSHA-H01 - May displace oxygen and cause rapid suffocation
CGA-HG01 - May cause frostbite
CGA-HG04 - May form explosive mixtures with air

Precautionary statements (GHS-CA) :

P381 - In case of leakage, eliminate all ignition sources.
P377 - Leaking gas fire: Do not extinguish unless leak can be stopped safely
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.
P403 - Store in a well-ventilated place.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P271 - Use only outdoors or in a well-ventilated area.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302 - IF ON SKIN:
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52 °C/125 °F
CGA-PG05 - Use a back flow preventive device in the piping
CGA-PG06 - Close valve after each use and when empty
CGA-PG10 - Use only with equipment rated for cylinder pressure
CGA-PG14 - Approach suspected leak area with caution

NSF International Detergent Certification

NSF International

789 N. Dixboro Road, Ann Arbor, MI 48105 USA

RECOGNIZES

CHEMITEQ Limited

Facility: Flevoland, The Netherlands

NSF INTERNATIONAL
S COMPLYING WITH NSF/ANSI 60 AND ALL APPLICABLE REQUIREMENTS
PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
AUTHORIZED TO BEAR THE NSF MARK.



ANSI Accredited Program
NSF/ANSI 60
4876
Certification Program
Accredited by the
American National
Standards Institute



Certification Program
Accredited by the
Standards Council
of Canada

This certificate is the property of NSF International and must be returned upon request. This certificate remains valid as long as this client Listing for the referenced standards. For the most current and complete Listing information, please access NSF's website (www.nsf.org)

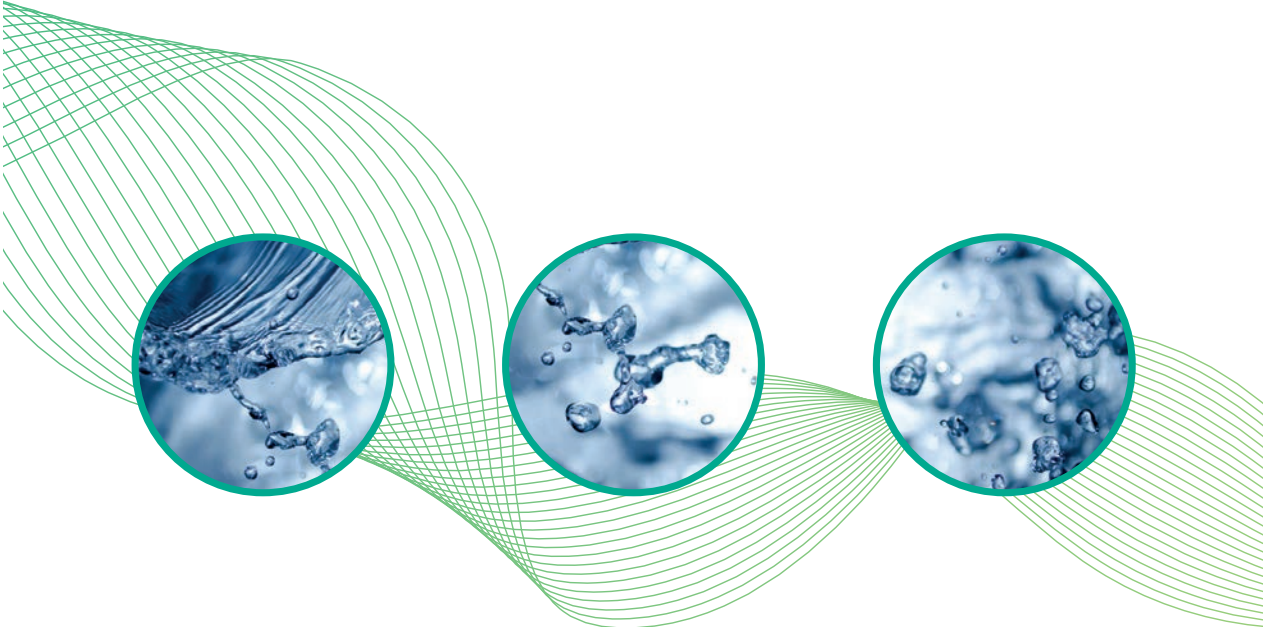
A handwritten signature in black ink that reads "Theresa Bellish".

2017
ic# C0315694 - 01

Theresa Bellish
General Manager, Water Systems



Oxyl-Pro Clean



For removal of biofilm and
disinfection of water & surfaces

Oxyl-Pro Clean - For removal of biofilm and disinfection of water & surfaces

Why Oxyl-Pro Clean?

The cleaning of pipework in buildings is a crucial step in ensuring clean water is delivered throughout the water distribution system. By removing biofilm from pipework, an important source of bacteria for harmful micro-organisms to survive is taken away. The result is clean pipework delivering clean water. Oxyl-Pro Clean is a very effective biofilm remover and is also effective against gram-positive and gram-negative bacteria including Legionella, Pseudomonas, yeasts and fungi. Test results are available on request.

Oxyl-Pro Clean has NSF/ANSI 60 Certification for use in drinking water

If biofilm is left to build up in pipework, it can lead to corrosion, resulting in blocked or leaking pipes. It harbours harmful bacteria, allowing it to grow and proliferate throughout the water distribution system. It can result in foul smells from the system and can significantly reduce water flow. Furthermore it can create a barrier to biocides such as chlorine.

Oxyl-Pro Clean has been Certified under NSF/ANSI 60 Drinking Water disinfection products. It has endorsement from WRc (UK) for use in water systems inside buildings and is on the approved list of products for use in drinking water systems by Norwegian Food Safety Authority (Mattisynet).

Oxyl-Pro Clean is also used for disinfection of hard surfaces and equipment. As a food safe no-rinse disinfectant, the benefits of labour and water savings can be significant. The product is used in many applications in the food and beverage sector for this purpose. When the product is used on equipment, hard surfaces, walls and floors it provides all round protection in the work place. There is no need to rinse. The efficacy continues to work long after the product has dried. When used at the end of production the equipment, surfaces etc. are ready to use at the start of the next run.



Using Oxyl-Pro Clean to clean pipework

Methods for cleaning pipework

There are several methods of cleaning pipework with Oxyl-Pro Clean and this is largely dependent on the time available to carry out the procedure and also the application:

- **General maintenance disinfection**
Low dose rate – Short period of time
- **Contaminated systems**
Fast or slow disinfection methods applicable, depending on available time.
- **Continuous dosing**
Low dose rate delivered via dosing system
- **Hard surface disinfection**
For equipment, work surfaces, walls, floors etc.

Generic method statements are available from your technical advisor. Alternatively we can work with you to provide a bespoke package suited to your requirements.

Advantages of Oxyl-Pro Clean

- All food grade raw materials, contains no silver or other heavy metals
- NSF/ANSI 60 drinking water certified
- Listed as an approved product by Norwegian Food Safety Authority
- Endorsed for use in water systems inside buildings by WRc
- Accepted by the HSE as an alternative means of disinfection in L8
- Quickly kills bacteria, including Legionella. (European Standards pr EN13623 2010)
- Has no build-up of resistance in the microbial population
- Capable of destroying biofilms and eliminating "microbial hideout"
- Has no odour, taint or taste at the recommended rates of use
- Waste products are water and oxygen, so it is environmentally safe
- Does not contain any toxic metals so is safer to use in domestic systems
- Fully effective through a pH range of 2 – 10 and temperatures up to 90°C
- Suitable for continuous dosing



SAFETY DATA SHEET OXYL-PRO® CLEAN

Revision date: 08/02/2018
Revision No: 6

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier:

Product Name: OXYL-PRO® CLEAN

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use: For industrial water treatment. Disinfection agent.

1.3. Details of the supplier of the safety data sheet

Company Name: Oxyl-Pro Limited
Unit 8 Birch Court
Grosvenor Grange
Warrington
WA1 4GD
Tel: 01606 851782
Email: enquiries@oxylpro.com

1.4. Emergency telephone number

Emergency No: 01606 851782 (Office hours only)
Carechem 24 International (Europe): +44 (0) 1235 239 670

SECTION 2: HAZARDS IDENTIFICATION

Labelling



Signal Word: Danger

2.2. Label Elements

Hazard Statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary Statements

P260: Do not breathe dust/fume/gas/mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P284: In case of inadequate ventilation wear respiratory protection.
P303+P361+P353+p310: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing - Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.
P305+P351+P338+P310: IF IN EYES: Rinse continuously with water for several minutes - Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor
P370+380+375: In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed. Storage temperatures 5-30°C.

Hazardous components which must be listed on the label:

7722-84-1 Hydrogen peroxide

2.3. Other Hazards

Physical/Chemical Hazard: Risk of decomposition on heating. Risk of decomposition in contact with incompatible products. (metal oxides, metal ions (e.g. Mn, Fe, Cu, Ni, Cr, Zn), metal salts, bases, reducing agents). Sustains the combustion of combustible material.

Remarks: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures**Hazardous ingredients:**

HYDROGEN PEROXIDE <40%

CAS: 7722-84-1

EC No: 231-765-0

EC annex No: 008-003-00-9

REACH registration number: 01-2119485845-22

Composition comments:

Stabilised

Food packaging certificate available from supplier.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures**Skin contact:**

Wash off immediately with plenty of water removing all contaminated clothes and shoes. Wash contaminated clothing with plenty of water to prevent a fire hazard. Keep warm. If skin irritation persists, call a physician.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.

Ingestion:

Rinse mouth. Give small amounts of water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Keep warm. Call a physician immediately.

Inhalation:

Move to fresh air. Keep warm. Give oxygen or artificial respiration if needed. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed**Symptoms:**

Cough, Dizziness, Headache, Nausea, Shortness of breath, Redness, Pain, Blurred vision, Burn, Abdominal pain, Vomiting, Causes severe burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Symptomatic treatment.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media: Water
 Water mist
 The product itself does not burn

Unsuitable Carbon dioxide (CO₂)
Extinguishing media Dry powder

5.2. Special hazards arising from the substance or mixture

The product itself does not burn but it sustains the combustion of combustible material. Contact with combustible material may cause fire. Risk of explosion if mixed with combustible material. Pressure build-up in confined space (risk of decomposition).

5.3. Advice for fire-fighters

Wear self-contained breathing apparatus (EN 133)
Complete suit protecting against chemicals

5.4. Specific Methods

Cool containers / tanks with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Never return spills in original containers for re-use. Ensure adequate ventilation. Wear personal protective equipment. Remove all sources of ignition. Keep people away from and upwind of spill/leak.

6.2. Environmental precautions

Environmental precautions:

Prevent product from entering drains. Do not release into the environment.

6.3. Methods and material for containment and cleaning up

Clean-up procedures:

Prevent from spreading. Dam up. Very dilute solution can be washed into drains with plenty of water. Contact the local authorities. Never return spills in original containers for re-use.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Never return unused material to storage receptacle. Open drum carefully as content may be under pressure. Avoid exposure. Ensure adequate ventilation, especially in confined areas. Wear suitable protective clothing. Keep away from sources of ignition. No smoking. Keep away from combustible material. Protect from contamination.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a cool, well-ventilated place. Keep away from heat and sources of ignition. Condition of containers should be checked regularly. Store in original container. Store in a receptacle equipped with a vent. Never store in metal containers.

Shelf life: 2 years from date of manufacture when stored in accordance with recommendations. See best before date on label.

Materials to avoid:

Combustible material, Reducing agents, Organic materials, Bases, metal oxides, metal ions (e.g. Mn, Fe, Cu, Ni, Cr, Zn), metal salts, Rust, Dirt.

7.3. Specific end use(s)

Specific end use(s): No data available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Limit Values

8.1.1 Limit values in other countries

Finland:

Hydrogen peroxide

HTP-arvot 8h = 1 ppm = 1,4 mg/m³

HTP-arvot 15 min = 3 ppm = 4,2 mg/m³

Sweden:

Hydrogen peroxide

NGV = 1 ppm = 1,4 mg/m³

TGV = 2 ppm = 3 mg/m³

Germany:

Hydrogen peroxide

MAK = 0,5 ppm = 0,71 mg/m³

Belgium:

Hydrogen peroxide

TGG 8 hr = 1 ppm = 1,4 mg/m³

Switzerland:

Hydrogen peroxide

TWA = 0,5 ppm = 0,71 mg/m³, : OSHA

STEL = 0,5 ppm = 0,71 mg/m³, : OSHA

Estonia:

Hydrogen peroxide

Piirnorm = 1 ppm = 1,4 mg/m³, *: Ceiling limit value - the maximum permitted sustained content of rapidly acting substances in the air over a 15 minute period; in the case of ammonia and isocyanide over a 5 minute period.

Piirnormi lagi = 2 ppm = 3 mg/m³, *: Ceiling limit value - the maximum permitted sustained content of rapidly acting substances in the air over a 15 minute period; in the case of ammonia and isocyanide over a 5 minute period.

Spain:

Hydrogen peroxide

VLA-ED = 1 ppm = 1,4 mg/m³

France:

Hydrogen peroxide

VME = 1 ppm = 1,5 mg/m³, : Indicative exposure limits

Ireland:

Hydrogen peroxide

OELV - 8 hrs (TWA) = 1 ppm = 1,5 mg/m³

OELV - 15 min (STEL) = 2 ppm = 3 mg/m³

Netherlands:

Hydrogen peroxide

TWA = 1 ppm = 1,4 mg/m³

Poland:

Hydrogen peroxide

NDS = 1.5 mg/m³

Portugal:

Hydrogen peroxide

VLE-MP = 1 ppm, A3: Substances of which the carcinogenic effect has been confirmed in laboratory tests on animals with confirmed relevance for humans

Slovenia:

Hydrogen peroxide

MV = 1 ppm = 1,4 mg/m³

Slovakia:

Hydrogen peroxide

NPEL = 1 ppm = 1,4 mg/m³, Category 1: Local irritating factors or factors that cause sensibilisation of the airways.: Maximum duration of 15 minutes. Frequency per shift: 4. Minimum period between individual exposure peaks: 1 hour. CEIL = 1,4 mg/m³, Category 1: Local irritating factors or factors that cause sensibilisation of the airways.: Maximum duration of 15 minutes. Frequency per shift: 4. Minimum period between individual exposure peaks: 1 hour.

DNEL

Hydrogen peroxide

End Use: Workers

Exposure routes: Inhalation

Value: 3 mg/m³

Acute, Local effects

End Use: Workers

Exposure routes: Inhalation

Value: 1,4 mg/m³

Long-term, Local effects

End Use: General population

Exposure routes: Inhalation

Value: 1,93 mg/m³

Acute, Local effects

End Use: General population

Exposure routes: Inhalation

Value: 0,21 mg/m³

Long-term, Local effects

PNEC

Hydrogen peroxide

Fresh water

Value: 0,0126 mg/l

Fresh water sediment

Value: 0,047 mg/kg

Marine water

Value: 0,0126 mg/l

Marine sediment

Value: 0,047 mg/kg

STP

Value: 4,66 mg/l

Soil

Value: 0,0023 mg/kg

8.2. Exposure controls

Engineering measures

Avoid exposure. Wash hands before breaks and immediately after handling the product. Ensure adequate ventilation. Use personal protective equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory equipment

In case of insufficient ventilation wear suitable respiratory equipment. (filter ABEK-P3)

Hand protection

Use suitable protective gloves if risk of skin contact.

Glove material: butyl-rubber, Break through time: 8 h

Glove material: Natural Rubber, Break through time: 8 h

Glove material: Nitrile rubber, Break through time: 8 h

Glove material: Polyethylene, Break through time: 8 h

Glove material: PVC, Break through time: 4 h

Glove material: Neoprene, Break through time: 1 - 4 h

DO NOT wear leather gloves. Do not wear cotton gloves (May cause fire)

Eye protection

Tightly fitting safety goggles and face-shield. Eye wash bottle with pure water

Skin and Body Protection

Chemical resistant protective clothing. Do not wear leather shoes. Safety shower

8.2.3 Environmental exposure controls

Prevent product from entering the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

State:	Liquid
Colour:	Colourless
Odour:	Odourless - Slightly pungent
pH Value:	1.4 – 1.6
Density:	1.16
Solubility in water:	Complete
Flash point [°C]:	Not applicable
Freeze point:	-33°C
Boiling point:	108 °C
Vapour pressure:	299 Pa (25 °C) 100 %

Partition coefficient:	
n-octanol/water	log Pow: -1,57 (100 %)
Thermal decomposition	> 108 °C Stabilized
Viscosity:	
Viscosity, dynamic	1,81 mPa.s (0 °C) 1,10 mPa.s (20 °C)

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Risk of decomposition in contact with incompatible products.
 Risk of explosion due to rapid pressure increase in closed containers.
 Decomposes to water and oxygen.
 Contact with combustible material may cause fire.
 Sustains the combustion of combustible material.

10.2. Chemical stability

Decomposes on heating
 Stabilising additive(s)

10.3. Possibility of hazardous reactions

Hazardous reactions: See chapter 10.1.
 Risk of decomposition on heating
 Risk of decomposition in contact with incompatible products

10.4. Conditions to avoid

High temperatures
 UV Light
 Protect from contamination
 Keep away from heat and sources of ignition.

10.5. Incompatible materials

Materials To Avoid	Combustible material Reducing agents Organic materials Bases Metal oxides Metal ions (e.g. Mn, Fe, Cu, Ni, Cr, Zn) Metal salts Rust Dirt
--------------------	--

10.6. Hazardous decomposition products

Hazardous decomposition products	Oxygen Water Steam
----------------------------------	--------------------------

Thermal decomposition	>108 °C Note: Stabilised.
-----------------------	------------------------------

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed.

Hydrogen peroxide:

LD50/Oral/rat: 1.193 - 1.270 mg/kg Remarks:(35 % solution)

LD50/Inhalation/4 h/rat: > 0,17 mg/l

Remarks: (50 % solution)

LD50/Dermal/rabbit: > 2.000 mg/kg

Remarks: (35 % solution)

Irritation and corrosion

Skin: Causes skin irritation.

Eyes: Causes serious eye damage.

Hydrogen peroxide:

Skin: rabbit/4 h/Draize Test: irritating

Eyes: rabbit/Draize Test: Eye irritation

Remarks: >=5% w/w to < 8% w/w

Rabbit/Draize Test: Severe eye irritation

Remarks: >= 8% w/w

Sensitisation

Hydrogen peroxide: not sensitising.

Long term toxicity

Target organ

May cause respiratory irritation.

Hydrogen peroxide:

Repeated dose toxicity:

Oral/mouse/90 d/OECD Test Guideline 408:

NOAEL: = 100 ppm

LOAEL: = 300 ppm

Remarks: In drinking water: (35 % solution)

Inhalation/rat/28 d/OECD Test Guideline 412:

NOAEL: = 2,9 mg/m³

LOAEL: = 14,6 mg/m³

Carcinogenicity

No known carcinogenic effects.

Mutagenicity

Result: Mutagenic, genotoxic

Metabolic activation:

Remarks: in vitro assay (various)

Result: not mutagenic

Remarks: in vivo assay (various)

Target organ

Remarks: (≥35 % solution)

STOT - single exposure May cause respiratory irritation.

Human experience

Inhalation

Irritating to respiratory system.

Skin contact

Contact with skin causes blanching and erythema.

Eye contact

Liquid causes severe inflammation of conjunctiva and may cause severe damage of the cornea

Ingestion

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity:

Hydrogen peroxide

LC50/96 h/Pimephales promelas (fathead minnow)/semi-static test/US EPA TSCA Test Guidelines: 16,4 mg/l

LC50/7 d/Oncorhynchus mykiss (rainbow trout): 38,5 mg/l

EC50/48 h/Daphnia/semi-static test/US EPA TSCA Test Guidelines: 2,4 mg/l

NOEC/72 h/Skeletonema costatum (diatom)/static test: 0,63 mg/l

Toxicity to other organisms

EC50/30 min/activated sludge/Respiration inhibition of activated sludge/OECD Test Guideline 209: 466 mg/l

EC50/3 h/activated sludge/Respiration inhibition of activated sludge/OECD Test Guideline 209: > 1.000 mg/l

12.2. Persistence and degradability

Biological degradability:

Hydrogen peroxide:

Readily biodegradable

Chemical degradation:

Hydrogen peroxide:

Decomposes to water and oxygen.

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water: log Pow: -1,57

Hydrogen peroxide –bioaccumulation is unlikely.

12.4. Mobility in soil

Mobility:

Vapour pressure: 299 Pa (25 °C)

Water solubility: completely soluble

Henry's Constant: 0,75 mPa*m³/mol (20 °C); Evaporation from water to air is very weak.

Surface tension: not determined

Hydrogen peroxide:

Vapour pressure: 299 Pa (25 °C)

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Contact a licensed waste disposal company. Dispose of in compliance with local and national regulations.

13.1. Waste treatment methods

In accordance with local and national regulations. See also: Accidental release measures. Wear personal protective equipment. The diluted aqueous solution can be released into drain if it is in accordance with local regulations. The undiluted waste must not be released into drain. Can be incinerated, when in compliance with local regulations.

Rinse package before disposal. Empty containers/packages must not be used for other purposes.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN number: 2014

14.2. UN proper shipping name

Shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3. Transport hazard class(es)

Transport class: 5.1

14.4. Packing group

Packing group: II

Risk code 58

ADR/RID-Labels: 5.1 & 8

Sea transport IMDG:

14.2. UN proper shipping name

Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3. Class 5.1

14.4 Packaging group: II

Risk code 58

MDG-Labels: 5.1 & 8

14.5 Environmentally Hazardous: Not a Marine Pollutant

Air transport Not suitable for air transport.

14.6. Special precautions for user – None known.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Take note of Directive 96/82/EC on the control of major accident hazards involving dangerous substances. The product belongs to at least one of the categories 1 through 11 mentioned in Annex 1 of the Directive 1996/82/EC concerning the control of major accident hazards.

15.2 Chemical Safety Assessment

A chemical safety assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION

Training advice

Read the safety data sheet before using the product

Sources of key data used to compile the Safety Data Sheet
Regulations, databases, literature, own tests.



NSF - Oxyl-Pro Clean
MUL 23mg/L
Bactericide -
Disinfection &
Oxidation

This product is Certified to NSF/ANSI 60 for Drinking Water.

OXYL-PRO® is a registered trade mark of Chemiteq Limited.

Revision 6: 08/02/2018

Annex 1 (EG)1907/2006

Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

Legal disclaimer: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Wildlife Handling Permit



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Atlantic Region
October 2016

Canadian Wildlife Service – Permit Application CAPTURE AND HANDLING OF MIGRATORY BIRDS

SECTION 1: Applicant Information		
1.1 Type of request		
<input type="checkbox"/> New project. <input type="checkbox"/> Continuing project for which a permit has expired. Permit number: _____		
1.2 Previous permits		
Do you currently have or have you previously held a permit issued under the <i>Migratory Birds Regulations</i> ? <input type="checkbox"/> Yes <input type="checkbox"/> No		
If so, provide the most recent permit number: _____		
Has a report been submitted for this (previous) permit? <input type="checkbox"/> Yes <input type="checkbox"/> No		
1.3 Contact information		
Applicant surname:	Applicant given name:	
Position/title (e.g. Environmental Planner):		
Name of the organization you are affiliated with:		
Mailing address of applicant		
Street:		
City:	Province/Territory:	Postal Code:
Work Telephone:	Fax (if available):	
Cellular:	Email:	
Mailing address of organization (if different from above)		
Street:		
City:	Province/Territory:	Postal Code:
SECTION 2: Project Information		
2.1 Project title		
2.2 Project duration (anticipated):		
Start _____ (yyyy/mm/dd)	End _____ (yyyy/mm/dd)	
2.3 Project summary		



2.4 Facility, vessels or rigs where activities will occur
2.5 Location Address/UTM/geo-location or proximity to nearest identifiable town or city. Provide the location(s) where the activities will be conducted. If the migratory birds are to be held in captivity, the address of the facility where they will be held must be included. If birds are to be released in a location other than at the point of capture, please provide the location of release.
SECTION 3: Activities/Methods
3.1 Target species (indicate the species expected to be captured and released)
3.2 Methods or protocol followed for handling and release
3.3 Proposed disposition of dead birds
3.4 Shipment/transport If samples or specimens will be shipped, transported, imported or exported, describe these and provide the name and address where they will be shipped (to/from):



--

Section 4: Nominees

4.1 Nominees (other participants)

Name all individuals handling birds, if this is impossible at time of application, a detailed position title is required.

Name	Organization	Position/Title

Signature of Applicant:	Date (yyyy/mm/dd):
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Send completed form to:

E-mail ec.scfatlpermis-cwsatlpermits.ec@canada.ca

Fax (506) 364-5062

Mail Canadian Wildlife Service
 Environment and Climate Change Canada
 17 Waterfowl Lane
 PO Box 6227
 Sackville NB, E4L 1G6

Contact

Permits (506) 364-5068

General line (506) 364-5044

Schedule A of the Environmental Control Water and Sewage Regulations

NEWFOUNDLAND AND LABRADOR REGULATION 65/03

Environmental Control Water and Sewage Regulations, 2003
under the
Water Resources Act
(O.C. 2003-231)

Schedule A

<i>Column 1</i> <i>Constituents</i>	<i>Column 2</i> <i>Maximum Content</i> <i>(in milligrams per</i> <i>litre unless noted)</i>
B.O.D.	20
Coliform - faecal	1000/100 ml
Coliform - total	5000/100 ml
Solids (dissolved)	1000 (see note)
Solids (suspended)	30 (see note)
Oils (Ether extract)	15
Floating debris, oils and grease	None to be visible
Arsenic	0.5
Barium	5.0
Boron	5.0
Cadmium	0.05
Chlorine	1.0
Chromium (hexavalent)	0.05
Chromium (trivalent)	1.0
Copper	0.3
Cyanide	0.025
Iron (total)	10
Lead	0.2
Mercury	.005
Nickel	0.5
Nitrates	10
Nitrogen (ammoniacal)	2.0
Phenol	0.1
Phosphates (total as P ₂ O ₅)	1.0
Phosphorus (elemental)	0.0005
Selenium	0.01
Sulfides	0.5
Silver	0.05
Zinc	0.5

NOTES:

(1) If water is being abstracted from a water course, used, treated and subsequently returned to the same water course, these solids data mean that the effluent should not contain more than 1000 or 30 milligrams per litre more than was in the water originally abstracted.

(2) 1 bequerel (bq) - 27.03 pico-curies. Bequerel is the SI unit for the measure of radioactivity.

(3) All metal results should be the total of the particulate and the dissolved fractions of that metal and the maximum content is the amount in excess of the background level as determined upstream of the discharge.

Waste Management Plan

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Waste Characterization

Effluent Handling

Septic System

Solid Wastes

Waste Characterization

- Effluent
 - Washdown Grey Water
 - Receiving Zone
 - Transport Vehicles
 - Fish Tubs
 - Skin Splitting Phase
 - Meat Processing Phase
 - Skin Washing Wastewater
 - Oil Refinery Processing Water
 - Water Separated from Pinniped Vascularized Adipose Tissue
- Septic
- Solid Waste
 - Loose Seal Hair
 - General Waste
 - Cardboard
 - Recyclables

Effluent

The plant's existing offal discharge outflow is located approximately 200 feet North East of the wharf. Ocean currents draw discharge away from the beach and with the company's primary operating months of January through May comes the added benefit of increased sea states and tidal movements within the harbour which increases the recycle flush rate of the area.

Figure 95 - Effluent Discharge Location

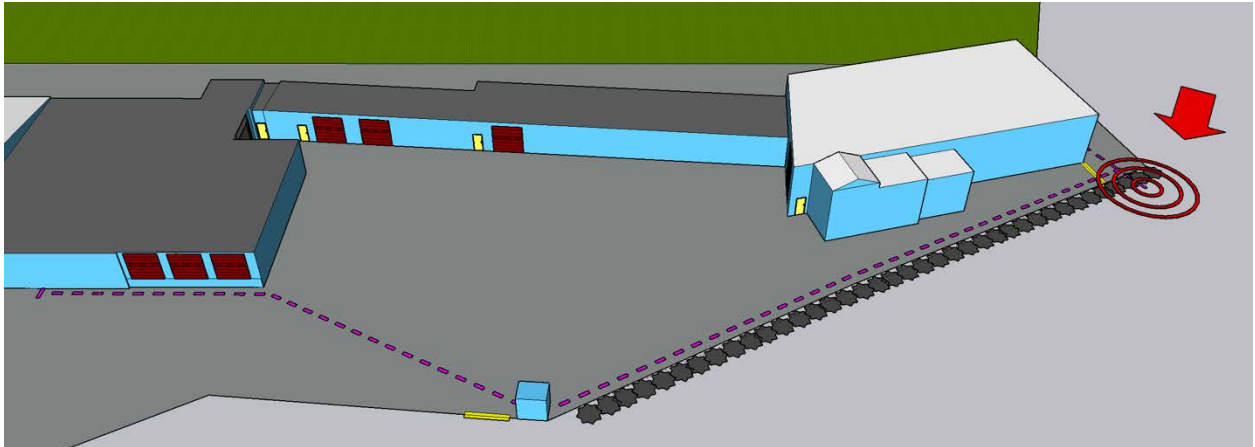


Figure 96 - Effluent Discharge Location

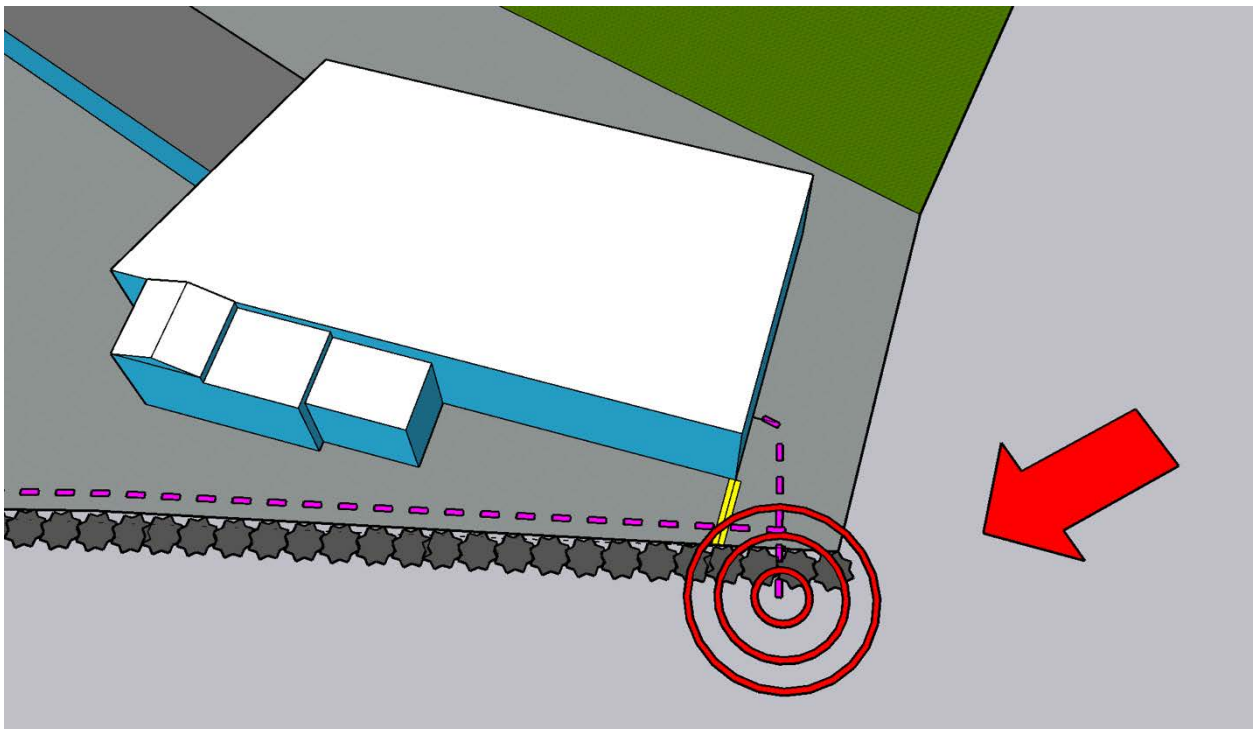


Figure 97 - Effluent Discharge Location Distance to Wharf



The oil refinery mechanically separates the pinniped vascularized adipose tissue into 3 parts:

- Omega-3 oil
- Fat Solids
- Clean Water

The Omega-3 oil and fat solids, collected in 1000L IBCs, are sold and shipped from the plant. Water from every batch is collected for quality testing.

The company acknowledges that certain contaminants have been found to attach to the pinniped vascularized adipose tissue due to habitat pollution and environmental bioaccumulation. Below is a list of some of the contaminants that have been found:

- Organochlorine Pesticides (OCPs)
- Polychlorinated dibenzodioxins (PCDDs)
- Polychlorinated biphenyl (PCBs)
- Hexachlorobenzene (HCB)
- Tris(4-chlorophenyl) methane (TCPMe)
- Tris(4-chlorophenyl) methanol (TCPMOH)
- Heavy Metals

It is the company's understanding that none of the existing seal plants in Newfoundland have detected these contaminants in the water separated from the fat solids beyond the acceptable limits as defined by Schedule A of the Environmental Control Water and Sewage Regulations.

Samples from each batch of separated water and grey water will be collected and transported to an external laboratory that meets the requirements of the Accredited Laboratory Policy for testing.

The policy can be found at: [Pollution Prevention - Environment and Climate Change \(gov.nl.ca\)](https://www.gov.nl.ca/pollution-prevention-environment-and-climate-change/).

The company commits to ensuring any and all effluent released from the plant will be within acceptable limits as defined by Schedule A of the Environmental Control Water and Sewage Regulations which includes but not limited to PH, BODs, TSS, and heavy metals and to utilize a 3rd party to monitor the receiving environment annually.

[Schedule A provided on Appendix 10.11 pg. 151 and at https://www.assembly.nl.ca/Legislation/sr/Regulations/rc030065.htm](https://www.assembly.nl.ca/Legislation/sr/Regulations/rc030065.htm)

Septic

The plant has an existing septic system that the company plans to utilize based on successful verification, hookup and testing. If this system is not functioning it will be decommissioned, and a new system will be installed.

The new system will be governed by provincial government sewage standards: <https://www.gov.nl.ca/dgsnl/files/publications-private-sewage-disposal-and-water-supply-standards.pdf>.

This process requires an application with the following information provided:

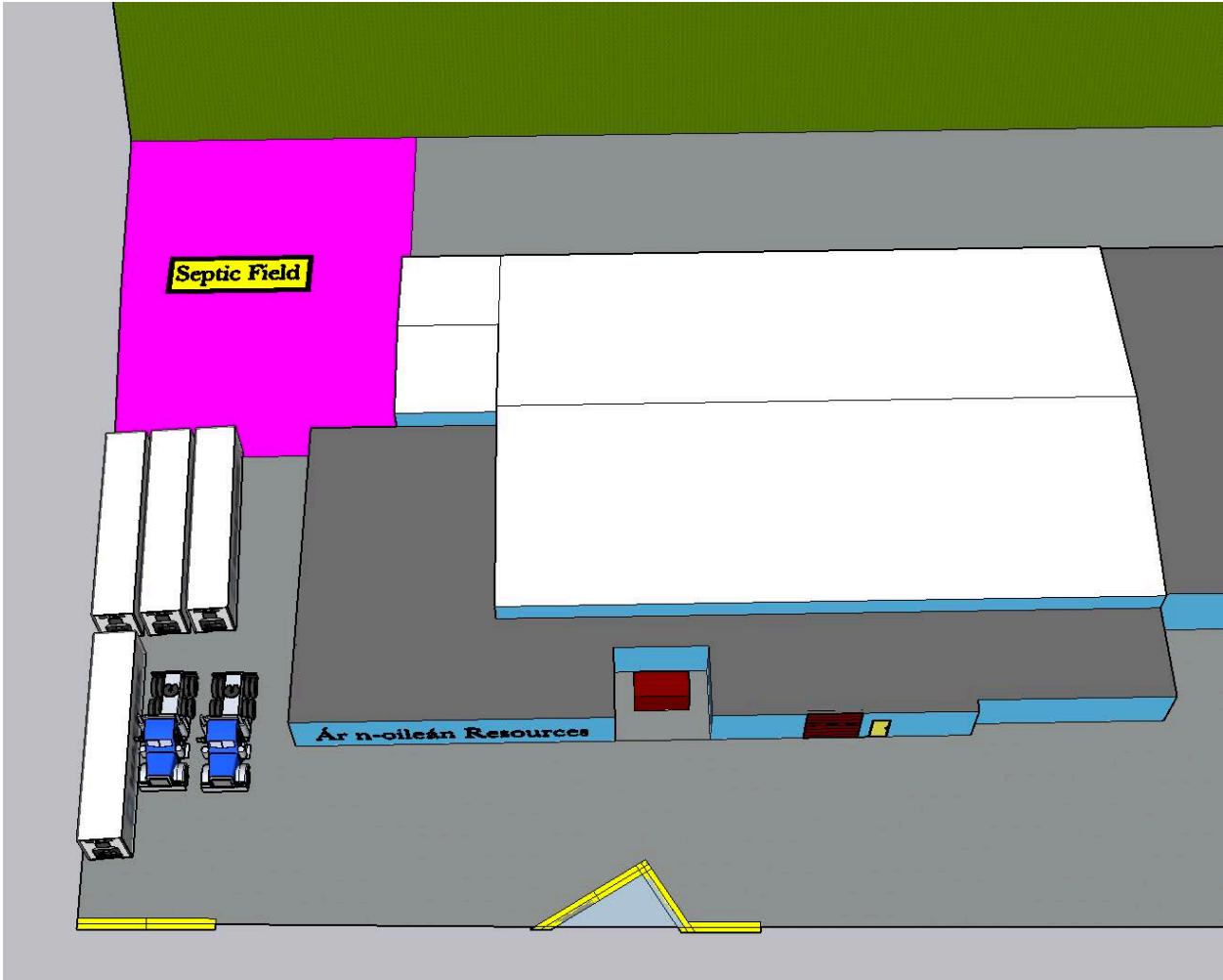
- Detailed site plan.
- Floor plan of proposed dwelling/establishment.
- Percolation test results.
- Depth of ground water table.
- Design calculations for the design of the Septic System.
- Detailed construction drawings.
- Profile of the land in the general area of where the septic system is to be installed.
- Description of the general ground conditions in the area where the system is to be installed.
- Municipal approval (if applicable).

If a new system is required the application, design and installation will be completed by a government approved engineering contractor and inspected as per guidelines by Government officials.

<https://www.gov.nl.ca/dgsnl/files/Approved-Designers-Provincial.pdf>

In the event that a new system is required the company plans to utilize the land shaded in drawing below.

Figure 98 - Septic Field Designated Area Highlighted in Pink



Solid Waste

Any hair separated from the skins during the washing process are collected by a self-cleaning filter, bagged and disposed of at the Robin Hood Bay Waste Management Facility pending final approval from Eastern Regional Landfill.

Company representatives have had discussions with the Waste Management Engineer Waste & Recycling Division, Department of Public Work, city of St. John's and have been advised that seal hair, not full pelts, collected in garbage bags could be accepted at the Robin Hood Bay facility provided that the waste is free from other seal parts and does not have a strong smell. Final approval will be reserved until inspection of first waste collected.

There is a very limited volume of solid waste generated during processing mostly limited to PPE, packaging materials and cleaning products. Such waste will be disposed of in covered dumpsters and/or garbage skips located outside of the facility and will be collected and/or replaced when needed by Eastern Waste Management or third-party commercial garbage haulers.

Carboard and other recyclable material ready for disposal will be segregated in clearly labeled skips and collected by Eastern Waste Management as required.

Figure 99 – Garbage & Recycling Bins



Noise Mitigation Plan

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Traffic

Operational Noise

Traffic

The adult seal harvesting season begins in January and the beater seal season runs from March-May, the vast majority of traffic whether it be employee or transport truck, will occur from the months of January through May.

One to three trailers will be required to unload a sealing vessel depending on the payload and there will typically be one to two boats landed in a week with sealers staying at sea up to ten to fourteen days at a time. It is estimated there will be six to twenty landings per year with twenty-five to fifty trailers of raw material entering the plant annually.

These trailers will be unloaded on the day that they arrive at the plant during normal processing hours in the vicinity of~ 8am – 5pm. Finished product leaving the plant would require fewer trucks than the raw material brought in and would be exiting during the same aforementioned processing hours.

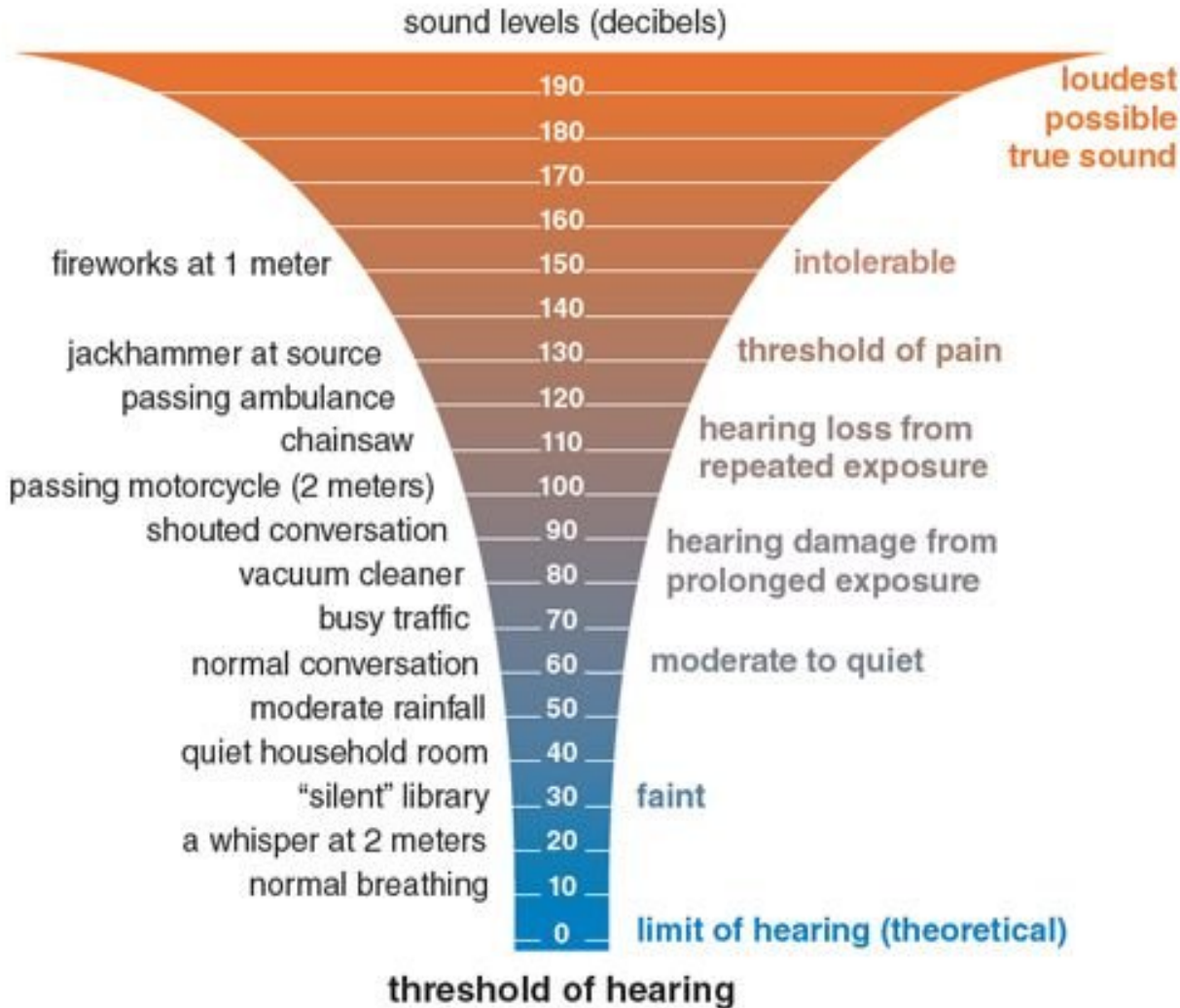
Any and all vehicles on Ár n-oileán property will adhere to the strictly enforced no idling policy, this includes pickup trucks and tractor trailers.

Operational Noise

Sound tests were conducted in the plant at 135db and it was completely inaudible beyond the company property. There will be no shift change horns used as had been implemented by the plants previous owners.

During phase two of Áir n-oileán’s upgrades to the facility the company will be installing insulated siding to the exterior of the facility adding further sound dampening.

Figure 100 - Sound Level Comparison Chart



Air Quality / Odour Mitigation Plan

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Raw Material Handling

Omega-3 Oil Process

Air Filtration

Raw Material Handling

Raw material entering the plant will be transported in covered, watertight fish tubs. They are unloaded from transport trucks at the loading zone which is on a natural incline preventing runoff from inside of the trailer. The loading zone yard is paved to prevent the absorption of organic material spills and sloped away from the facility preventing standing water and mitigating any potential odors.

The loading zone, general yard, trailers and tubs will be hosed off regularly to ensure they are free from material that could become odorous and attract wildlife or insects.

Figure 101 - 1,000L Insulated Fish Tub



Figure 102 - Raw Material Receiving



The company anticipates utilizing nearly 100% of the organic material it accepts into the plant and therefore there will be very little thrown away. The plant's garbage and recyclables will be disposed of into clearly marked covered dumpsters or similar bins and removed regularly by Eastern Waste Management and local commercial waste haulers.

Figure 103 – Garbage & Recycling Bins



Omega-3 Oil Process

The predominate process for separating omega-3 seal oil in Newfoundland is a combination of cooking the seal fat between 90°C and 105°C to create the necessary viscosity to flow through multiple centrifuges. Ár n-oileán has developed a new process that does not require the use of heat at all. The company's proprietary, cold process for refining pinniped, vascularized, adipose tissue into high quality omega-3 oil mechanically separates the tissue without cookers and chemical free.

By not using chemicals or heat to separate the seal fat it not only provides the highest quality oil attainable, but limits the production effluent to clean water and dramatically reduces potentially odorous off gases typically produced during a rendering process.

Although there are numerous other mechanical cold separation techniques utilized around the world for refining seal oil including but not limited to hydraulic, centrifugal and gravity fed, no other method produces a quality as high as Ár n-oileán's oil or produces it as efficiently. With this achieved quality the company models itself under nutraceutical standards instead of that of a typical seal plant.

The fat once removed from the seal pelt, is fed into the pharmaceutical grade, hermetically sealed oil refinery which is equipped internally with HEPA and carbon filtration. Here the fat is mechanically separated during a cold process into three parts: Omega-3 oil, fat solids and water.

The oil is pumped directly into sealed IBCs (Intermediate Bulk Containers) and shipped for encapsulation.

The fat solids are also pumped directly into sealed IBCs. These containers are sold to both international and Newfoundland buyers.

Separated water from every batch along with samples of the grey water will be tested by an external laboratory that meets the requirements of the Accredited Laboratory Policy for testing to ensure all effluents released are within the acceptable limits as defined by Schedule A of the Environmental Control Water and Sewage Regulations.

The Accredited Laboratory policy can be found at: [Pollution Prevention - Environment and Climate Change \(gov.nl.ca\)](#).

[Schedule A provided on Appendix 10.11 pg. 151 and at <https://www.assembly.nl.ca/Legislation/sr/Regulations/rc030065.htm>](#)

Air Filtration

Ár n-oileán's Tors Cove facility is being refitted as a nutraceutical plant rather than a seal tannery or a fish plant. The buildings will have an array of sixteen custom designed, self-contained, HVAC air filtration units provided by HVAC Specialties. These are suspended from the ceiling to circulate and filter air within the building.

These units have 3 stage filtration including High Efficiency 4V HEPA filters which are 99.99% effective at 0.3 microns and far exceeds CSA standards for hospital operating rooms.

Airborne particulates and gases including odors are captured in these filters before they can exit the building.

They are also equipped with Needlepoint Bipolar Ionization Equipment (GPS NPBI), devices that neutralize pathogens such as moulds and viruses including COVID-19.

These HVAC units provide air filtration but are not air conditioning units and as such do not contain any CFCs or other refrigerants commonly found in air conditioners.

[More detail on HVAC air filtration units provided on Appendix 10.1 pg. 128](#)

Recreational Water Quality & Country Foods Impact Mitigation Plan

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Geography

Recreational Water Usage

Country Foods

Impacts & Mitigations

Geography

Figure 104 – Aerial Photo of Tors Cove Facility



The area adjacent to the plant is a public beach and a dilapidated, partial wharf. This land and wharf are **not** property owned or commercially utilized by the company. Furthermore, the company has no intentions of receiving vessels or landing raw material at this wharf at any time of year.

Recreational Water Usage

The area adjacent to the plant is a beach and partial Wharf. The area is used by locals and tourist who visit the beach to see the ocean view, by recreational fisher-people, recreational boaters, divers, kayakers the majority of this activity is from May - Sept.

Country Foods

In addition to the recreational activity there is commercial activity with two Tors Cove Fisherman occasionally landing Ground Fish and Lobster and use this are to clean their catch.

Impacts & Mitigations

As discussed in main body of this document the planned operation is running primary in winter months when activity in the area is low and the only thing entering the ocean is the by-product of our oil refinery which is clean fresh water and wash-down water which will includes small amounts of Environmentally safe detergents.

In contrast to the primary activity May through September timespan of recreational and country food operators utilizing the harbour, 70% of Ár n-oileán's operations occur January through February, 25% March through May, and only 5% from June through December.

The company has no plans to use the wharf or beach area at any time of the year and all trucks, trailers and employee parking will be kept within the fenced property or within secured off-street parking.

The plant's existing offal discharge outflow is located approximately 200 feet North East of the beach. For decades Tors Cove Fisheries utilized this infrastructure to discharge its offal from processing its shellfish, pelagics and groundfish. The currents in this area carried any and all discharge further North East and away from the beach including heavy, discharged offal such as streams of cod heads.

Figure 105 - Effluent Discharge Location Distance to Wharf



Ár n-oileán's offal discharge will not contain similar solids; the company is estimating approximately 600,000 – 1,000,000 gallons of effluents will be discharged annually and will be composed entirely of grey water from skin washing drums, water separated from the seal fat and grey water from general plant and equipment wash downs. Detergents used during skin washing and general washdowns will strictly be CFIA approved, **environmentally safe**, and the same or similar to the detergents used by the nearby Barry Group Inc (BGI) crab plant in Witless Bay.

One such option for Ár n-oileán is Oxyl Clean Pro, a detergent that is not toxic to birds or any other wildlife and has NSF/ANSI 60 certification.

Information on NSF/ANSI 60 certification can be found at https://d2evkimvhatqav.cloudfront.net/documents/NSF-ANSI_60_watemarked.pdf?mtime=20200716160320&focal=none

*Oxyl Clean Pro NSF certification is provided on Appendix 10.7 pg. 134
More information on Oxyl Clean Pro detergent is provided on Appendix 10.8 pg. 135*

The company will monitor all releases, samples will be regularly collected and transported to an external laboratory that meets the requirements of the Accredited Laboratory Policy for testing to ensure it is within acceptable government limits as per Schedule A of the Environmental Control Water and Sewage Regulations.

The Accredited Laboratory policy can be found at: [Pollution Prevention - Environment and Climate Change \(gov.nl.ca\)](#).

Schedule A provided on Appendix 10.11 pg. 151 and at <https://www.assembly.nl.ca/Legislation/sr/Regulations/rc030065.htm>

As stated above, ocean currents draw discharge away from the beach and with the company's primary operating months comes the added benefit of increased sea states and tidal movements within the harbour which increases the recycle flush rate of the area.

The company believes the amount of by-product, type of by-product and planned time of yearly operation are at such low level or type that interaction with fish, users of ocean and coastline pose a very little, if any, concern.

Wildlife Management Plan

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Area Wildlife

Potential Wildlife Impacts

Mitigations

Permits & Reporting

Area Wildlife

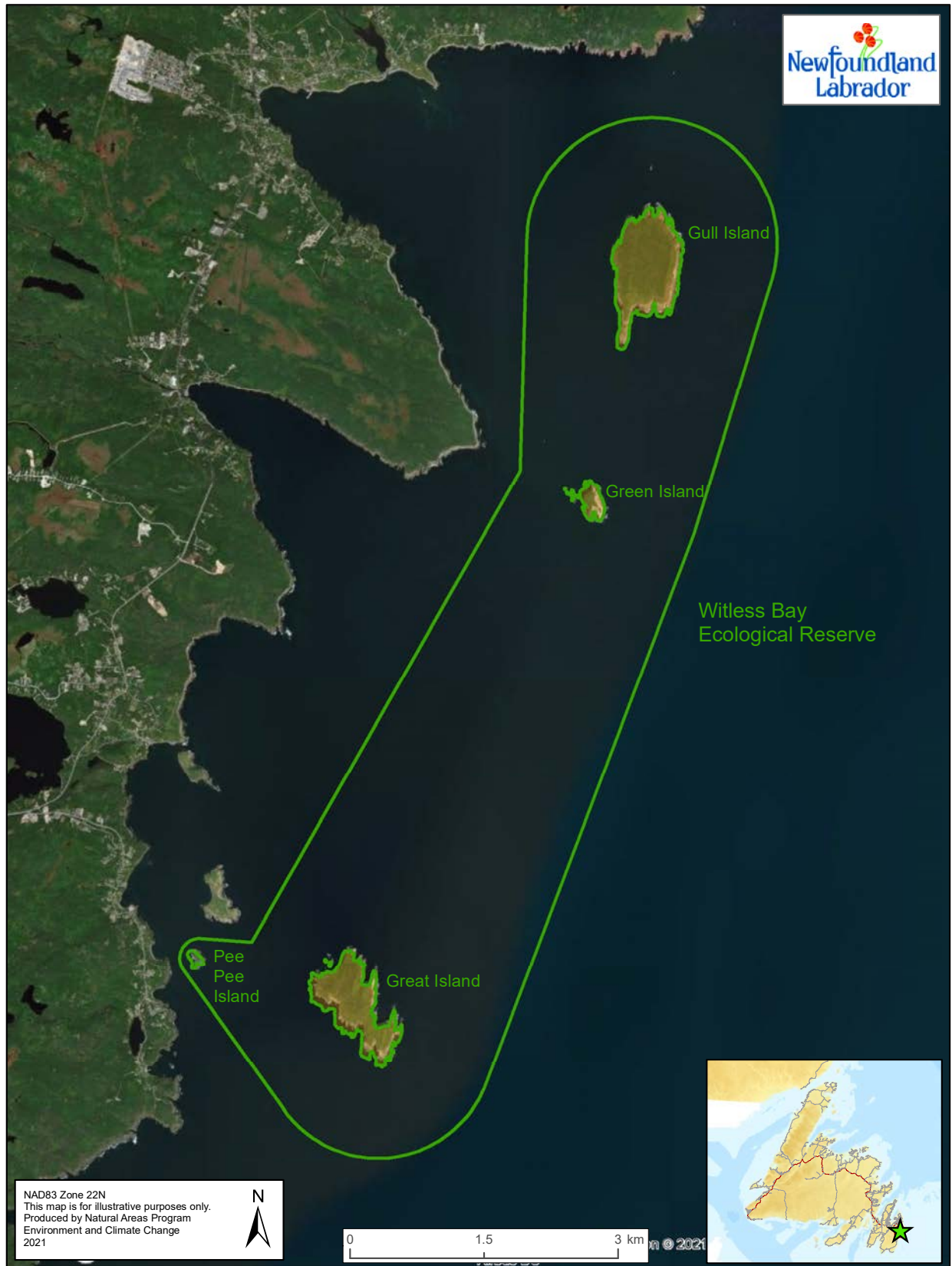
The Ár n-oileán omega-3 oil processing facility is located within the coastal community of Tors Cove. The predominant wildlife that could be impacted in this area are sea birds, namely the Herring Gull and the Leach's Storm-petrel.

The processing plant is less than 3km from the Witless Bay Ecological Reserve as shown below in **Figure 106**. The Reserve is home to the largest colony of the Leach's Storm-petrel in Newfoundland.

Figure 106 - Leach's Storm-Petrel



Figure 107 - Witless Bay Ecological Reserve



Potential Wildlife Impacts

- Onsite impacts
 - Effluent
 - Garbage Bins
 - Raw Material
 - Standing Water
 - Lighting

Mitigations

Figure 108 - Effluent Discharge Location

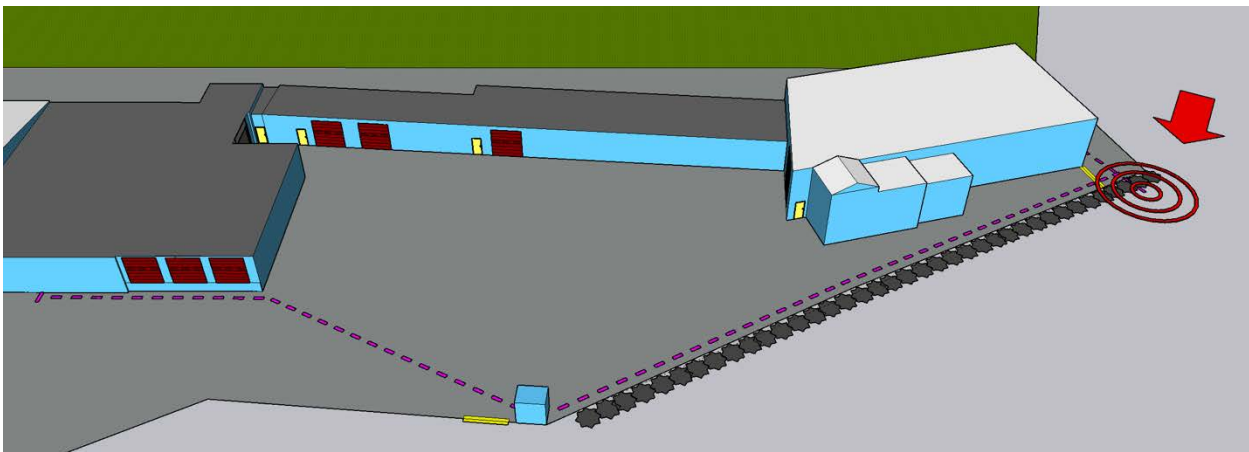


Figure 109 - Effluent Discharge Location

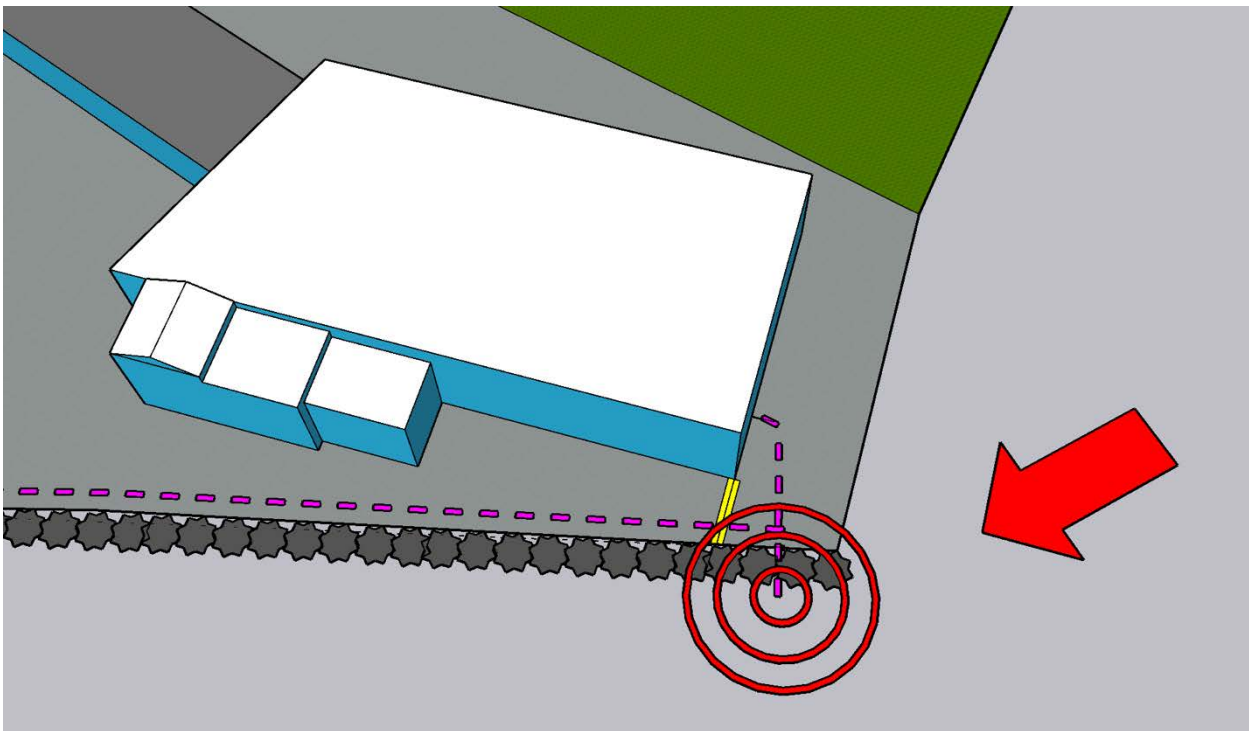


Figure 110 - Effluent Discharge Location Distance to Wharf



The company will ensure the selected **Environmentally Safe**, CFIA approved detergents used during operations will be in compliance with the Migratory Birds Convention Act and its associated regulations. Under Section 5.1 of the MBCA, it is prohibited to deposit substances that are harmful to migratory birds into waters or areas that are frequented by migratory birds, or in a place from which the substance may enter such waters or such an area.

One such option for *Ár n-oileán* is Oxyl Clean Pro, a detergent that is not toxic to birds or any other wildlife and has NSF/ANSI 60 certification.

Information on NSF/ANSI 60 certification can be found at https://d2evkimvhatqav.cloudfront.net/documents/NSF-ANSI_60_watemarked.pdf?mtime=20200716160320&focal=none

*Oxyl Clean Pro NSF certification is provided on Appendix 10.7 pg. 134
More information on Oxyl Clean Pro detergent is provided on Appendix 10.8 pg. 135*

The company commits to ensuring any and all effluent released from the plant will be within acceptable limits as defined by Schedule A of the Environmental Control Water and Sewage Regulations and to utilize a 3rd party to monitor the receiving environment annually.

Schedule A provided on Appendix 10.11 pg. 151 and at <https://www.assembly.nl.ca/Legislation/sr/Regulations/rc030065.htm>

The Canadian Wildlife Service asks that any material that may attract Gulls be removed from the yard and garbage skips and dumpsters that may contain organic material be covered and removed on a regular basis. Any tubs or other holding devices that are stored outside will have been cleaned and free of any product or debris that could attract birds or pests.

The company anticipates utilizing nearly 100% of the organic material it accepts into the plant and therefore there will be very little thrown away. The plant's garbage and recyclables will be disposed of into clearly marked covered dumpsters or similar bins and removed regularly by Eastern Waste Management and local commercial waste haulers.

Figure 111 – Garbage & Recycling Bins



Raw material entering the plant will be transported in covered, watertight fish tubs. They are unloaded from transport trucks at the loading zone which is on a natural incline preventing runoff from inside of the trailer. The loading zone yard is paved to prevent absorption of organic material and sloped to prevent standing water. The loading zone, general yard, trailers and tubs will be hosed off regularly to ensure they are free from material that could attract wildlife or insects.

A certified pest control company will be contracted to provide ongoing pest control inside and outside of the facility.

Figure 112 - Raw Material Receiving



Figure 113 - 1,000L Insulated Fish Tub



The ecological reserve hosts the protected Leach's Storm-Petrel, a nocturnal bird attracted to large, bright, lights. The company recognizes that with the proximity of the plant to Witless Bay Islands Ecological Reserve, which hosts a large population of Leach's Storm-petrel and other migratory birds, light attraction is a concern and commits to making every effort to mitigate the amount of artificial light emitted from the property.

As operations take place almost entirely during daylight hours, the company will not be installing external lighting beyond security lighting above doors which is necessary for safety concerns. There is an existing streetlight on the fenced boundary of the company property and the beach. As an added precaution the company will follow a suggestion from the coordinator of making sure security lights are aimed downwards whenever possible.

The Leach's fledging season runs from September through November, during these months in particular but also throughout the year, it is not entirely uncommon for these young birds to be blown ashore. The Canadian Wildlife Service has recommended that the company post Leach identifying material throughout the facility so company employees will be able to identify the birds if they are blown onto the property. Noting that approximately 95% of the company's operations will occur during January through May, Ár n-oileán will make sure that staff present during the off-season will be educated on identifying the birds.

The Canadian Wildlife Service indicated that a wildlife handling permit could be obtained so that company representatives can release lost birds back to flight.

Figure 114 - Tors Cove Beach Street Light



Figure 115 - Tors Cove Beach Street Light



Figure 116 - Tors Cove Beach Street Light



Permits & Reporting

The company will apply for the Canadian Wildlife Services handling permit required to handle and release migratory birds that become stranded at the facility, which will be done following ECCC's 2017 Guidance "Procedures for handling and documenting stranded birds encountered on infrastructure offshore Atlantic Canada."

CWS handling permit provided on Appendix 10.10 pg. 148

ECCC's 2017 Guidance can be found at:

<https://www.cnlopb.ca/wp-content/uploads/mkiasseis/bestpracbird.pdf>

In addition to mitigations to operating vectors that could potentially affect the colony listed within this document, the company will also record any and all sightings of the Leach's Storm-petrel including dates and times, and provide The Canadian Wildlife Service of all such encounters to aid the department with their data accumulation.

In the event that Gulls begin nesting upon facility rooftops the Canadian Wildlife Service asks that the company relay this information to the federal department so that they can ascertain and implement methods for removal and future deterrent.

Environmental Health & Safety Contingency (Transportation Spill) Plan

Ár n-oileán will be transporting bulk oil to the mainland for encapsulation and bottling via transport truck with approximately 16,000L – 20,000L per trailer. The company will use drivers with all necessary certifications and trained in WHMIS. Drivers will also undergo in house training on spill reporting and containment.

The company plans to have each truck enabled with GPS tracking which will allow for faster tracking, reporting and response times in the very rare event of a release.

In addition to the standard truck kit the company will have extra spill kits on bulk oil shipments that contain:

- Instructions and reporting guidelines
- Transportation spill reporting forms
- PPE
 - Gloves
 - eye ware
 - disposable suit

Figure 117 - PPE



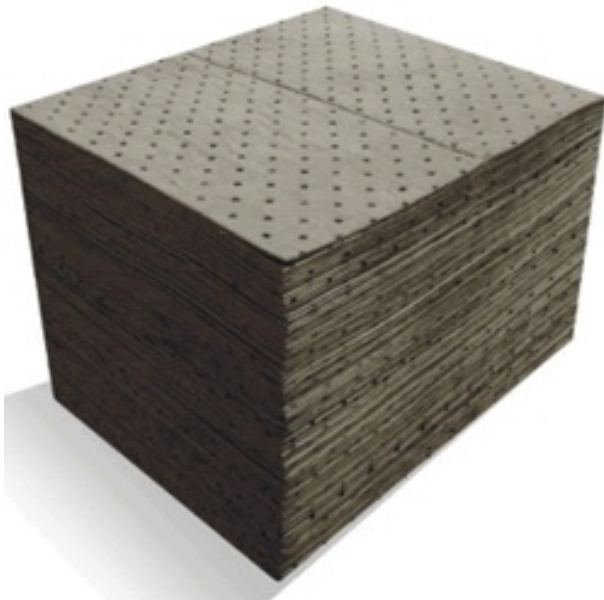
- Granular absorbents

Figure 118 – Granular Absorbents



- Absorbent mats

Figure 119 – Absorbent Mats



- Boom socks

Figure 120 – Boom Socks



- Bio-hazard waste bags

Figure 121 – Bio-Hazard Waste Bags



Transportation Spill Reporting Form

Date of reporting:	Time of reporting:
Person reporting the spill:	Phone number:
Address:	Email:
Responsible person (the person/company in possession, charge, and/or control of the substance when it was spilled):	Phone number:
Address:	Email:
Owner of the substance spilled:	Phone number:
Address:	Email:
Date of spill:	Time of spill:
Location of Spill Site:	
Description of spill location and surroundings:	
Distance to nearest public facility, residence, Indigenous community:	
Distance to nearest stream, water bodies, sensitive areas:	
Description of source of spill:	
Type of substance spilled:	Quantity of substance spilled:
Description of the circumstances, cause and adverse effects of the spill:	
Actions taken to address the threat or hazard caused by the spill:	

Check/tick the boxes below (advised of the spill and present at the spill site):	
Agencies and name of person advised about the spill:	
<input type="checkbox"/> Police/Fire Dept. (911)	
<input type="checkbox"/> Environment and Climate Change Canada (1800-668-6767)	
<input type="checkbox"/> Local government; name of person:	
<input type="checkbox"/> Others:	
Other comments/actions taken:	
Information Form completed by:	Phone number:
Title:	Date: