

Waste Management Plan

St. Anthony Marine Biomaterial Processing Facility

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1. Proponent and Project Information

Project Name: St. Anthony Marine Biomaterial Processing Facility

Proponent: Atlantic BioCorp Ltd.

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Construction is anticipated to occur during June-July 2026. The construction workforce is expected to be approximately 5–7 personnel. The operational workforce is expected to be approximately 5–10 personnel.

2. Purpose of the Plan

This Waste Management Plan has been prepared to describe the generation, handling, storage, transport, and disposal of wastes associated with the construction and operation of the St. Anthony Marine Biomaterial Processing Facility. The plan is intended to support review by the Waste Management Section of the Pollution Prevention Division prior to the commencement of construction. The plan incorporates fundamental waste management principles, including reducing, reusing, recycling, and recovering materials, with disposal as a last resort.

3. Project Context and General Waste Profile

The facility will be established within an existing building; no earthworks or new building construction is anticipated. The project's overall pollution profile is low. Wastes associated with the project are expected to be limited primarily to general solid waste and recyclable materials typical of light industrial and office operations (e.g., packaging materials), as well as small volumes of infrequent maintenance-related wastes (e.g., spent absorbents and filters). The facility's operational inputs include powdered food-grade citric acid and a powdered food-grade protease enzyme. Routine facility cleaning will use conventional residential cleaning products in small quantities. The facility's process and water management approach is primarily mechanical (filtration), with use of chitosan for flocculation as part of internal treatment processes. No fueling will occur on site, as equipment is electric.

4. Waste Management Objectives and Hierarchy

Atlantic BioCorp Ltd. will manage wastes in accordance with the waste hierarchy. This will be achieved through procurement and operational practices that minimize waste generation, encourage reuse where feasible, and maximize recycling and recovery opportunities. Waste will be segregated at source where practical to support recycling and appropriate disposal. Waste storage will be conducted in a manner that prevents windblown litter, nuisance odours, wildlife attraction, and releases to the environment. Waste will be transported and disposed of through approved services and facilities.

5. Waste Identification and Management Measures

Atlantic BioCorp Ltd. will manage all wastes generated during construction and operation through source segregation, controlled storage, approved collection, and disposal or recycling through appropriate regional or approved receiving facilities. In addition to describing handling measures, this section identifies the anticipated waste streams, estimated quantities, storage arrangements, collection frequency, and proposed disposal or receiving routes for each waste type.

5.1 Construction phase (June - July 2026)

Construction activities are expected to be limited in scope due to occupation of an existing building. The primary waste streams anticipated during construction include:

- Lumber offcuts and small quantities of wood waste associated with minor fit-ups or modifications.
- General refuse (mixed waste) associated with day-to-day construction activities.
- Packaging wastes (cardboard and plastics) associated with delivery and installation of equipment or materials.
- Concrete waste, excavated soil, and other earthwork-related wastes are not anticipated.

Construction wastes will be managed by segregation where feasible. Recyclable packaging (cardboard and plastics) will be separated and placed into designated recycling containers where local services accept these materials. General refuse and non-recyclable materials will be placed in covered waste dumpsters. Lumber offcuts will be placed in designated waste containers and managed through the local waste management system in accordance with acceptance requirements. Waste will be removed as required to maintain a clean site and to prevent accumulation.

5.2 Operations phase (ongoing)

During operations, the facility will generate typical commercial solid wastes and recyclables. Anticipated waste streams include:

- General solid waste from normal operations and housekeeping.
- Recyclables including cardboard, plastics, and cans/beverage containers.
- Infrequent or incidental wastes, including printer cartridges (rare), batteries from handheld tools (rare), small electronic waste (rare), occasional lighting waste (rare), and small quantities of maintenance wastes such as spent absorbents and filters (rare).

General solid waste will be collected in lined internal receptacles and transferred to covered on-site dumpsters. Recyclable materials will be source-separated using clearly labeled containers and transferred to designated recycling bins/dumpsters. Materials will be kept reasonably clean and dry to support acceptance by recycling services.

Infrequent wastes such as printer cartridges, batteries, small e-waste, and spent lamps will not be placed in general dumpsters where stewardship or depot-based systems are available. Instead, these items will be consolidated in a dry, secure indoor location and periodically transferred to an appropriate approved depot or receiver, or returned through supplier take-back programs where applicable. Small maintenance wastes (e.g., spent absorbents and filters) will be collected in sealed bags or containers to prevent nuisance conditions and managed through the local waste management system unless characterization indicates special handling is required.

5.3 Anticipated Waste Streams, Estimated Quantities, and Receiving Routes

A table has been added as appendix A to this document defining and outlining the associated waste streams with this project. Estimated quantities are conservative planning values intended to size storage capacity and define disposal pathways. Actual quantities will be tracked during operation and this plan may be updated if operational experience indicates materially different volumes or additional waste streams. No concrete waste, excavated soil, or other earthworks-related wastes are anticipated because the project will occupy an existing building.

5.4 Temporary Triage Management for Flocculated Process Water

During initial operations, and until the dedicated water treatment system is delivered, installed, commissioned, and operating reliably, Atlantic BioCorp Ltd. will implement a temporary triage management approach for process water requiring off-site handling.

Atlantic BioCorp Ltd.'s technical team has identified a temporary treatment approach that is expected to reduce the majority of the waste management burden to approximately two to three IBC totes (1,000L or less total) per operating day of treated process water. This process

water will have been pH-adjusted and flocculated to remove protein solids using chitosan and citric acid. The resulting flocculated protein material will be separated from the water stream to the extent practical before off-site management.

This temporary approach is intended only as an interim operational control measure. It is not Atlantic BioCorp Ltd.'s long-term wastewater management strategy. The long-term strategy remains the installation, commissioning, and operation of the dedicated water treatment system described elsewhere in this plan.

Atlantic BioCorp Ltd. has met with representatives of NorPen / Northern Peninsula Regional Service Board and the Town of St. Anthony regarding this temporary approach. Based on those discussions, NorPen has indicated that it has the ability to accommodate the temporary volume of approximately two to three IBC totes per day without issue, subject to any normal operational coordination, scheduling, and site-specific receiving requirements.

The temporarily managed water will be stored in sealed, labelled, liquid-tight IBC totes or equivalent containers. Containers will be kept closed except during filling, sampling, inspection, transfer, or unloading. Storage will occur in a controlled area to prevent leakage, odour, wildlife attraction, windblown material, or release to the environment.

Atlantic BioCorp Ltd. will continue to minimize the volume requiring off-site handling by maximizing in-process solids separation, maintaining effective pH adjustment and flocculation controls, and expediting commissioning of the dedicated water treatment system. Once the dedicated water treatment system is operating reliably, this temporary off-site triage pathway will be discontinued unless otherwise required as a contingency measure.

5.5 Transport, Receiving, and Recordkeeping for Temporary IBC Tote Management

Temporarily managed process water generated under Section 5.4 will be transported to NorPen / Northern Peninsula Regional Service Board or another approved receiving facility acceptable for the material characteristics. Transport will occur in sealed, liquid-tight IBC totes or equivalent approved containers suitable for preventing spills, leaks, odours, and release to the environment.

Atlantic BioCorp Ltd. has coordinated with NorPen to confirm the receiving location, delivery schedule, notice requirements, acceptable container type, unloading method, and site-specific requirements for handling or placement. Delivery frequency will be managed to prevent unnecessary accumulation on site and to maintain orderly operations.

The material will not be discharged to the environment, placed loose in exterior bins, discharged untreated to sewer, or allowed to accumulate in a manner that could create odour, nuisance conditions, leachate, wildlife attraction, or environmental release. If any tote or

container shows signs of leakage, damage, abnormal odour, or other concern, the affected container will be isolated, secured, and addressed promptly.

Atlantic BioCorp Ltd. will maintain records for this temporary management pathway, including the dates of generation and shipment, approximate number of IBC totes shipped, estimated volume, treatment method used, transporter where applicable, receiving facility, and any receipts, weigh tickets, service logs, or receiving documentation provided by NorPen or another approved receiver.

This temporary IBC tote management approach will remain in place only until the dedicated water treatment system is installed, commissioned, and operating reliably. Actual volumes and handling experience during the temporary period will be reviewed by the Waste Coordinator and used to update this plan if materially different waste volumes, material characteristics, or receiving requirements are identified.

6. Waste Dangerous Goods / Hazardous Waste Statement

Atlantic BioCorp Ltd. does not anticipate generating waste dangerous goods (WDG) or hazardous wastes (HW) as part of construction or operations. Fueling will not occur on site, as equipment is electric. Primary process inputs are food-grade powders (citric acid and protease enzyme), and cleaning products will be conventional household-grade products used in small quantities.

If an unexpected waste stream is generated or discovered (for example due to changes in materials, maintenance activities, or unforeseen items present within the building), Atlantic BioCorp Ltd. will isolate and label the material, determine its appropriate classification (including whether it is regulated as WDG/HW), and arrange transport and management using appropriately qualified and authorized service providers. Applicable documentation (including manifests and receiving documentation where required) will be retained.

7. On-site Storage, Segregation, and Site Controls

Waste storage will be conducted using on-site dumpsters located in a designated, accessible area suitable for collection vehicles. Dumpsters will be maintained in a closed or covered condition when not in active use to prevent windblown litter and wildlife attraction and to reduce precipitation ingress. Containers will be maintained in good condition and replaced if damaged.

Recyclables will be stored separately from general refuse, with clear labeling to support correct disposal practices. Infrequent special items (batteries, lamps, e-waste, cartridges) will be stored indoors in a dry and secure location until removed to an approved depot/receiver or returned via supplier programs, as applicable.

Atlantic BioCorp Ltd. will maintain general housekeeping standards around waste storage areas. Any litter or debris will be cleaned promptly. Waste will not be allowed to accumulate in a manner that creates odours or nuisance conditions.

8. Wastewater Management and Effluent Treatment

Process wastewater generated at the facility will be managed through an internal treatment train prior to discharge. The purpose of the treatment train is to remove suspended solids, fats/oils/grease-associated material, and other loadings so that treated effluent is suitable for discharge in accordance with the Environmental Control Water and Sewer Regulations. Atlantic BioCorp Ltd. will operate the treatment system as an integral part of facility operations and will monitor performance through influent and effluent characterization.

8.1 Treatment Process

Process wastewater is first discharged from the reactor vessel to a drop screen with 500 µm openings to remove coarse suspended solids and reduce downstream loading. The screened flow is then routed through a secondary fine screen with 250 µm openings to capture additional fine suspended solids not retained by the first stage. Following screening, the wastewater is conditioned in a dedicated coagulation/flocculation step using quaternized chitosan as the primary flocculant upstream of a dissolved air flotation unit. The DAF system generates microbubbles through a pressurized recycle stream; the microbubbles attach to conditioned floc and carry the solids to the surface, where the floated material is removed by skimming. Clarified effluent from the treatment unit is the stream intended for discharge.

8.2 Effluent Characterization Methods

To evaluate treatment performance, influent and effluent samples are analyzed using recognized standard methods. Total suspended solids (TSS) are determined using Standard Methods 2540 D. Five-day biochemical oxygen demand (BOD₅) is determined using Standard Methods 5210 B. Chemical oxygen demand (COD) is determined using Standard Methods 5220 C/D. Fats, oils, and grease (FOG) are measured using Standard Methods 5520 B. Total Kjeldahl nitrogen (TKN) is determined using Standard Methods 4500-Norg (Kjeldahl) together with Standard Methods 4500-NH₃. These parameters are used to characterize wastewater quality entering and leaving the treatment train and to confirm treatment performance.

8.3 Representativeness of Characterization

Characterization samples were collected directly from the pilot demonstration line at defined locations immediately upstream of the treatment train, representing influent prior to screening and DAF, and immediately downstream of the treatment train, representing effluent from the post-DAF clarified stream. Both influent and effluent samples were analyzed for TSS, BOD, COD, FOG, and TKN using the analytical methods identified above. This characterization is considered representative of pilot-scale operations because the samples were generated during operation of a scale-sized pilot demonstration system using the same process steps, equipment types, operating conditions, and wastewater matrix anticipated for the proposed pilot-scale configuration. Accordingly, the measured influent and effluent concentrations reflect actual pilot operating performance through the treatment process rather than bench-scale or synthetic testing.

8.4 Compliance Basis and Operational Commitment

Atlantic BioCorp Ltd. has presented treatment and characterization information to the Pollution Prevention Division in a meeting on March 2, 2026 and a follow-up email dated March 3, 2026. A summary table of the pilot influent and effluent analytical results, together with the applicable discharge criteria under the Environmental Control Water and Sewer Regulations, will be appended to this plan as Appendix B. That appendix will demonstrate the reduction achieved across the treatment train and the basis on which Atlantic BioCorp Ltd. concludes that the treatment process is capable of producing effluent suitable for discharge when operated as designed.

Atlantic BioCorp Ltd. will operate the treatment system so that only treated effluent meeting applicable discharge requirements is released. If monitoring, observation, or operating conditions indicate that treated effluent may not meet applicable criteria, discharge will be suspended and the affected wastewater will be retained for retreatment, adjustment, or other appropriate management until compliance is confirmed.

9. Waste Transport, Collection, and Disposal

Atlantic BioCorp Ltd. will use NorPen / Northern Peninsula Regional Service Board for waste management services, including general dumpster collection and, where accepted, management of temporary process-water residuals and other approved waste streams through regional waste management facilities serving the St. Anthony area.

General solid waste and routine recyclables will continue to be managed through covered dumpsters, labelled recycling containers, and approved regional disposal or recycling routes as described in Appendix A.

During the temporary triage period before the dedicated water treatment system is delivered, installed, commissioned, and operating reliably, Atlantic BioCorp Ltd. may transport approximately two to three IBC totes per operating day of pH-adjusted and flocculated process water to NorPen or another approved receiving facility. This material will have been treated using chitosan and citric acid to flocculate and remove proteinaceous solids to the extent practical before off-site handling.

Atlantic BioCorp Ltd. has met with NorPen / Northern Peninsula Regional Service Board and the Town of St. Anthony regarding this temporary approach. Based on those discussions, NorPen has indicated that it has the ability to accommodate the temporary volume of approximately two to three IBC totes per day without issue, subject to normal operational coordination, scheduling, acceptance, and site-specific receiving requirements.

Before routine delivery, Atlantic BioCorp Ltd. will coordinate with NorPen to confirm the receiving location, delivery schedule, notice requirements, vehicle or container access, acceptable container type, unloading method, and any site-specific handling requirements.

Temporarily managed process water will be transported in sealed, labelled, liquid-tight IBC totes or equivalent approved containers. Containers will be kept closed except during filling, inspection, sampling, transfer, or unloading. Transport will be conducted in a manner that prevents spills, leaks, odours, litter, and release to the environment. No loose liquid, sludge, or uncontained material will be transported in open vehicles.

The material will not be discharged to the environment, placed loose in exterior bins, discharged untreated to sewer, or allowed to accumulate in a manner that could create odour, nuisance conditions, leachate, wildlife attraction, or environmental release. If odour, leakage, container damage, or other concern arises, removal or corrective action will be expedited.

Receipts, service logs, weigh tickets, manifests, or other documentation provided by the transporter or receiving facility will be retained when available. The temporary IBC tote pathway will be discontinued once the dedicated water treatment system is installed, commissioned, and operating reliably, unless otherwise required as a contingency measure.

10. Contingency and Emergency Response Measures

Atlantic BioCorp Ltd. will maintain procedures and basic supplies to address incidents that could affect the environment, including issues related to waste handling and storage.

Potential events include windblown litter, container damage or leakage, odour conditions, and small spills associated with cleaning products or maintenance activities. Response measures include prompt cleanup, isolation of affected materials, replacement of damaged containers, and expedited waste removal. Where a spill occurs, the material will be contained, absorbed

using appropriate absorbents, collected, and disposed of appropriately. Reasonable care will be taken to prevent any discharge to drains or the surrounding environment.

Basic spill response supplies (e.g., absorbent materials, gloves, waste bags) will be maintained on site in a known location. Any incident with potential off-site impact or environmental concern will be managed and reported to the appropriate authorities consistent with applicable requirements and internal procedures.

In addition to the general response measures above, any treatment upset, process upset, or off-spec batch generation event will trigger immediate segregation of the affected material, inspection of containers and process equipment, and a determination of whether the material can be reprocessed or must be disposed of. Any wastewater not meeting internal discharge criteria will be retained for retreatment, adjustment, or off-site management as appropriate and will not be discharged until acceptable quality is confirmed.

11. Roles, Responsibilities, and Training

Atlantic BioCorp Ltd. will designate a Waste Coordinator prior to construction start. The Waste Coordinator will be responsible for implementing this Waste Management Plan, coordinating collection and hauling services with NorPen, maintaining waste-related records, overseeing inspections of waste areas, and ensuring that segregation and labeling practices are maintained.

All staff and contractors will be responsible for placing wastes in the correct containers, maintaining tidy work areas, and reporting any issues such as odours, container damage, leakage, or improper disposal.

Training will be provided to staff and relevant contractors at onboarding and refreshed annually (or as procedures change). Training will cover waste segregation requirements, location and use of waste and recycling containers, management of infrequent special items (batteries, lamps, e-waste, cartridges), housekeeping expectations, and basic spill response and reporting procedures. Training records will be retained.

12. Inspection and Recordkeeping

Atlantic BioCorp Ltd. will conduct routine checks of waste storage areas daily during operations and daily during construction. Inspections will verify that dumpsters are closed, not overflowing, and in good condition, that recycling streams remain segregated, and that the surrounding area is free of litter and nuisance conditions. Any deficiencies will be corrected promptly, including scheduling additional pickups as required.

Records retained on site will include the designated Waste Coordinator assignment, service provider contact information, service agreements, any available hauling or receiving documentation, inspection logs, training records, incident/spill reports, wastewater treatment operating logs, and influent/effluent sampling and analytical records demonstrating treatment performance and discharge compliance.

13. Site Plan and Photo Documentation

Appendix C provides an annotated aerial site plan identifying the locations and access points associated with waste management at the St. Anthony Marine Biomaterial Processing Facility. The plan shows the designated dumpster area for general waste and recycling on the north side of the building adjacent to the loading bay, positioned to support direct collection by NorPen via the truck access route from Murray's Pt Road. It also identifies indoor secure storage for rare, incidental special items (e.g., batteries, lamps, small e-waste, and cartridges) to be held indoors until transfer to an appropriate depot/receiver or take-back program, as well as the indoor location of spill response supplies.

Appendix A: Table of Anticipated Waste Streams

Phase	Waste Stream	Estimated Quantity / Frequency	Storage / Handling	Proposed Receiving Route
Construction	Lumber offcuts / wood waste	1–2 m ³ total over construction period	Segregated waste bin	NorPen / approved regional disposal facility
Construction	Mixed general refuse	0.5–1.0 m ³ per week during fit-up	Covered dumpster	NorPen / approved regional disposal facility

Construction	Cardboard packaging	0.5–1.0 m ³ per week during deliveries	Segregated recycling container	Approved recycling stream / NorPen where accepted
Construction	Plastic packaging	0.25–0.5 m ³ per week during deliveries	Segregated recycling container	Approved recycling stream / NorPen where accepted
Operations	General solid waste / housekeeping waste	0.25–0.5 m ³ per week	Lined receptacles to covered dumpster	NorPen / approved regional disposal facility
Operations	Cardboard	0.25–0.5 m ³ per week	Dry, segregated recycling storage	Approved recycling stream
Operations	Plastics	0.10–0.25 m ³ per week	Dry, segregated recycling storage	Approved recycling stream / NorPen where accepted
Operations	Cans / beverage containers	Approximately 0.05 m ³ per week	Segregated container	Approved recycling / deposit-return receiver
Operations	Spent absorbents / filters	Up to 20–40 kg per month, non-routine	Sealed bags/containers indoors	NorPen / approved facility, unless special handling is required

Operations	Batteries	Less than 10 kg per year	Secure indoor storage	Approved stewardship depot / receiver
Operations	Small electronic waste	Less than 0.1 m ³ per year	Secure indoor storage	Approved e-waste depot / receiver
Operations	Printer cartridges	Less than 12 units per year	Secure indoor storage	Supplier take-back or approved depot
Operations, temporary triage period only	pH-adjusted and flocculated process water after protein removal using chitosan and citric acid	Approximately 2–3 IBC totes per operating day during the temporary triage period, until the dedicated water treatment system is installed, commissioned, and operating reliably	Sealed, labelled, liquid-tight IBC totes or equivalent approved containers; containers kept closed except during filling, inspection, transfer, sampling, or unloading; stored in a controlled area to prevent leakage, odour, nuisance conditions, wildlife attraction, or release to the environment	NorPen / Northern Peninsula Regional Service Board, subject to normal coordination, scheduling, acceptance, and site-specific receiving requirements

Operations, contingency only	Off-specific ation, spoiled, contaminated, or surplus wet product or wet intermediate material that cannot be reprocessed or reused	Up to approximately 250–500 kg per affected batch, infrequent contingency	Immediately segregated; sealed, labelled, and stored in liquid-tight totes, drums, or covered bins; odorous material removed promptly where practical	Reprocessing/reuse first where feasible; if not feasible, NorPen facility for disposal.
Operations, contingency only	Off-specific ation or surplus dry/semi-dry chitin, chitosan, or similar dry intermediate product	Up to approximately 250–500 kg per affected batch, infrequent contingency	Sealed bags, drums, or totes stored indoors in a dry, secure location	Reprocessing/reuse first where feasible; if not feasible, NorPen facility for disposal.
Operations, contingency only	Chemically treated material with abnormal pH or incompatible characteristics	Infrequent contingency only	Segregated from other waste streams; sealed and labelled; pH/characterization completed before shipment	Reprocessing/reuse first where feasible; if not feasible, NorPen facility for disposal.

Appendix B: Pilot Wastewater Characterization and Effluent Compliance Summary

This appendix summarizes pilot-scale wastewater characterization and treated effluent quality data for the proposed Atlantic BioCorp Ltd. process. The appendix is intended to document the basis on which Atlantic BioCorp Ltd. has concluded that the proposed screening and dissolved air flotation treatment train is capable of producing treated effluent that meets the applicable discharge criteria under the *Environmental Control Water and Sewer Regulations*. The results presented below reflect characterization of the untreated process streams and of the treated effluent following screening and dissolved air flotation with quaternized chitosan flocculation.

For the pilot system, untreated process waters from the principal output streams were characterized prior to treatment, and treated effluent samples were subsequently analyzed following passage through the treatment train. The treatment process consists of: (i) discharge to a 500 µm drop screen for removal of coarse suspended solids, (ii) secondary screening through a 250 µm screen for removal of finer suspended solids, and (iii) dissolved air flotation (DAF) with quaternized chitosan addition in an upstream coagulation/flocculation step to promote solids separation and skimming.

The analytical parameters selected for characterization were those most relevant to the anticipated process wastewater matrix and treatment objectives, namely biochemical oxygen demand (BOD), chemical oxygen demand (COD), total Kjeldahl nitrogen (TKN), total suspended solids (TSS), fats/oils/grease (FOG), and calcium. Post-treatment assessment focused on the principal discharge quality indicators most directly relevant to the treatment train and the applicable regulatory discharge limits, namely BOD, TSS, and oils and grease, with TKN also monitored as a supplementary wastewater quality indicator.

Table B-1. Untreated Process Stream Characterization

Parameter	PT	DM	DP
BOD (mg/L)	243–783	109–472	108–224
COD (mg/L)	3560–4980	5390–8760	4960–7330
TKN (mg/L)	208–313	24–47	282–358

TSS (mg/L)	5000–8080	417–840	230–363
FOG (mg/L)	0.1408–0.3213	0.0122	0.0776
Ca+ (mg/L)	715	1460	11.7

The untreated process streams show elevated organic and solids loadings prior to treatment, particularly for BOD, COD, TKN, and TSS, confirming the need for dedicated solids separation and clarification prior to discharge.

Table B-2. Applicable Regulatory Maximum Concentrations
Environmental Control Water and Sewer Regulations

Constituent	Maximum Content
B.O.D.	20 mg/L
Solids (suspended)	30 mg/L
Oils (ether extract)	15 mg/L
Floating debris, oils and grease	None to be visible

Table B-3. Treated Effluent Quality Following Screening and DAF Treatment

Parameter	PT	DM	DP	Applicable Regulatory Criterion
BOD (mg/L)	7–13	9–14	7–13	20 mg/L
TKN (mg/L)	0.6–0.9	0.3–0.8	0.6–0.9	Not directly listed as TKN
TSS (mg/L)	16–22	8–15	16–22	30 mg/L
FOG (mg/L)	0.05–0.1	0.01	0.05–0.1	15 mg/L
Floating oils/grease	None observed	None observed	None observed	None visible

The treated effluent data indicate substantial reduction in suspended solids and oxygen-demanding constituents across the treatment train. Based on the treated effluent results obtained for the parameters tested, BOD remained below the regulatory maximum of 20 mg/L in all cases, TSS remained below the regulatory maximum of 30 mg/L in all cases, and oils/grease concentrations remained well below the regulatory maximum of 15 mg/L. No visible floating debris, oils, or grease were observed in the treated effluent samples.

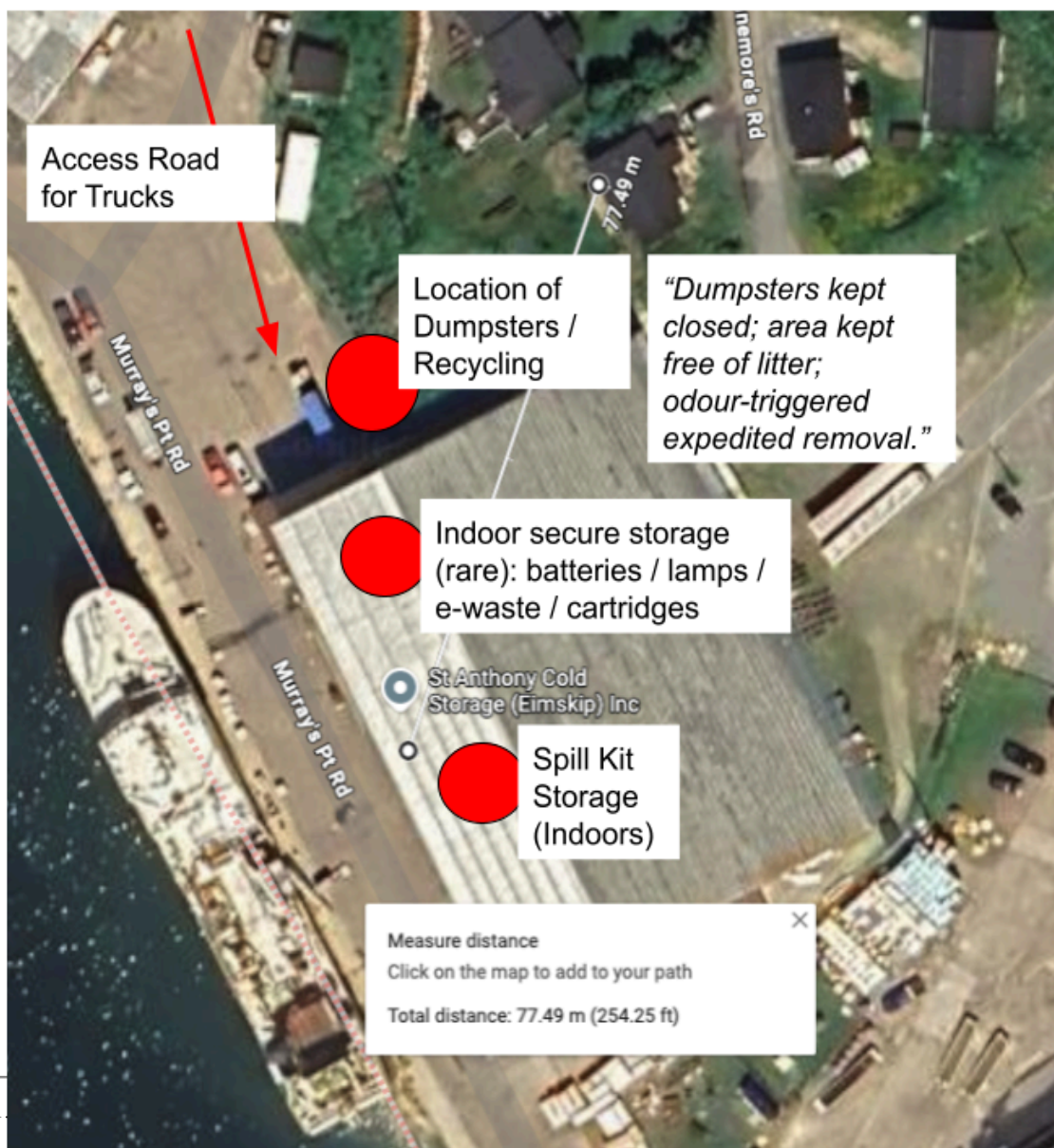
For the wastewater matrix evaluated, these results demonstrate that the proposed treatment process is effective in reducing the principal discharge quality indicators associated with the Atlantic BioCorp process to levels consistent with the applicable discharge criteria for the parameters tested. The pilot results are considered representative of expected pilot-scale operation because the samples were generated from a scale-sized pilot demonstration line using the same process steps, equipment types, treatment sequence, and wastewater matrix anticipated for facility operation.

Atlantic BioCorp Ltd. will operate the wastewater treatment system so that only treated effluent meeting applicable discharge requirements is released. Influent and effluent monitoring will continue during operation to verify treatment performance. If monitoring or

operating conditions indicate that treated effluent may not meet discharge requirements, discharge will be suspended and the affected wastewater will be retained for retreatment, adjustment, or other appropriate management until acceptable quality is confirmed.

The analytical program summarized in this appendix was focused on the principal wastewater quality indicators most relevant to the process and treatment train, namely organic loading, suspended solids, oils and grease, and nitrogen-related constituents. The regulatory comparison presented above demonstrates compliance capability for the parameters tested. Additional confirmatory testing for any other regulated parameters will be undertaken as required by the applicable approval or regulatory process.

Appendix C: Site Plan



Appendix D: Material Characterization for Temporary Triage Process Water Management

D.1 Material Name and Source

The primary temporary off-site management stream is pH-adjusted and flocculated process water generated during initial operations before the dedicated water treatment system is delivered, installed, commissioned, and operating reliably.

This stream is generated from Atlantic BioCorp Ltd. 's processing of Northern shrimp by-product. During the temporary triage period, the process water will be treated using chitosan and citric acid to adjust pH and flocculate proteinaceous material. Protein solids will be removed from the water stream to the extent practical before off-site handling.

This material is distinct from Atlantic BioCorp Ltd.'s long-term wastewater management approach. It is an interim triage stream only and will be discontinued once the dedicated water treatment system is operating reliably, unless otherwise required as a contingency measure.

D.2 Physical Description

The material is expected to be high-moisture process water contained in IBC totes or equivalent liquid-tight containers. The water will have been pH-adjusted and flocculated using chitosan and citric acid to remove the majority of protein solids from the stream.

The material may contain residual fine suspended solids, trace organic material, dissolved or residual protein, pigment-bearing material, chitosan flocculant residue, citric acid, and other constituents associated with shrimp by-product processing. It is expected to be primarily aqueous and will be managed as a liquid waste stream for temporary off-site receiving.

D.3 Expected Composition

The exact composition may vary depending on operating conditions, incoming raw material characteristics, and treatment efficiency during the temporary triage period. The material is expected to consist primarily of water, with residual suspended and dissolved organic constituents associated with shrimp processing by-product.

The treatment approach uses chitosan and citric acid to adjust pH and flocculate proteinaceous material. Flocculated protein solids will be separated to the extent practical prior to shipment. Residual constituents may include fine shrimp protein, pigment, shell/chitin fines, dissolved organic material, and minor fats/oils.

The material is not expected to be hazardous or waste dangerous goods under normal operations. However, because it is derived from marine organic processing water, it will be

managed conservatively to prevent odour, leakage, nuisance conditions, or release to the environment.

D.4 Estimated Volumes and Operating Period

During the temporary triage period, Atlantic BioCorp Ltd. expects to generate approximately less than 1,000L per day, placed in two to three IBC totes, of pH-adjusted and flocculated process water requiring off-site management.

This volume estimate is based on the temporary treatment solution identified by Atlantic BioCorp Ltd.'s technical team. The approach is intended to substantially reduce the volume and management burden associated with initial operations until the dedicated water treatment system is available.

Use of this temporary off-site pathway is expected to continue only until the dedicated water treatment system is delivered, installed, commissioned, and operating reliably. Actual volumes will be tracked during the temporary period and this appendix will be updated if materially different volumes, material characteristics, or receiving requirements are identified.

D.5 Management Concerns

The material is not expected to be hazardous or waste dangerous goods under normal operating conditions. Primary management concerns are leakage, odour, residual organic loading, suspended solids, nuisance conditions, and potential attraction of pests, birds, or wildlife if material is spilled or stored improperly.

The material will be stored only in sealed, labelled, liquid-tight IBC totes or equivalent approved containers. Containers will be kept closed except during filling, inspection, sampling, transfer, or unloading. Any damaged, leaking, or abnormal container will be isolated and addressed promptly.

D.6 Disposal / Receiving Route

The intended temporary receiving route is NorPen / Northern Peninsula Regional Service Board, subject to normal coordination, scheduling, acceptance, and any site-specific receiving requirements.

Atlantic BioCorp Ltd. has met NORPEN and the City Manager for the Town of St. Anthony regarding the temporary approach. Based on those discussions, NorPen has indicated that it has the ability to accommodate the temporary volume of approximately two to three IBC totes per day without issue, subject to operational coordination and site-specific receiving requirements.

Material will be delivered only to the receiving location or area designated by NorPen. Atlantic BioCorp Ltd. will coordinate delivery schedule, unloading method, vehicle/container type, and any handling requirements with NorPen before routine delivery.

The material will not be discharged to the environment, placed loose in exterior bins, discharged untreated to sewer, or allowed to accumulate in a manner that could create leakage, odour, nuisance conditions, wildlife attraction, or environmental release.

D.7 Recordkeeping

Atlantic BioCorp Ltd. will maintain records for the temporary IBC tote management pathway, including the date generated, approximate number of IBC totes shipped, estimated volume, treatment method used, transporter where applicable, receiving facility, and any receipts, weigh tickets, service logs, or receiving documentation provided by NorPen or another approved receiver.

The Waste Coordinator will review actual volumes and handling experience during the temporary period and will update the plan if materially different waste volumes, material characteristics, or receiving requirements are identified.