Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
marijuana.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Marijuana Control Board

Operating Plan Supplemental

Form MJ-04: Marijuana Cultivation Facility

What is this form?

This operating plan supplemental form is required for all applicants seeking a marijuana cultivation facility license and must accompany **Form MJ-01: Marijuana Establishment Operating Plan**, per 3 AAC 306.020(b)(11). Applicants should review **Chapter 306: Article 4** of the **Alaska Administrative Code.** This form will be used to document how an applicant intends to meet the requirements of the statutes and regulations.

If your business has a formal operating plan, you may include a copy of that operating plan with your application, but all fields of this form must still be completed per 3 AAC 306.020 and 3 AAC 306.420(2).

What additional information is required for cultivation facilities?

Applicants must identify how the proposed establishment will comply with applicable regulations regarding the following:

- Prohibitions
- Cultivation plan
- Waste disposal
- Odor control
- Testing procedure and protocols
- Packaging and labeling

This form must be completed and submitted to AMCO's main office before any new or transfer application for a standard marijuana cultivation facility or limited marijuana cultivation facility license will be considered complete.

Section 1 – Establishment Information

Enter information for the business seeking to be licensed, as identified on the license application.

Licensee:	Great Northern Cultivation, Inc.	**MJ License #:**	17346		
License Type:	Standard Marijuana Cultivation Facility				
Doing Business As:	Great Northern Cultivation, Inc.				
Premises Address:	7031 Arctic Boulevard, Suite 101				
City:	Anchorage	**State:**	Alaska	**ZIP:**	99518-2149

AMCO Received 1/20/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

Section 2 – Overview of Operations

2.1. Provide an overview of your proposed facility's operations. Include information regarding the flow of marijuana from seed or clone to harvest and transfer from your premises:

The facility will be built out in two phases, as follows:
During Phase 1 of the build-out no cultivation will take place at the facility; the facility will only be used to package marijuana produced by other licensed cultivators. Marijuana flower and trim will be manifested, transferred, and received from other licensed cultivators (primarily from Great Northern Cultivation, Inc. licensed facility #10747) to the proposed Arctic Boulevard facility where it will be packaged for sale. In addition to packaging flower, trim will be packaged and may be processed into pre-rolled joints. Kief leftover from trimming operations will also be collected and packaged. Packaged pre-rolled joints and kief will be placed in Product Storage until its manifested and transported to another licensed marijuana establishment.
No marijuana will leave the cultivation facility unless it is properly packaged, entered into Metrc, and manifested with the appropriate documentation. Any marijuana waste will be entered into Metrc and AMCO will be emailed notice of our intent to render the waste unusable. The waste will then be held in isolation for three days before it is rendered unusable by mixing it with cardboard, sawdust, plastic, paper, vegetable oil, or another authorized material. The mixture will contain no more than 50% marijuana. It will then be bagged up and made ready for disposal at the local landfill.
After passing test results are received from a licensed testing facility, packaging and labeling will be ordered. Marijuana that has passed testing will be moved to the "Product Storage" room until it is manifested and transported to another licensed marijuana establishment. See MJ-04 Supplemental Attachment A for additional information.

Section 3 – Prohibitions

Review the requirements under 3 AAC 306.405 and 3 AAC 306.410.

3.1. I certify that the marijuana cultivation facility will not: Initials

a. **sell, distribute, or transfer any marijuana or marijuana product to a consumer, with or without compensation;** SB

b. **allow any person, including a licensee, employee, or agent, to consume marijuana or marijuana product on the licensed premises or within 20 feet of the exterior of any building or outdoor cultivation facility; or** SB

c. **treat or otherwise adulterate marijuana with any organic or nonorganic chemical or compound to alter the color, appearance, weight, or odor of the marijuana.** SB

Section 4 – Cultivation Plan

Review the requirements under 3 AAC 306.420 and 3 AAC 306.430.

4.1. Describe the size of the space(s) the marijuana cultivation facility intends to be under cultivation, including dimensions and overall square footage. Provide your calculations below:

During Phase 1 of the build-out we will use the following spaces as depicted in the MJ-02 diagrams:

(2) Entry Rm: 226 sq ft/ 173 sq ft, Confrence Rm: 455 sq ft, (2) Offices: 112 sq ft
(3) Bathrooms: 27 sq ft/ 29 sq ft/ 54 sq ft, Mechanical Rm: 62 square feet
Trim/Package Rm: 711 sq ft
Quarantine Rm: 75 sq ft
Dry Rms: 239 sq ft total (Room #1 = 117 sq ft and Room #2 = 122 sq ft).
Product Storage Rm: 148 sq ft
Staff Lockers: 292 sq ft, Laundry-Shower Rm: 55 sq ft
Garage: 277 sq ft, Janitor Closet: 57 sq ft, Comm Closet: 34 sq ft, Mechanical Rm: 62 sq ft
TOTAL CULTIVATION SPACE (e.g. mother-clone, vegetation, genetics flower, and flower rooms) = 0 square feet
TOTAL SUPPLEMENTAL SPACE (e.g. trim, quarantine, dry, and product storage rooms) = 3,200 square feet.

See MJ-04 Supplemental Attachment J for additional information.

AMCO Received 1/20/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

You must be able to certify the statement below. Read the following and then sign your initials in the box to the right: Initials

4.2. The proposed area(s) for cultivation are clearly identified on the Form MJ-02: Premises Diagram that is submitted with this application. SB

Answer "Yes" or "No" to the following question: Yes No

4.3. Will the marijuana cultivation facility include outdoor production? ☐ ☑

If "Yes", describe the outdoor structure(s) or the expanse of open or clear ground and how it is fully-enclosed by a physical barrier:

4.4. Describe the method(s) used to ensure that any marijuana at the marijuana cultivation facility, whether indoors or outdoors, cannot be observed by the public from outside the facility:

The cultivation facility will not have any exterior windows, ensuring that the public cannot observe marijuana from outside the facility. Furthermore, exterior doors do not open directly into any room or space where marijuana is being cultivated, packaged, or otherwise handled. Marijuana leaving the building will be enclosed in opaque shipping containers and loaded into transportation vehicles in the secured garage inside the building (See MJ-04, Premises Diagram). Because marijuana will be loaded securely in a closed, locked garage within the building, the public will be unable to observe any marijuana from outside the facility.

4.5. Describe the marijuana cultivation facility's growing medium(s) to be used:

During Phase 2: The cultivation facility will utilize a combination of soil and hydroponic growing mediums to produce quality cannabis. Hydroponic systems include the placement of the plants roots directly into a water nutrient solution, the composition of which can be tightly controlled. Soil systems include placement of the plant into a natural or artificial soil similar to traditional gardening. The cultivation manager and cultivation employees will work throughout the entire growing process to ensure mediums are not contaminated with pests, molds, mildew or other problems. See Attachment B for additional information.

4.6. Provide the complete product name and EPA registration # (if applicable) for each of the cultivation facility's pesticides and pest control products to be used. All proposed products must be on DEC's list of approved pesticides in the state of Alaska:

During Phase 2: The facility will use Safer Brand 3-IN-1 Concentrate II, EPA registration # 59913-13.

4.7. Describe all other fertilizers, chemicals, gases, and delivery systems, including carbon dioxide management, to be used at the marijuana cultivation facility:

During Phase 2: The facility will use fertilizers including nutrient solutions will be used throughout the cultivation process until the final weeks of plant growth after which time the plants will receive only water to flush fertilizers from the plants. This practice ensures that no residual fertilizers are present at harvesting time. Fertilizers/nutrients will be mixed directly into hydroponic systems; however, they will be manually mixed and hand-fed to soil based plants. Fertilizers/nutrients will be applied on a schedule that is deemed appropriate by the cultivation manager. Fertilizers may include the following: Calcium, Boron, Cobalt, Copper, Iron, Manganese, Molybdenium, Sulfur; Humic Acid; Sugarcane; Molasses; Silicone Dioxide; Potassium Sulfate. See Attachment C for additional information.

AMCO Received 1/20/2019

4.8. Describe the marijuana cultivation facility's irrigation and waste water systems to be used:

During Phase 2: The facility will use a variety of irrigation systems based on the the strains being produced, best practices, and the desired method for producing the best yield and quality. Irrigation systems will be supplied with fertilizers/nutrients as appropriate for the strain and based on the stage of the plants' life cycle. Under the supervision of the cultivation manager, employees will monitor the irrigation systems daily for any leaks, malfunctions, or requirements for adjustments. Potted plants will be hand-watered by employees on a regular schedule directed by the cultivation manager. Pots will be placed in trays that will catch excess water until absorbed by the plant. See Attachment D for additional information.

Section 5 – Waste Disposal

Review the requirements under 3 AAC 306.740.

You must be able to certify the statement below. Read the following and then sign your initials in the box to the right: Initials

5.1. The marijuana cultivation facility shall give the board at least three days written notice required under 3 AAC 306.740(c) before making marijuana waste unusable and disposing of it. SB

5.2. Describe how you will store, manage, and dispose of any solid or liquid marijuana waste, including wastewater generated during marijuana cultivation, in compliance with any applicable laws. Include details about the material(s) you will mix with ground marijuana waste and the processes that you will use to make the marijuana waste unusable for any purpose for which it was grown:

See Attachment E for additional information.

AMCO Received 1/20/2019

Section 6 – Odor Control

Review the requirements under 3 AAC 306.430.

Answer "Yes" or "No" to the following question:	Yes	No
6.1. Have you received an exemption from your local government for the odor control requirement set forth in 3 AAC 306.430(c)(2)?	☐	☑

If "Yes", you must be able to certify the statement below. Read the following and then sign your initials in the box:	Initials
I am attaching to this form documentation of my odor control exemption from the local government.	☐

If "No" to question 6.1., describe the odor control method(s) to be used and how the marijuana cultivation facility will ensure that any marijuana at the facility does not emit an odor that is detectable by the public from outside the facility:

Odor control will be achieved by a number of methods such as a sophisticated HVAC system with carbon filtration, the use of sealed containers, and other best management practices. Odor control systems will be routinely monitored and inspected, and filters and other mechanisms will be replaced on a regular basis. Records will be maintained to document inspection and maintenance activities. In addition, the flower rooms (where most odor is generated) will be individually-constructed within the warehouse building such that the warehouse building functions as a secondary containment. See Attachment F for additional information.

Section 7 – Testing Procedure and Protocols

Review the requirements under 3 AAC 306.455 and 3 AAC 306.465.

You must be able to certify each statement below. Read the following and then sign your initials in the corresponding box:	Initials
7.1. I understand and agree that the board or director will, from time to time, require the marijuana cultivation facility to provide samples of the growing medium, soil amendments, fertilizers, crop production aids, pesticides, or water for random compliance checks.	SrB
7.2. I will ensure that any individual responsible for collecting random, homogenous samples for required laboratory testing under 3 AAC 306.455 will prepare the necessary accompanying signed statement, provide the signed statement to the marijuana testing facility, and maintain a copy as a business record under 3 AAC 306.755.	SrB

7.3. Describe the testing procedures and protocols the marijuana cultivation facility will follow:

The facility will abide by all regulations on testing as described in 3 AAC 306.455 and 3 AAC 306.465. The company will designate one or more employees to be responsible for collecting each sample as required by 3 AAC 306.455(b)(2). The designated employee will select a sample, and weigh it with a registered scale to ensure that the sample size is less than the maximum amount requested by the testing facility. The designated employee will initiate the testing procedure when applicable, prepare a signed statement to attest the randomness for each sample, provide the statement to the licensed testing facility, and place a copy in the business records. Tests for the following will occur by the licensed testing facility as outlined in AAC 306.475(e)(1-4): cannabinoid profile; microbial testing; residual solvent testing; and contaminates (e.g., molds, mildew, filth, etc.). Random samples will be collected from batches of individual strains of flower. All marijuana prepared for testing will be packaged in containers of a different color to differentiate between product for testing and product for sale. During testing at the licensed testing facility, the batch that the sample came from will be segregated and stored in the secure Quarantine room in a cool dry place until the test results are received. Once written confirmation has been received from the testing facility confirming that the sample passed all tests, the batch will be prepared for transportation, delivery and sale. Any testing information that is legally required in labeling for marijuana products will be included on all labels on all marijuana packages sold by the cultivation facility. Furthermore, test results and the name of the testing facility that performed the tests will be available upon request. See Attachment G for additional information.

AMCO Received 1/20/2019

Section 8 – Packaging and Labeling

Review the requirements under 3 AAC 306.470 and 3 AAC 306.475.

Answer "Yes" or "No" to the following question:	Yes	No
8.1. Will the marijuana cultivation facility be packaging marijuana for a retail marijuana store to sell to a consumer without repackaging?	☑	☐

If "Yes", describe how the marijuana cultivation facility will ensure that the marijuana sold will meet the packaging requirements in 3 AAC 306.470, and provide a sample label that the facility will use to meet the labeling requirements set forth in 3 AAC 306.475:

All packaging will be done in compliance with 3 AAC 306.470. Marijuana that is sold in retail stores prepackaged without the need for additional handling will be packaged in quantities not to exceed one ounce. All such packaging will protect the product from contamination and will not impart any toxic or damaging substance to the marijuana. Additionally, the packaging will not have any printed images (including cartoon characters) that target persons under 21 years of age. Packaged marijuana will be associated with tracking label generated by Metrc, and a transport manifest will accompany the marijuana to its destination.

See attachment H for additional information.

Answer "Yes" or "No" to the following question:	Yes	No
8.2. Will the marijuana cultivation facility be packaging marijuana in wholesale packages?	☑	☐

If "Yes", describe how the marijuana cultivation facility will ensure that the marijuana sold will meet the packaging requirements in 3 AAC 306.470, and provide a sample label that the facility will use to meet the labeling requirements set forth in 3 AAC 306.475:

All packaging will be done in compliance with 3 AAC 306.470. Marijuana that is sold in a wholesale package will be packaged in a quantity not to exceed 5 pounds. Any wholesale package delivered to a product manufacturing facility will consist of a single strain or mixture strains as identified on the label. Package marijuana will be associated with a tracking label generated by Metrc, and transport manifest will accompany the marijuana to its destination.

See Attachment I for additional information.

I certify that as a marijuana cultivation facility, I will submit monthly reports to the Department of Revenue and pay the excise tax required under AS 43.61.010 and AS 43.61.020 on all marijuana sold or provided as a sample to a marijuana establishment, as required under 3 AAC 306.480.

I declare under penalty of unsworn falsification that this form, including all accompanying schedules and statements, is true, correct, and complete.

Stephen W. Brashear
Signature of licensee

Stephen W. Brashear
Printed name of licensee

MIRANDA HONEST NOTARY PUBLIC My Commission Expires July 21, 2019 STATE OF ALASKA

Miranda Honest
Notary Public in and for the State of Alaska

My commission expires: 7/21/19

Subscribed and sworn to before me this 16 day of January, 20 19.

AMCO Received 1/20/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Attachment A - 2.1. Provide an overview of your proposed facility's operations. Include information regarding the flow of marijuana from seed or clone to harvest and transfer from your premises:

During Phase 2 of the build-out, marijuana plants are initiated from either seed or clone. As immature plants, the marijuana seedlings and clones will spend several weeks in the Mother-Clone room (See MJ-04 Premises Diagram) until they are strong enough for transplant. The immature plants are then transplanted, equipped with a Metrc tag, and moved into the Vegetation room where they will spend several weeks. In the Vegetation room, plants grow and add biomass in preparation for the final phase of their life cycle. After four to six weeks in vegetation, the plans are moved to one of the flowering rooms where they will remain for another eight to nine weeks before being harvested. Metrc is updated each time a plant's status changes (e.g., room change, death of a plant, etc.). During the harvest, plants will be cut down at the base of their stalks, and then they will be moved to the "Trim" room. The harvested plants will be immediately weighed, and then the buds will be removed from the plant. The buds will then be trimmed before being hung on a rack and transported to a Dry room for curing. Metrc will be updated at this time. After curing in the Dry room for up to 14 days, the buds will receive a final trim including the removal of their stems. Random samples will then be collected from each harvest batch, packaged, entered into Metrc, manifested, and delivered to a licensed marijuana testing facility. Until passing test results are received from the testing facility, the marijuana will be stored in Quarantine room. After passing test results are received from the testing facility, packaging and labeling will be ordered. Marijuana that has passed testing will be moved to the Product Storage room until it is manifested and transported to another licensed marijuana facility. See Attachment A for additional information.

In addition to flower, trim will be packaged into pre-rolled joints. Kief leftover from trimming operations will also be collected and packaged. Packaged pre-rolled joints and kief will be placed in Product Storage until its manifested and transported to another licensed marijuana establishment.

Waste left from harvesting and trimming will be weighed, entered into Metrc. We will then email AMCO to provide notice of our intent to render the waste unusable three days in advance. Following expiration of those three days, we will render the marijuana unusable pursuant to our operating agreement and state and local law.

During each phase of the life cycle (clone/seedling, vegetation, and flowering), the marijuana plants will be watered, fed nutrients, defoliated, and carefully tended to ensure a safe and quality product for consumers. Occasionally, some plants will be moved from the Vegetation room to the Mother/Clone room instead of being placed in a flowering room. These plants will be developed into new mother plants from which to collect clones. This practice is used to maintain a fresh and vibrant selection of healthy strains in the cultivation facility. Clones are taken from the mother plants by clipping a stem and placing it in either a rockwool cube or a clone machine where it receives only water until roots sprout. Clones undergo the same process of moving from the Mother/Clone room to the Vegetation room to the Flowering room before eventually being harvested. When a mother plant ages to the point it is no longer healthy enough to produce viable clones, it will be moved to a Flowering room for eventual production and harvest.

No marijuana will leave the cultivation facility unless it is properly packaged, entered into Metrc, and manifested with the appropriate documentation. Marijuana waste will be entered into Metrc and held in isolation for three days before it is rendered unusable by mixing it with cardboard, sawdust, plastic, paper, vegetable oil, or another authorized material. The mixture will contain no more than 50% marijuana. After the three-day notice period for AMCO expires, the waste will be rendered unusable and bagged up for disposal at the local landfill.

New strains will be developed and/or introduced into the cultivation facility as allowed under regulations. The cultivation facility will include a Genetics Flower room in which existing strains will be cross-bred to create new strains, which will be marketed under the Great Northern brand. The cross-breeding will produce seeds of a new strain, which will then be added to Great Northern Cultivation, Inc.'s seed bank and used to start the next generation of the newly produced strain. Those seedlings will be placed in the Mother Clone room, and they will undergo the same process previously described.

AMCO Received 1/16/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Attachment B - 4.5. Describe the marijuana cultivation facility's growing medium(s) to be used:

The cultivation manager or cultivation employees will work throughout the entire growing process to ensure mediums are not contaminated with pests, molds, mildew or other problems. Reputable companies that have a reputation for providing mediums free of contaminants, pests and/or diseases will be used when purchasing grow mediums. Once a grow cycle in soil has been completed the soil will be disposed of by putting it in a container or bag and either taking it to a solid waste facility or providing it to local businesses (i.e. backfill material, composting, etc.). When a growing cycle has been completed within the hydroponic system the water will be reused using a reverse osmosis filtering system or pretreated and disposed of per waste management protocol.

Seedlings:

- Naturally composted fine milled sphagnum peat moss cubes
- Rockwool mineral cubes

Vegetation & Flowering
Growing mediums as described in 3 AAC 306.420(6) are listed below and will be used as part of the cultivation process.

Hydroponic:

- Natural clay
- Coconut husk natural fiber
- Vermiculite
- Perlite
- Pith
- Rockwool mineral cubes
- Reverse Osmosis (RO) Water System
- Sphagnum peat moss
- Peat moss
- Fibrous peat moss

Soil:

- Coconut husk natural fiber
- Vermiculite
- Perlite
- Fibrous peat moss
- Pumice
- Fish bone meal
- Soybean meal
- Feather meal
- Leonardite
- Alfalfa meal
- Fulvic acid
- Earthworm castings
- Bat guano
- Kelpmeal
- Oystershells
- Seabird guano
- Shrimp meal
- Aged forest products
- Spaghnum peat moss
- Soybean meal
- Fishmeal
- Blood meal

AMCO Received 1/16/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Attachment C - 4.7. Describe all other fertilizers, chemicals, gases, and delivery systems, including carbon dioxide management, to be used at the marijuana cultivation facility:

Potassium carbonate; Potassium; Phosphate; Thiamine mononitrate; Glucose; Xylose; Soluble salts; Chloride; Boron; Fluoride; Zinc; Aluminum; Nitrate; Ammonium; Potassium; Magnesium carbonate; Bloodmeal; Coffee grounds; Corn stalks; Cottonseed meal; Dried blood; Fish scrap; Bone meal. A variety of beneficial bacteria may also be used to enhance plant growth.

FloraKlean will be used when changing pots and cleaning out systems in order to remove residue from the containers. Hydrogen Peroxide will be used to clean and sanitize the water in the systems as needed if fungal contaminants are present during the growing cycle or between cycles.

Potassium Salts, FloraShield, sulfur and Clean Leaf will be the only chemicals used to treat insects, pests, molds and clean foliage during the growing cycles. The above chemicals will be sprayed onto the plant and then washed off to ensure no residual elements from the chemical remains on the plants. Potassium Salts, FloraSheild, sulfur and Clean Leaf will be applied as needed under the discretion of the Cultivation Manager, and all employees will be trained in the application and removal of the product. Notes will be kept when a chemical is used and stored as part of the business record to ensure proper tracking of each plant's life cycle and to ensure proper labels are generated with all necessary ingredient requirements as per 3 AAC 306.475.

Chemicals: General Hydroponics FloraKlean (hydroponic system fertilizer residue remover); General Hydroponics FloraShield (foliage and system rinse containing chitosan, stearic acid, palmitic acid); Jungle Rain Clean Leaf-Castille soap (fungicide), citrus oil (fungicide), vegetable oils (fungicide); Potassium Salts (pest control); Hydrogen Peroxide (fungicide); Sulfur (fungicide); Safer 3-N-1 Concentrate II (pest control).

Gases & Delivery Systems: CO_2 - The CO_2 system will be used to ensure that plants receive enough CO_2 as found in their natural environment to ensure optimum growing and uptake of nutrients. CO_2 tanks will be mounted to a wall in the hallway outside of the cultivation rooms and will connect to a manifold system (pipes) that will put the regulated amount of CO_2 into the room. CO_2 bags may also be used as necessary if primary system breaks down or as a supplement as needed. Tanks stored in hallways will be secured with chains and the manifold system attached to each individual grow room wall. CO_2 generators that are fueled with natural gas may also be used to supply CO_2 to the plants.

Each CO_2 system will be monitored by a regulator that will provide the correct amount of CO_2 into the room and all CO_2 system operations will be supervised by the cultivation manager. Tanks, regulators, and valves will be tested at least one per month to ensure proper operation and that there are no leaks. Each CO_2 system will contain a warning system that consists of a light mounted to a wall that will illuminate if a dangerous amount of CO_2 is present.

Examples of specific nutrient brands to be used, as follows:

Advanced Nutrients Connoisseur A&B
Advanced Nutrients Big Bud
Advanced Nutrients Bud Candy
Advanced Nutrients Rhino Skin
Advanced Nutrients Sensi Grow A&B
Advanced Nutrients Bud Ignitor
Advanced Nutrients Flawless Finish
Advanced Nutrients B-52
Advanced Nutrients Carboload
Advanced Nutrients pH Down
Advanced Nutrients Ancient Earth
Perlite
Clonex Clone Solution
Technaflora Rootech
Botanicare Cal-Mag
Plant Success Great White
Superthrive
General Hydroponics Rapid Start
Clonex Gel
Elite 91 Myco

AMCO Received 1/16/2019

(Additional Space as Needed):

Attachment D - 4.8. Describe the marijuana cultivation facility's irrigation and waste water systems to be used:

Reservoir irrigation systems will be watered by employees as needed when systems fall below system requirements as directed by the cultivation manager. Employees will add water/fertilizer to the system until capacity is met. Excess solution will be stored in sealed containers for up to three (3) days and if not used will be disposed of via the municipal sewer system after being run through a sediment filter.

In the flood and drain table irrigation system, the table floods with the solution and then drains into a reservoir. Each table will either be on a timer with a pump that will flood the table at predetermined intervals or will be hand-fed by cultivation employees. Flood and drain tables will be used with soil-potted plants and hydroponic mediums (i.e., cubes or cloth containers with hydroton). Every two (2) weeks the reservoirs will be changed manually and a new water/fertilizer solution will be added.

In the ebb and flow system, a reservoir system will be used in which two (2) reservoirs will be used interchangeably in a way such that the solution is pumped from one reservoir into the linked container system and then drained out into another reservoir and cycled again to the original tank. Through the system, the water tight growing containers with the choice of medium will be periodically flooded for short periods of time with a nutrient solution, and will either be on a timer system or turned on manually as necessary to maintain proper hydration levels. Every two (2) weeks the reservoirs will be changed manually and a new water/fertilizer solution will be added.

In the nutrient film table system, tables will be angled so that the water/fertilizer solution is pumped from a reservoir to the high side of a table, creating a shallow film of water running under hydroponic containers toward the low side of the table where it drains back into the reservoir. The solution runs down channels or gullies located in the table and will either be on a timer or turned on manually as necessary to maintain proper hydration levels. Every two (2) weeks, the reservoirs will be changed manually and a new water/fertilizer solution will be added to the system.

In the deep-water culture system, the water/fertilizer solution recirculates through a container system 24 hours a day, seven days a week with a top feed system that sprays the solution into each individual container. Containers are connected through a pipe system that is fed by a reservoir tank that provides circulated water through the system. The integrated top feed system is used to supplement the solution onto the roots from the top of the container. The system will run continually, will be checked daily, and reservoirs will be changed over every two (2) weeks in order to maintain a fresh solution mixture.

Wastewater:

Wastewater will be recycled to the extent possible through a reverse Osmosis (RO) system. The RO system will be the primary method of wastewater management. Wastewater ready for disposal will be pumped out of the plant reservoir system into reservoirs feeding into the RO system. The system will filter the solution, removing sediment and impurities so that the water can be recycled and reused. Once water is filtered, it will be stored in clean water reservoirs to be used in future cultivation facility operations.

AMCO Received 1/20/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Attachment E - 5.2. Describe how you will store, manage, and dispose of any solid or liquid marijuana waste, including wastewater generated during marijuana cultivation, in compliance with any applicable laws. Include details about the material(s) you will mix with ground marijuana waste and the processes that you will use to make the marijuana waste unusable for any purpose for which it was grown:

Great Northern Cultivation, Inc. will store, manage, and dispose of any solid or liquid waste, including wastewater and marijuana waste in compliance with 3 AAC 306.740. Employees will follow health and safety standards during the waste disposal process. Waste includes marijuana plant waste, including stalks, leaves, and stems that have not been processed with a solvent, solid marijuana sample plant waste in the possession of a marijuana testing facility and other waste as determined by the Marijuana Control Board. We expect the following wastes to be generated at a our cultivation facility:

1. Ordinary household waste;
2. Waste from marijuana flowers, trim and solid plant materials;
3. Marijuana that is identified as infected or fails quality testing standards;
4. Marijuana plant waste, including stalks, leaves, and stems;
5. Wastewater generated during cultivation and processing; and
6. Used soil medium.

While handling marijuana waste and wastewater, employees will be trained in proper disposal methods and required to use Personal Protective Equipment (PPE), including gloves, eye protection, laboratory coats or coveralls, and other PPE as needed. Employees will be required to follow health standards as outlined in 3 AAC 306.745, including maintaining a clean work environment, maintaining personal hygiene, preventing contamination, and ensuring that waste disposal equipment is adequately maintained.

Solid Waste: Solid marijuana waste will be segregated in red-colored, plastic garbage bins. The cultivation facility will have marijuana waste bins located in the vegetation, flowering, trimming, and curing/drying rooms to facilitate the collection of solid waste. Ordinary household waste will be collected in black-colored, plastic garbage bins, segregated from marijuana waste. Marijuana waste will be weighed with a certified scale and logged into Metrc in compliance with 3 AAC 306.745. Then sending a notice email to AMCO and waiting the required three-day notice period, the marijuana waste will be ground up using a grinder and mixed with at least an equal amount of sawdust, vegetable oil, paper, cardboard, or other approved material to render it unusable. The volume of marijuana in a waste mixture will never exceed 50%. Unusable solid waste will be taken or collected by a solid waste facility, transfer station, or incinerator, and a record of the final destination will be maintained as a part of the business records per 3 AAC 306.470(c)(2). Any testing samples returned to the cultivation facility after required testing will be disposed of in the same manner. In the event of a waste disposal emergency (e.g., pests, molds, accidents, or other comparable situations) the solid plant waste will be separated from all other waste and stored in a separate bin until the Marijuana Control Board authorizes an immediate disposal as outlined in 3 AAC 3036.740(c)(1).

The facility is expected to generate only a minimal amount of wastewater, which will be filtered of sediments and impurities before being discharged to the municipal sewer system in-compliance with local and state environmental regulations.

AMCO Received 1/16/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Attachment F - If "No" to question 6.1., describe the odor control method(s) to be used and how the marijuana cultivation facility will ensure that any marijuana at the facility does not emit an odor that is detectable by the public from outside the facility:

Ventilation with 100% carbon filters will be used in the individual plant rooms as well as the greater warehouse building. Great Northern Cultivation, Inc. has an excellent track record in odor control at its existing cultivation facility located at 2341 Cinnabar Loop (License #10747).

AMCO Received 1/16/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Attachment G - 7.3. Describe the testing procedures and protocols the marijuana cultivation facility will follow:

If tests fail for a sample, then the relevant harvest batch will be isolated. The facility request authorization from the Director of AMCO to send the failed batch to a manufacturing facility for processing into concentrates. If authorization is denied, the harvest batch will be wasted and rendered unusable in compliant with the regulations.

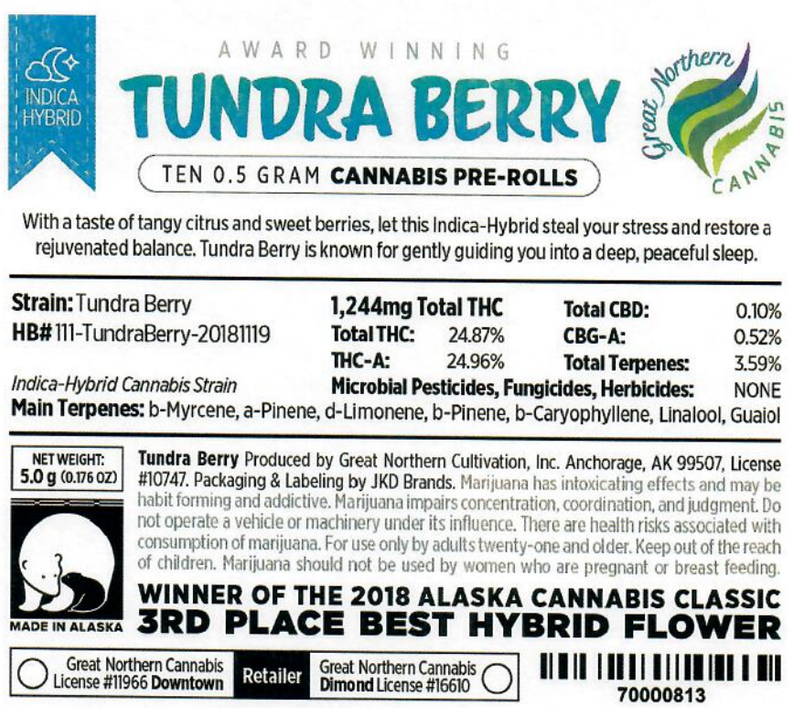
AMCO Received 1/16/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Attachment H - If "Yes", describe how the marijuana cultivation facility will ensure that the marijuana sold will meet the packaging requirements in 3 AAC 306.470, and provide a sample label that the facility will use to meet the labeling requirements set forth in 3 AAC 306.475:

Two sample labels the facility will use to meet the labeling requirements described in 3 AAC 306.475 is provided below:



AMCO Received 1/16/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Attachment I - If "Yes", describe how the marijuana cultivation facility will ensure that the marijuana sold will meet the packaging requirements in 3 AAC 306.470, and provide a sample label that the facility will use to meet the labeling requirements set forth in 3 AAC 306.475:

A sample label that the facility will use to meet the labeling requirements described in 3 AAC 306.475 is provided below:

Side of Tamper-Evident Transport Container

Test Facility Name: Weed Testers Inc.
License # 123456789
THC 20% THCA 20% CBD 20%
CBDA 20% CBN 20%
Microbial Test: Pass _X_ Fail ____
Residual Solvents Test: Pass _X_ Fail ____
Contaminants Test Results:
Molds, Mildew, & Filth: Pass _X_ Fail ____
Herbicidies, Pesticides, & Fungicides:
Pass _X_ Fail ____
Harmful Chemicals: Pass _X_ Fail ____

AMCO Received 1/16/2019

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Attachment J - 4.1. Describe the size of the space(s) the marijuana cultivation facility intends to be under cultivation, including dimensions and overall square footage. Provide your calculations below:

During Phase 2, we will use the following spaces as depicted in the MJ-02 diagrams:

Cultivation and supplemental space within the facility will include each of the following:
Entry Room: 226 square feet, Mechanical Room: 62 square feet, Staff Lockers: 292 square feet
Vegetation Room: 971 square feet
Mother-Clone Room: 354 square feet
Genetics Flower Room: 306 square feet
Standard Flower Rooms: 2,570 total square feet (Rm. #1 - 306 sq. ft.; Rm #2 - 306 sq. ft.; Rm. #3 = 305 sq. ft.; Rm. #4 - 305 sq. ft.; Rm. #5 - 304 sq. ft.; Rm. #6 - 346 sq. ft.; Rm. #7 - 349 sq. ft; Rm. #8 - 349 sq. ft.)
Trim/Package Room: 711 square feet
Quarantine Room: 75 square feet
Dry Rooms: 239 total square feet (Rm. #1 - 117 sq. ft.; Rm. #2 - 122 sq. ft.)
Product Storage Room - 148 sq. ft.
Garage: 277 square feet
Total Cultivation Space (i.e., mother/clone, vegetation, genetics flower, and flower rooms) = 4,201 square feet
Total Supplemental Space (i.e., trim, quarantine, dry, and product storage rooms, etc.) = 2,030 square feet.

AMCO Received 1/16/2019