From: AK Green Labs
To: Marijuana Licensing (CED sponsored)
Subject: Re: MJ-15 Operating Plan for AK Green Labs, LLC #10186
Date: Friday, December 30, 2016 1:28:47 PM

Hi Jane,

Not sure what you're asking for since that's what I put in the docs I submitted. Summarizing those:
We bought new chromatography equipment, so we have new SOPs for Cannabinoid Analyses on all MJ products and Residual Solvent Analyses. Then we added Terpene Analyses and new Microbial testing procedures.

Is that what you wanted to know ?

Regards,
Brian

On Fri, Dec 30, 2016 at 12:43 PM Marijuana Licensing (CED sponsored) <marijuana.licensing@alaska.gov> wrote:

> Brian,
>
> I am working on your MJ-15, can you please email me a summary of what you are changing.

Thank you

Jane Sawyer

State of Alaska-DCCED

Alcohol and Marijuana Control Office

550 W 7th Avenue Ste. 1600

Anchorage, AK 99501

907-269-0350

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Alaska Marijuana Control Board

Cover Sheet for Marijuana Establishment Applications

What is this form?

This cover sheet **must** be completed and submitted any time a document, payment, or other marijuana establishment application item is emailed, mailed, or hand-delivered to AMCO's main office.

Items that are submitted without this page will be returned in the manner in which they were received.

Section 1 – Establishment Information

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

Licensee:	AK GREEN LABS, LLC	**License Number:**	10186		
License Type:	Marijuana Testing Facility				
Doing Business As:	AK GREEN LABS LLC				
Physical Address:	2509 Fairbanks Street, Suite A				
City:	Anchorage	**State:**	AK	**Zip Code:**	99503
Designated Licensee:	Brian Coyle				
Email Address:	akgreenlabs@gmail.com				

Section 2 – Attached Items

List all documents, payments, and other items that are being submitted along with this page.

Attached Items:	Form MJ-15 Operating Plan Change Pages changed from Form MJ-06: Marijuana Testing Facility

OFFICE USE ONLY					
Received Date:		Payment Submitted Y/N:		Transaction #:	

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Form MJ-15: Operating Plan Change

What is this form?

This operating plan change form is required for all marijuana establishment licensees seeking to change a licensed marijuana establishment's existing operating plan, under 3 AAC 306.100. With this form, a licensee may request changes to as much or as little as desired of Form MJ-01 and/or the corresponding operating plan supplemental for the establishment's license type.
The required $250 change fee may be made by credit card online (VISA, MasterCard, or Discover), or by check or money order.

Please download, complete, and submit with this form **only the pages** of Form MJ-01 and/or the corresponding operating plan supplemental that contain sections that you are requesting to change. All fields that are left blank will be considered unchanged from the existing operating plan. All fields that are completed and submitted with this form will be considered as changes to the existing operating plan and are subject to board approval. **Please do not submit any wholly unchanged pages of an operating plan.**

The form(s) that I am requesting board approval to change is:

- ☐ **Form MJ-01:** Marijuana Establishment Operating Plan
- ☐ **Form MJ-03:** Retail Marijuana Store Operating Plan Supplemental
- ☐ **Form MJ-04:** Marijuana Cultivation Facility Operating Plan Supplemental
- ☐ **Form MJ-05:** Marijuana Product Manufacturing Facility Operating Plan Supplemental
- ☑ **Form MJ-06:** Marijuana Testing Facility Operating Plan Supplemental

This form must be completed and submitted to AMCO's main office prior to changing existing operations. The licensed establishment's operations may not be altered unless and until the Marijuana Control Board has approved of the changes. Please note that licensees seeking to change operating plans for multiple licenses must submit a separate completed copy of this form for each license.

Section 1 – Establishment Information

Enter information for the licensed establishment.

Licensee:	AK Green Labs LLC	**License Number:**	10186		
License Type:	Marijuana Testing Facility				
Doing Business As:	AK Green Labs LLC				
Premises Address:	2509 Fairbanks Street, Suite A				
City:	ANCHORAGE	**State:**	AK	**ZIP:**	99503

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Form MJ-15: Operating Plan Change

As a marijuana establishment licensee, I declare under penalty of unsworn falsification that I have examined this form, including all accompanying documents, schedules, and statements, and to the best of my knowledge and belief find them to be true, correct, and complete.

Signature of licensee

Brian Coyle

Printed name

Subscribed and sworn to before me this 22 day of December, 2016.

Notary Public
SHARON R. LEIPPI
State of Alaska
My Commission Expires Jun 8, 2018

Sharon R. Leippi
Notary Public in and for the State of Alaska.

My commission expires: June 8, 2018

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Operating Plan Supplemental
Form MJ-06: Marijuana Testing Facility

What is this form?

This operating plan supplemental form is required for all applicants seeking a marijuana testing facility license and must accompany the **Marijuana Establishment Operating Plan (Form MJ-01)**, per 3 AAC 306.020(b)(11). Applicants should review **Chapter 306: Article 6** of the **Alaska Administrative Code.** This form will be used to document how an applicant intends to meet the requirements of those 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 306.615(2).

What additional information is required for testing facilities?

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

- Prohibitions
- Testing practices and procedures
- Employee qualification and training
- Security
- Reporting and records retention

This form must be submitted to AMCO's main office before any marijuana testing facility license application will be considered complete.

Section 1 – Establishment Information

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

Licensee:	AK Green Labs LLC	**License Number:**	**10186**		
License Type:	**Marijuana Testing Facility**				
Doing Business As:	**AK Green Labs LLC**				
Premises Address:	**2509 Fairbanks St, Suite A**				
City:	**Anchorage**	**State:**	ALASKA	**ZIP:**	99503

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Operating Plan Supplemental
Form MJ-06: Marijuana Testing Facility

Section 2 – Prohibitions

Applicants should review 3 AAC 306.610 and be able to answer "Agree" to all items below.

The marijuana testing facility will not:	Agree	Disagree
Sell, deliver, distribute or transfer any marijuana or marijuana product to a consumer, with or without compensation	☐	☐
Allow any person to consume marijuana or marijuana product on its licenses premises	☐	☐

Section 3 – Testing Practices and Procedures

Review the requirements under 3 AAC 306.615, 3 AAC 306.635 – 3AAC 306.645, and 3 AAC 306.660, and identify how the proposed establishment will meet the listed requirements.

Describe each test the marijuana testing facility will offer:

Potency of flower, concentrates, extracts and all marijuana products including edible products. Samples will be analyzed for Δ9THC, THCA, CBD, CBDA, CBN and other cannabinoids e.g. CBDV, CBDVA, CBG, CBC, Δ8THC and THCV

Residual Solvent Analysis on solvent-based extracts.
Samples will be analyzed for Butane, Heptane, Hexane, Benzene, Toluene and Xylenes meta-xylenes, para-xylenes and ortho-xylenes.

Microbial Screening of flower, trim, non-solvent based extracts and marijuana products. Samples will be tested for Salmonella, Ecoli STEC and Aspergillius - fumigatus, flavus and niger

Terpene Analyses on flower, trim, concentrates, extracts and marijuana products Alpha-Pinene, Beta-Myrcene, Beta-Caryophyllene, Caryophyllene oxide, Citronellol, Humulene, D-Limonene, Linalool, Phytol,Terpinolene, Alpha-Bisabolol, Delta-3-Carene, Camphene, Geraniol, Guaiol, p-Cymene, Isopulegol, Nerolidol, Ocimene, Beta-Pinene, Eucalyptol (1,8 Cineole), Alpha-Terpinene, Gamma-Terpinene. This is our current list and it may grow in time.

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Operating Plan Supplemental

Form MJ-06: Marijuana Testing Facility

Standard Operating Procedure Manual (3 AAC 306.640):

Applicants for marijuana testing facilities must have a written procedures manual with detailed instructions explaining how to perform each testing method the applicant or marijuana testing facility uses, and minimum standards for each test. Applicants should be able to answer "Agree" to all items below.

The marijuana testing facility will ensure that the standard operating procedure manual:	Agree	Disagree
Is available to each employee at all times	■	☐
Will cover at least the required procedures listed under 3 AAC 306.640	■	☐

Describe the marijuana testing facility's standard operating procedure for each test the facility will offer:

These are brief descriptions only of our procedures. Our detailed procedures for extraction and analysis have been reviewed and passed by A2LA, and are available in the Laboratory.

Potency will be analyzed using a HPLC (High-performance Liquid Chromatograph with a DAD (Diode Array Detector). Samples will be extracted through a multi-step process including: grinding, vortexing, sonication and extraction with methanol, acetone, cyclohexane and ethanol. Some marijuana products, especially gelatin based ones, will require extended agitation and centrifuging for a complete extraction. Extracted fluid is filtered and injected to the HPLC for separation and detection. Data files are analyzed using the Shimadzu LabSolutions suite of software.

Residual Solvents will be analyzed on the GC (Gas Chromatograph) with a MS (Mass Spectrometer) detector and HS (Headspace) injector. Samples are dissolved in octanol, loaded onto the headspace autosampler and an aliquot of the gas phase (headspace) is injected to the GCMS for separation and detection of compounds. Data files are analyzed using the Shimadzu LabSolutions suite of software.

Terpenes are analyzed on either the HPLC or the GCMS using the liquid injector. Sample preparation and extraction procedures are the same as used for the Potency analyses. Data files are analyzed using the Shimadzu LabSolutions suite of software.

Microbial Testing procedures are on continuation page.

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Operating Plan Supplemental

Form MJ-06: Marijuana Testing Facility

Laboratory Testing of Marijuana and Marijuana Products (3 AAC 306.645):

A licensed marijuana testing facility must meet minimum standards for laboratory testing. Applicants should be able to answer "Agree" to all items below.

The marijuana testing facility applicant has:	Agree	Disagree
Read and understands and agrees to the requirements listed under 3 AAC 306.645	☐	☐

Describe the acceptable range of results for each test the marijuana testing facility will offer:

Potency of Edibles
Single servings of marijuana products that have a THC content greater than 6mg/g (5mg/g +20%) will be noted in METRC and AMCO notified.

Residual Solvent Analysis
Solvent-extracted concentrates will be tested for residual solvent content, with results expressed in parts per million (ppm). Acceptable limits per gram are: a) Butanes: < 800 ppm; b) Heptanes: < 500 ppm; c) Benzene: < 1 ppm; d) Toluene: < 1 ppm; e) Hexane: < 10 ppm; and f) Total Xylenes (m,p & o-xylenes) < 1 ppm. If a sample exceeds any one of these concentration levels, the sample is failed

Visual Inspection
Foreign matter seen during visual inspection will be noted in METRC including:
- Visible contaminants (e.g. sample spiked with kief or extract)
- Obvious foreign matter (e.g. hair, insect parts, excreta, feathers, decomposed material, and miscellaneous matter such as soil, sand, glass, rust, or other foreign substances.

The regulations do not give any criteria for failure by visual inspection, so we will only recommend failing a sample for egregious contamination.

Microbial Screening
Samples presenting evidence of the presence of one (1) colony-forming unit (CFU) of Salmonella, SHiga-toxin Ecoli (STEC), or Aspergillius - flavus, fumigatus or niger - detected in one (1) gram of sample shall be reported into METRC as a failure.

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Operating Plan Supplemental

Form MJ-06: Marijuana Testing Facility

(Additional Space as Needed):

Describe the Marijuana Testing Facility's procedure for each test the facility will offer (continued).

Microbial Testing Procedures

All samples are first is dispersed in buffered peptone water to enrich any colonies that may be present.

Salmonella Tests: A volume of the peptone water containing any bacteria that are dispersed and enriched is transferred to Salmonella chromogenic agar. After 24-hour incubation, colonies characteristic of Salmonella are identified by shape and color.

Shiga-toxin E. coli (STEC) Tests: A volume of the peptone water containing any bacteria that aredispersed and enriched is transferred to MacConkey broth. After 24-hour incubation, each tube is examined for turbidity and color to indicate Lactose-fermenting microorganisms such as E. coli. Samples indicative of E. coli growth are tested for Shiga toxin using ImmunoCard STAT! EHEC test devices based on the immunochromographic lateral flow principle (Meridian Biosciences, Cincinnati, OH).

Aspergillus Tests: A volume of the peptone water containing any mold spores that are dispersed is transferred to Dichloran rose bengal chloramphenicol (DRBC) agar. After 48-hour incubation, mold colonies suspected of being Aspergillus sp. are examined microscopically to observe diagnostic features of Aspergillus fumigatus, Aspergillus flavus, and Aspergillus niger (brasiliensis). Identification will be based on: Larone, D. H. 2002. Medically important fungi: a guide to identification, 4th ed. ASM Press, Washington, D.C. (or equivalent reference).