



Michigan Department of
AGRICULTURE
& Rural Development

**MICHIGAN
HEMP PRODUCTION
PLAN**

V3. 6-3-2022

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www.Michigan.gov/mdard
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Introduction – State and Tribal Plans; General authority (7 CFR Part 990.2)

Pursuant to 7 C.F.R 990.2 (State and Tribal plans; General authority), states desiring to have primary regulatory authority over the production of hemp in the State for which it has jurisdiction, must develop and submit to the United States Department of Agriculture (hereinafter “USDA”), a state hemp plan that monitors and regulates hemp production in the State. This plan shall be developed in consultation with the Governor and chief law enforcement officer of the state and must be approved by USDA.

The Michigan Department of Agriculture and Rural Development (MDARD) (hereinafter “the Department”) works closely with regulated businesses to ensure compliance with applicable state and federal laws and regulations. This is done through monitored compliance assistance activities, strict regulatory oversight, and appropriate enforcement. Michigan growers are excited to grow hemp as a new commodity and consumers are eager to have access to hemp-derived products grown and processed locally.

To ensure the needs of Michigan growers and businesses are met, the Governor, our state legislature, and the Department, believe it is in the best interest of Michigan’s hemp industry to administer a hemp program at the state level. Doing so will ensure the industry is regulated fairly and effectively, and the agricultural and economic interests of the people of the State of Michigan are met through efficient customer service, compliance assistance, partnership, and collaboration with hemp industry partners and appropriate enforcement.

In December of 2018, Michigan’s legislature enacted the Industrial Hemp Research and Development Act, Public Act 641 of 2018. This act amended Public Act 547 of 2014 which authorized growing and cultivating industrial hemp for research purposes only and expanded authorization for the development of a commercial hemp program in the state.

On October 16, 2020, the Michigan Industrial Hemp Growers Act, Public Act 220 of 2020 was enacted authorizing the Department to establish an industrial hemp program. Public Act 220 established hemp cultivation requirements that were consistent with USDA’s Interim Final Rules. The Act was again updated on March 24, 2021 to align with USDA’s Final Rule. Public Act 220 authorizes the Department to develop and submit to USDA an industrial hemp plan that complies with 7 USC 1639o to 1639s and upon approval, use the industrial hemp plan to operate and administer the hemp program. Among other things, PA 220 authorizes the Department to register persons engaged in the cultivation of industrial hemp; to sample and test industrial hemp to ensure compliance; to prohibit certain acts; and prescribe penalties and civil sanctions for violations.

Michigan’s Hemp Plan is comprised of multiple sections that address the requirements of the 2018 Farm Bill and USDA’s Final Rules. Within each section is a description of the federal requirement(s), an explanation on the Department’s compliance with the requirement(s) and citation of its legal authority. The Department believes this plan meets federal hemp plan requirements and we look forward to your approval.

Table of Contents

1. SECTION 1. PLAN TO MAINTAIN RELEVANT PRODUCER AND LAND INFORMATION 3

2. SECTION 2. PLAN FOR ACCURATE AND EFFECTIVE SAMPLING AND TESTING USING POST-
DECARBOXYLATION OR SIMILARLY RELIABLE METHODS [990.3 (a) (2)] 5

3. SECTION 3. PLAN FOR DISPOSAL PROCEDURES..... 15

4. SECTION 4. PLAN FOR REMEDIATION PROCEDURES 16

5. SECTION 5. PLAN FOR INSPECTION PROCEDURES..... 17

6. SECTION 6. PLAN FOR COLLECTION OF INFORMATION..... 17

7. SECTION 7. PLAN TO COMPLY WITH ENFORCEMENT PROCEDURES..... 18

8. CERTIFICATION THAT THE STATE HAS RESOURCES AND PERSONNEL TO CARRY OUT REQUIRED FARM BILL
PRACTICES AND PROCEDURES. [990.3 (A) (9)] 21

9. ATTACHMENTS 22

1. SECTION 1. PLAN TO MAINTAIN RELEVANT PRODUCER AND LAND INFORMATION

1.1 *Final Rule Requirement - Collect, maintain and provide to USDA real-time contact, land and license information for each hemp producer licensed or authorized in the state or territory of the tribal government (whichever applicable). [990.3 (a) (1)]*

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act, Public Act 220 of 2020, (Attachment A) requires any person growing industrial hemp in Michigan to be registered with the Department. Persons applying for a grower registration are required to apply to the Department and complete an application. Applicants are required to include the following information on their grower application:

The applicant’s full name, date of birth, mailing address, telephone number and electronic mail address. If the applicant is not an individual, the application must include the EIN number of the applicant and for each key participant, his or her full name, date of birth, title, and electronic mail address.

The total acreage and greenhouse or other indoor square footage where industrial hemp will be grown.

The address, legal description and GPS coordinates for each field, greenhouse, building, or other location where industrial hemp will be grown.

Maps depicting each field, greenhouse, building, or other location where industrial hemp will be grown that indicate entrances, field boundaries, and specific locations corresponding to the GPS coordinates provided.

The Department is required by the Act to report to USDA, information on growers that the Department has registered, by the first of each month, including contact information, locations where industrial hemp will be grown, registration status, and any changes or updates made to registration information that was previously submitted to USDA. The Department will provide this information to USDA electronically on the forms and in the method required by USDA.

The Department is required by the Act to maintain registration applications for a period of 5 years. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 201 (1) (2) (a) – (d), SECTION 501 (1) (a) – (e) and SECTION 507.

- 1.2 ***Final Rule Requirement - Provide contact information for each hemp producer, who is an individual covered under the plan, including their full name, license or authorization identifier, EIN of the business entity, business address, telephone number, and email address (if available). If the producer is a business entity, the information must include the full name of the business, address of the principal business location, license or authorization identifier, full name and title of the key participants, and email address of key participants (if available). This information can be provided via the AMS-23 form via mail, fax, or email. [990.3 (a) (1) (i)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act mandates that the Department report to USDA, information on growers that the Department has registered. Information required to be submitted by the first of each month includes:

- (a) all contact information provided on the application for registration, specifically, the applicant's full name, date of birth, mailing address, telephone number and email address, and if the applicant is not an individual, the application must include the EIN number of the applicant, and for each key participant, his or her full name, date of birth, and email address;
- (b) each grower's registration number;
- (c) the status of each grower's registration;
- (d) any changes or updates to a grower's contact information. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 201 (2) (a), SECTION 503 (1) (a) – (d).

The Department will collect this information by including it on the grower's application for registration and requiring that it be provided. The Department will submit the information electronically to USDA on a form and in the manner required.

- 1.3 ***Final Rule Requirement - Provide a legal description of the land where hemp is produced in the state or tribal territory, including, to the extent practicable, its geospatial location. [990.3 (a) (1) (ii)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Act mandates that the Department report to USDA, information on growers that the Department has registered. Information required to be submitted by the first of each month includes specific information applicants for a grower registration provide on locations where hemp will be grown, including, the address, legal description and GPS coordinates for each field, greenhouse, building, or other location where industrial hemp will be grown. The Department will collect this information by including it on the grower's application for registration and will submit the information electronically to USDA on the form and in the manner required. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 201 (2) (c) and SECTION 503 (1) (a).

- 1.4 ***Final Rule Requirement - Maintain and report to USDA status of licensed producers (and any changes) and license or authorization numbers of producers. [990.3 (a) (1) (iii)]***

DEPARTMENT RESPONSE:

As indicated previously in this section, the Michigan Industrial Hemp Growers Act mandates that the Department report to USDA, information on growers that the Department has registered. Information required to be submitted by the first of each month includes each grower's registration number, the status of each grower registration and any changes or updates made to grower registration information that was previously submitted. The Department will collect this information by including it on the grower's application for registration and will submit the information electronically to USDA on the form and in the manner required. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 503 (1) (b)-(d).

2. **SECTION 2. PLAN FOR ACCURATE AND EFFECTIVE SAMPLING AND TESTING USING POST-DECARBOXYLATION OR SIMILARLY RELIABLE METHODS [990.3 (a) (2)]**

- 2.1 ***Final Rule Requirement - Standard sampling and performance-based sampling procedures must be sufficient at a confidence level of 95 percent that no more than one percent of the plants in each lot would exceed the acceptable hemp THC level and ensure that a representative sample is collected that represents a homogeneous composition of the lot. [990.3 (a) (2) (ii)].***

DEPARTMENT RESPONSE:

The Department will utilize standard sampling and performance-based sampling when collecting official hemp samples. Sampling protocols will be sufficient to ensure at a confidence level of 95% that no more than 1% of hemp plants in each sampled lot would exceed the acceptable THC level and will ensure that representative samples are collected reflecting a homogeneous composition of the lot being sampled. The

Department's Industrial Hemp Standard Sampling Plan (Attachment B) includes procedures for standard sampling along with the following elements: Definitions; Background; Authority; Designated Sampling Agents; Biosecurity; Equipment; Sampling Process, Number of Samples to Take, Resampling, and Remediation Sampling. The Department's Performance-Based Sampling Plan addresses college and university research, immature plants, and hemp varieties (Attachment F). LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (ee) AND SECTION 401 (6)

- 2.2 ***Final Rule Requirement - All samples must be collected from the flowering tops of the plant when flowering tops are present by cutting the top five to eight inches from the “main stem” (that includes the leaves and flowers), “terminal bud” (that occurs at the end of a stem),” or “central cola” (cut stem that could develop into a bud) of the flowering top of the plant. [990.3 (a) (2) (ii)].***

DEPARTMENT RESPONSE:

The requirement for collecting samples from the flowering tops of the plant by cutting the top 5-8 inches from the main stem, terminal bud or central cola is described in the Department's Industrial Hemp Standard Sampling Plan, specifically, section 8.12.3 which states “A cutting shall be obtained from ONLY female flowers, from branches at the top 1/3 of the plant. All samples must be collected from the flowering tops of the plant by cutting the top five to eight inches from the “main stem” (that includes the leaves and flowers),” terminal bud” (that occurs at the end of a stem), or” central cola” (cut stem that could develop into a bud) of the flowering top of the plant. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (ee) AND SECTION 401 (6) and the Department's Industrial Hemp Standard Sampling Plan

- 2.3 ***Final Rule Requirement A. Procedures to either sample all lots or do performance-based sampling.***

- 2.3.1 ***(1) Sampling all lots [990.3 (a) (2) (i) –(iii)]***

2.3.1.1 ***The standard sampling method must be used by all producers, except for producers operating under a State or Tribal plan that includes a performance-based sampling requirement.***

2.3.1.2 ***Every lot and every single growing location must be sampled and tested.***

DEPARTMENT RESPONSE:

The Department will collect samples from every grower and every lot unless their cultivation program meets a scenario described in the Department's Performance-Based Sampling Plan (Att. F). The Department will routinely collect and analyze program data pertinent to sample collection and testing to regularly update appropriate performance-based sampling protocols and submit to USDA for approval prior to implementation. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (ee) AND SECTION 401 (6)

2.3.2 (2) Performance-based sampling [990.3 (a) (2) (iii); 990 C. Sampling for Total THC Performance Based Sampling]:

2.3.2.1 Any performance-based method must be part of the State or Tribe’s hemp plan and is subject to USDA approval and must have the potential to ensure, at a confidence level of 95 percent, that the cannabis plant species *Cannabis sativa L.* that will be subject to the alternative method will not test above the acceptable THC level. Performance-based sampling protocols may consider seed certification processes, other process that identify varieties that have consistently resulted in compliant hemp plants, whether the producer is conducting research on hemp at an institution of higher learning or that is funded by a Federal, State, or Tribal government, whether a producer has consistently produced compliant hemp plants over an extended period, and other similar factors.

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act provides that the Department may use performance-based sampling that allows for reduced or no regulatory sampling of specific certified seed varieties yielding consistently compliant hemp, lots used for academic research by a college or university, if a grower has consistently produced compliant hemp plants over an extended period of time, or other factors that have the potential to ensure at a confidence level of 95% that not more than 1% of the plants in each lot would be noncompliant. As stated previously, the Department will collect official samples from every grower and every lot unless their cultivation program meets a scenario described in the Department’s Performance-Based Sampling Plan (Att. F). The Department will routinely collect and analyze program data pertinent to sample collection and testing to regularly update appropriate performance-based sampling protocols and submit to USDA for approval prior to implementation. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (ee) AND SECTION 401 (6)

2.4 Final Rule Requirement - Producers that produce hemp for research, along with the research institution itself, must obtain a license from a State or Tribal Government.

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act requires any person growing industrial hemp in Michigan, including a college or university that grows industrial hemp for the purpose of conducting research, to be registered with the Department. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (gg), SECTION 201 (1) and SECTION 801. (1)(a). Note, Section 801 does not take effect until PA 547 is repealed. The Department is in the process of repealing PA 547 at this time and will notify USDA when completed. Regardless, colleges and universities are included in the definition of a “person” and all “persons” growing industrial hemp in Michigan are required to be registered.

2.5 ***Final Rule Requirement -Hemp produced for research is not subject to the same sampling requirements provided that the producer adopts and carries out an alternative sampling method that has the potential to ensure, at a confidence level of 95 percent, that the cannabis plant species Cannabis sativa L. that will be subject to this alternative method will not test above the acceptable hemp THC level.***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act requires colleges and universities growing industrial hemp for the purpose of conducting research to allow for standard sampling by designated sampling agents to collect samples of each lot of industrial hemp and submit for total delta-9-THC testing. If the college or university adopts alternative methods for collecting a sample and completing a total delta-9-THC test, the college or university must submit their plan to the Department for approval and compliance with the Performance-Based Sampling Plan (Att. F).

College and university hemp researchers must still follow registration requirements, reporting requirements to MDARD and FSA, notification to MDARD, and disposal of noncompliant hemp. The Department retains authority to inspect all hemp growing and storage areas, documentation, files, etc. regardless of whether or not the researcher is subject to standard sampling and testing. Like all other growers, researchers who produce hemp lots that will enter the stream of commerce must follow Chapter IV requirements in PA 220 regarding official sample collection and testing.

If the researcher's performance-based sampling plan is approved by MDARD, the college or university does not have to comply with the Chapter IV requirements in PA 220. The alternative sampling and total delta-9-THC test conducted must have the potential to achieve at a confidence level of 95%, that the plants will not test above the acceptable THC level.

If college or university researchers intends to develop an alternative method of sampling, the researcher must submit the plan to the Department to review and approve or deny.

Plans must include:

- The proposed sampling and testing process.
- How the performance-based plan has the potential to ensure at a confidence level of 95% that the alternative sampling method will not test above the acceptable THC level.
- Acknowledgement that plants will not enter the stream of commerce at the conclusion of the study.
- Acknowledgement that MDARD may conduct inspections, investigations, and sampling at any time to assess compliance with PA 220 and adherence to the accepted performance-based plan.

The Department has requested updated language in PA 220 to require that college and university researchers submit their performance-based sampling plan to MDARD for approval and that hemp produced for research under a performance-based sampling plan cannot enter the stream of commerce. While legislative updates are in progress, the Department will continue to enforce the statutory requirement that all hemp growers must have lots sampled by the Department prior to harvest.

LEGAL AUTHORITY – PA 220 OF 2020, SECTION 801 (1) (b), SECTION 401. Note, Section 801 does not take effect until PA 547 is repealed. The Department is in the process of repealing PA 547 at this time and will notify USDA when completed. Until such time that PA 547 is repealed, colleges and universities intending to harvest hemp will be required to comply with all applicable sampling requirements prescribed in Section 401 of the Act.

2.6 *Final Rule Requirement - Research institutions and producers growing hemp for research purposes shall ensure the disposal of all noncompliant plants.*

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act requires growers to either dispose of or remediate non-compliant hemp. Specific disposal and remediation options are prescribed. LEGAL AUTHORITY, PA 220 OF 2020, SECTION 301 (2) (e), SECTION 405 (2), SECTION 407 (1) - (7) AND SECTION 801(1) (a), (1) (c). Note, Section 801 does not take effect until PA 547 is repealed. The Department is in the process of repealing PA 547 at this time and will notify USDA when completed. Until such time that PA 547 is repealed, colleges and universities with noncompliant plants are subject to all sampling, testing and disposal requirements prescribed in Chapter IV of the Act.

2.7 *Final Rule Requirement - Research institutions and producers growing hemp for research purposes shall also comply with the reporting requirements including reporting disposal of noncompliant plants.*

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act requires growers to report to the Department by November 30 of each year the total acreage of industrial hemp that the grower disposed of the immediately preceding growing season. The Act requires growers to submit, on a form provided by the Department, a notice of their intent to dispose to of non-compliant hemp. This notice must be provided at least 48 hours before disposal. In addition, a grower shall submit a notice of disposal within 48 hours after the industrial hemp is disposed of. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 301 (2) (g) (iii), SECTION 407 (6)(a), (b)(i)-(v) and SECTION 801 (1) (a), (1) (c).

2.8 *Final Rule Requirement B. Procedures on sampling agents.*

- 2.8.1 ***Procedures to conduct sampling and testing for total delta-9-tetrahydrocannabinol concentration level within 30 days prior to the anticipated harvest date; samples must be collected by a sampling agent; producers may not collect samples from their own growing facilities. [990.3 (a) (2) (i)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act requires growers intending to harvest an industrial hemp lot, to contact the Department not more than 30 days or less than 20 days before the grower's anticipated harvest to collect an official hemp sample of each lot of industrial hemp grown. A designated sampling agent must collect an official hemp sample before the grower's anticipated harvest. Official hemp samples will only be collected by designated sampling agents and will only be analyzed by the Department's regulatory testing facility. Under the Act, a designated sampling agent is a federal, state, or local law enforcement agent authorized by the Department of collect official sample. LEGAL AUTHORITY, PA 220 OF 2020, SECTION 103 (m), (kk)(i)-(v), SECTION 301 (2) (c) and SECTION 401 (1).

- 2.8.2 ***Final Rule Requirement - Procedures for collecting samples from the flowering tops of plants which shall be approximately five to eight inches in length from the "main stem" (that includes the leaves and flowers), "terminal bud" (that occurs at the end of a stem), or "central cola" (cut stem that could develop into a bud) of the flowering top of the plant. [990.3 (a) (2) (ii)]***

Final Rule Requirement - Procedures to ensure the sampling method used represents a homogenous composition of the lot. [990.3 (a) (2) (iii)]

DEPARTMENT RESPONSE:

As indicated previously in this section, the Department will utilize procedures in the Industrial Hemp Standard Sampling Plan (Att. B) b for collecting samples. Section 8.12.3 of the Department's Standard Sampling Plan states "A cutting shall be obtained from ONLY female flowers, from branches at the top 1/3 of the plant. All samples must be collected from the flowering tops of the plant by cutting the top five to eight inches from the "main stem" (that includes the leaves and flowers), "terminal bud" (that occurs at the end of a stem), or "central cola" (cut stem that could develop into a bud) of the flowering tops of a plant. To ensure collection of a homogenous composition of a lot of hemp being sampled, the Department will follow procedures outlined in the sampling plan related to the number of samples to collect, the size of the sample and what part of the plant to collect a sample from. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (ee) AND SECTION 401 (6) and the Department's Industrial Hemp Standard Sampling Plan.

2.8.3 ***Final Rule Requirement - Procedure/statement/allowance to require the producer or an authorized representative of the producer to be present at the growing site during sample collection, if possible. [990.3 (a) (2) (iv)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act requires growers or their authorized representatives to be present during sampling. This requirement is included in the Department's sample training program and materials, the Department's Industrial Hemp Standard Sampling Plan operating procedures and is confirmed with growers during the scheduling of sample collection appointments. Sample collection will be denied if a grower or their authorized representative are not able to be present. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 401 (1)

2.8.4 ***Final Rule Requirement - Procedures to allow for representatives of the sampling agency to have complete and unrestricted access during business hours to all hemp and other cannabis plants, (whether growing or harvested), to areas where hemp is grown and stored, and all land, buildings, and other structures used for cultivation, handling, and storage of all hemp and other cannabis plants, and all locations listed on the producer's license. [990.3 (a) (2) (v)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act requires growers to allow the Department or a law enforcement agency to enter onto and inspect all premises where industrial hemp is or will be located, with or without cause and with or without advance notice. Standard operating procedures for designated sampling agents provide instructions should access be denied and include notifying the grower that a return visit will occur and will include law enforcement. In addition, when a designated sampling agent collects an official hemp sample, growers are required to give designated sampling agents complete and unrestricted access to all cannabis and all acreage, greenhouse, indoor square footage, fields, buildings, or other locations, including any location listed in their grower application where cannabis is growing or stored. As stated previously, this requirement is included in the Department's sample training materials and SOP's and is confirmed with growers during the scheduling of their sample collection appointment. Sample collection will be denied if a grower or their authorized representative are not able to be present. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 301 (2) (a) and SECTION 401 (2)(a)(b).

2.8.5 ***Final Rule Requirement - Procedures to ensure that a producer does not harvest any cannabis prior to samples being taken. [990.3 (a) (2) (vi)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act prohibits a grower from harvesting industrial hemp before an official sample is collected. This legal requirement is included in web-based regulatory materials and technical bulletins designed to assist growers with compliance and is an element of an annual inspection. Allegations of violative harvest

activity will be investigated, and appropriate enforcement action will be taken if/when confirmed. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 303 (g) and SECTION 401.

2.8.6 *Final Rule Requirement - Procedures to ensure sampling agents are trained using USDA, state, or tribal training procedures and that information about trained sampling agents, available to producers, is maintained by the state or tribal government. [990.3 (a) (2) (vii)]*

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act defines a designated sampling agent as a federal, state or local law enforcement agent authorized by the Department to collect official samples. Designated sampling agents will receive official training using department-prepared materials including sampling standard operating procedures; inspection checklists; recorded, virtual presentations covering hemp morphology, uses, identification, agronomy, cannabinoid introduction; assignment of requests; sampling process and shipping; lab processing; and reporting. When available, on-site group demonstration or one-on-one training at facilities with fiber and cannabinoid crops and processing will be included. Designated sampling agents that have successfully completed this training will be issued a certificate from MDARD upon completion. The Department will maintain a list of its designated sampling agents. In lieu of or in conjunction with MDARD training, MDARD may choose to utilize USDA-provided online training. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (m).

2.9 *Final Rule Requirement C. Procedures on testing*

2.9.1 *Provides a definition for “acceptable hemp THC level.” The acceptable hemp THC level for the purpose of compliance with the requirements of State and Tribal Hemp plans or the USDA hemp plan is when the application of the measurement of uncertainty to the reported total delta-9-tetrahydrocannabinol content concentration level on a dry weight basis produces a distribution or range that includes 0.3% or less. [990.1]*

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act defines “acceptable THC level” as the application of the measurement of uncertainty to the reported total delta-9-THC concentration level on a dry weight basis that produces a distribution or range that includes 0.3% or less total delta-9-THC.

While the measurement of uncertainty (MU) may fluctuate over time, the exact value is provided to the grower with THC test results and is clearly marked as compliant or non-compliant. At of this time of this submittal, the MU is 0.06%. As such, any total delta-9 THC value less than or equal to 0.36% is compliant. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (a).

- 2.9.2 ***Final Rule Requirement - Procedures to require testing for delta-9 THC concentration. The procedures must require accurate identification of the acceptable hemp THC level. Testing methods must include 1) Post decarboxylation or other similarly reliable method; and 2) Consideration of potential conversion of delta-9 THCA into THC and test result measure total available THC (THC + THCA). Testing methodologies meeting these requirements include, but are not limited to, use of gas or liquid chromatography with detection. The total THC concentration shall be determined and reported on a dry weight basis. [990.3 (a) (3)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act establishes specific standards for industrial hemp testing. These standards are documented in the Departments Standard Operating Procedures for Determination of Total THC, Total CBD, and CBN using Chromatographic Methods and include adopting a laboratory quality assurance program that ensures the validity and reliability of total delta-9-THC test results; adopts an analytical method selection, validation, and verification procedure that ensures that the total delta-9-THC testing method is appropriate; demonstrates that the total delta-9-THC testing ensures consistent and accurate analytical performance; adopts method performance selection specifications that ensure that the total delta-9-THC testing methods are sufficient to detect the total delta-9-THC required under the Act; reports the measurement of uncertainty; and that adopts a total delta-9-THC testing method that includes a postdecarboxylation test or other similar method.

LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (nn) and SECTION 403 (1)(a) -(f) and Standard Operating Procedures for Determination of Total THC, Total CBD, and CBN using Chromatographic Methods (Attachment C).

- 2.9.3 ***Final Rule Requirement - Procedures to ensure the hemp plant material from one lot not be commingled with hemp plant material from other lots. [990.3 (a) (3) (ii)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act requires the Department to establish specific standards for hemp testing including, ensuring that an official hemp sample is not commingled with any official hemp sample. The Act defines an official hemp sample as a sample of an industrial hemp lot that is collected by a designated sampling agent in accordance with Department sampling protocols and is tested by a regulatory testing facility. Samples are processed and handled separately and tracked with barcodes to prevent comingling. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (ee) and SECTION 403 (2)(a).

- 2.9.4 ***Final Rule Requirement - Procedures to require hemp testing laboratories to adhere to standards of performance for detecting THC concentration, including Measurement of Uncertainty (MU). [990.3 (a) (3) (iii) (A through G)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act, PA 220 of 2020 requires the Department to establish specific standards for hemp testing including, reporting the measure of uncertainty on a certified report of the total delta-9-THC. The Department's Geagley Laboratory has identified the measure of uncertainty in accordance with the attached procedure (Attachment D). The Act requires a regulatory testing facility that performs total delta-9 testing must do all of the following:

- a) adopt a quality assurance program that ensures the validity and reliability of the total delta-9 THC test results;
- b) adopt an analytical method selection, validation, and verification procedure that ensures that the total delta-9 THC testing methods are sufficient to detect the total delta-9-THC.
- c) demonstrate that the total delta-9-THC testing ensures consistent and accurate analytical performance;
- d) adopt method performance selection specifications that ensure that the total delta-9-THC testing methods are sufficient to detect the total delta-9-THC;
- e) report the measurement of uncertainty on the certified report of the total delta-9-THC test;
- f) adopt a total delta-9-THC testing method that includes postdecarboxylation test or other similar method. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (r) and SECTION 403 (1) (a) – (f).

With respect to 7 CFR 990.3(a)(3)(iii)(E), the Department's analytical chemistry lab, the Geagley Laboratory, provides standard operating procedure for disposal of noncompliant hemp samples. "Determination of Total THC, Total CBD, and CBN Using Chromatographic Method" (Attachment C) states that staff will dispose of dried hemp samples in biohazard bags, sample extracts will be disposed in hazardous waste containers, and centrifuge tubes will be disposed in the trash.

With respect to 7 CFR 990.3(a)(3)(iii)(G), Geagley Laboratory's standard operating procedure (Attachment C) states the entire, dried sample will be ground to homogenize thoroughly.

2.9.5 Final Rule Requirement - Requirement to only use DEA registered labs after December 31, 2022. [990.3 (a) (3) (iii) (H)]

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act defines both compliance monitoring testing facility and regulatory testing facility. Both definitions require the facility to be registered with the United States Drug Enforcement Agency (DEA). The Act provides that the requirement for regulatory testing facilities and compliance monitoring facilities to be registered with the DEA is effective December 31, 2022.

A grower intending to harvest an industrial hemp lot is required to contact the Department to collect an official hemp sample. The Department is required to transport

or cause to be transported an official hemp sample to a regulatory testing facility for total delta-9-THC testing. After December 31, 2022, a grower may use only a DEA registered compliance monitoring facility to test unofficial hemp samples for compliance monitoring to determine whether the industrial hemp is in compliance.

Regulatory testing – The Department’s analytical chemistry lab, the Geagley Laboratory, is ISO17025 accredited and registered with the DEA (Attachment E) and will be the primary laboratory that will be utilized for analyzing official hemp samples for regulatory compliance. Procedures related to sample documentation, chain of custody, sample storage, analysis procedures, equipment usage and employee safety have been validated through accreditation and will be explicitly followed. The Department may also contract with a third-party laboratory to conduct hemp testing. Any such contract would contain provisions that require the third-party laboratory to be DEA registered and use reliable, validated post-decarboxylation methodology or other similarly reliable method.

The Act also requires growers to utilize only DEA registered laboratories for informal monitoring of THC.

LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (d)(i), SECTION 103 (kk)(i), SECTION 301(2)(h), SECTION 401 (1), (3), SECTION 403 (4), and SECTION 509 (1) (2).

3. SECTION 3. PLAN FOR DISPOSAL PROCEDURES

3.1 ***Final Rule Requirement - Procedures for the disposal or remediation of cannabis plants if the sample representing that plant tests above the acceptable hemp THC level. [990.3 (a) (6)]***

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act requires growers to either dispose of or remediate non-compliant hemp within 30 days after receiving test results. If a grower chooses to dispose of non-compliant hemp, they may do so by plowing under using a curved plow blade to rotate the subsoil to the surface and bury the industrial hemp below the subsoil; mulching, disking, or composting the industrial hemp and blending the industrial hemp with existing soil, manure, or other biomass material; or by mowing, deep burial, or burning. All industrial hemp that is disposed of must be rendered nonretrievable or noningestible. Growers performing disposal activities are required to provide a notice of intent to dispose to the Department at least 48 hours before disposal. This notice requires the Grower to provide the date of disposal, the method of disposal, the total acreage or square footage disposed of, the reason for disposal and photographic or video evidence of the disposal. Growers choosing to remediate their noncompliant hemp are required to contact the Department to collect a post remediation sample. Growers performing disposal or remediation activities are required to allow a representative of the Department to be present during any disposal or remediation activities. LEGAL

AUTHORITY – PA 220 OF 2020, SECTION 301 (2) (e), (f) (i) – (ii), SECTION 407(1),(2) (a) -(c), SECTION 407 (5) and SECTION 407 (7).

3.2 ***Final Rule Requirement - Procedures to notify USDA of noncompliant plants and disposal of those plants from the lot where representative samples were taken. Test results must be included. [990.3 (a) (6)]***

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act requires the Department to report to USDA, by the first of each month, the contact information of the grower, his or her grower registration number, the total acreage or square footage of industrial hemp that was disposed of and the date on which the industrial hemp was disposed. In addition to this monthly reporting, the Department will report to USDA annually the total acreage of industrial hemp that was disposed of in the immediately preceding growing season. Monthly and annual reporting will be submitted to USDA on the form and in the manner directed by USDA. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 503 (2)(a) -(d) and SECTION 503 (3)(c).

The Department will submit USDA’s AMS-22 spreadsheet or the online equivalent that will identify the grower name and registration number, address, lot identification, testing date, testing facility and DEA registration number, reporting date, measurement of uncertainty, and THC determination. The Department is pursuing an update to PA 220 of 2020 to codify this reporting requirement.

4. **SECTION 4. PLAN FOR REMEDIATION PROCEDURES**

4.1 ***Final Rule Requirement - Procedures to ensure effective disposal or remediation of plants produced in violation of part 990; only those successfully remediated crops will be allowed to enter the stream of commerce, and all other remaining non-compliant crops must then be disposed. [990 (a) (6) (i - iii); 990 E. Disposal and Remediation of Non-Compliant Plants]***

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act requires growers to either dispose of or remediate non-compliant hemp within 30 days after receiving test results. Growers choosing to remediate non-compliant hemp may do so by removing all of the floral material and disposing of it or by shredding the industrial hemp plant into a biomass-like material. Under either remediation method, growers are required to contact the Department to collect an official sample of the remediated hemp. If the results of the remediation test indicate a compliant test result, the grower must harvest the industrial hemp lot within 30 days after the sample is collected. If the results of the remediation test reveal a THC concentration that is greater than the acceptable THC level, the grower must dispose of the industrial hemp lot using any of the disposal methods previously described. LEGAL

AUTHORITY – PA 220 OF 2020, SECTION 407(1), SECTION 407(3)(a) -(b) and SECTION 407(4).

5. SECTION 5. PLAN FOR INSPECTION PROCEDURES

- 5.1 ***Final Rule Requirement - Procedure for conducting annual inspections of random sample of licensed producers to verify that hemp is not produced in violation of this part. [990.3 (a) (7)]***

DEPARTMENT RESPONSE:

The Michigan Industrial Hemp Growers Act requires the Department to conduct annual inspections of randomly selected growers to verify that industrial hemp is grown in compliance with the act. Inspection activity will be identified during annual workload planning activities and will include deciding on the number of inspections to be performed and the growers selected for inspection. Inspectors will follow inspection SOP's and utilize an inspection checklist document the results of the inspection. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 515.

6. SECTION 6. PLAN FOR COLLECTION OF INFORMATION

- 6.1 ***Final Rule Requirement - Procedure for submitting the information described in 990.70 to the Secretary by the first of each month in a format that is compatible with USDA's information sharing systems not more than 30 days after the date on which the information is received. [990.3 (a) (8)]***

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act requires the Department to submit specific information to USDA by the first of each month. Information required to be submitted for each registered grower includes, all information provided on the grower's registration application; each grower's registration number; the status of each grower registration; any changes or updates made to a grower's information previously reported to USDA; if applicable, an indication that there were no changes or updates to the reports previously submitted; the date for which the information is current, and the period covered by the report. The Department will submit this information electronically to USDA on a form and in the manner required by USDA. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 503 (1)(a)-(g).

- 6.2 ***Final Rule Requirement - Procedure under state and tribal government plans to share information with USDA, Agricultural Marketing Service (AMS), and Farm Service Agency (FSA). The plan must include: a requirement that producers report their hemp crop acreage to FSA consistent with 7 CFR 990.7 including: 1) hemp crop acreage; 2) license or authorization number 3) street address; 4) geospatial location(s) of each lot or greenhouse where hemp will be produced; 5) acreage dedicated to the production of hemp, or***

greenhouse or indoor square footage dedicated to the production of hemp. Producers must also report to the Department by November 30 of each year, total acreage of hemp planted, harvested, disposed of, or remediated. [990.3 (a) (10) and 990.7]

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act currently requires growers to submit specific information to USDA Farm Service Agency after they have become registered and not more than 60 days before planting any industrial hemp. Information to be submitted includes the address and total acreage of and GPS coordinates for each field, greenhouse, building, or other location where industrial hemp will be grown and the grower's registration number.

The Act also requires growers to submit total acreage planted, harvested, and disposed of, to the Department by November 30 each year, and the Department must report total acreage of hemp planted, harvested, and disposed to USDA by December 15. Disposal and remediation is reported monthly to USDA on form AMS-24 and will be tallied for USDA and reported in totality by December 15 each year.

MDARD will pursue a law update to incorporate remediation reporting from the grower to the state by November 30 and from the state to USDA by December 15. The Department will continue to provide monthly AMS-24 reports that include remediation regardless of the law status.

The Department allows growers to submit a site modification form any time a growing location has been added, modified, or removed. If the change is approved, the Department will notify the grower of the accepted change, issue a new registration, and notify the grower that the change must be reported to FSA. If the grower refuses or is prevented in some way from notifying FSA, the Department will notify the appropriate FSA office on the grower's behalf. MDARD will pursue a law update that if the site modification is approved, the grower must report the change to USDA Farm Service Agency. The Department will continue to notify FSA of site modifications until the update takes effect. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 301 (1) (a) – (b), (2)(g), SECTION 503(3) (a) – (c).

7. SECTION 7. PLAN TO COMPLY WITH ENFORCEMENT PROCEDURES

7.1 Final Rule Requirement - Procedures to contain provisions relating to negligent producer violations as defined under this part; producers shall not receive more than one negligent violation per growing season. [990.6 (b)]

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act defines negligence as the failure to exercise the level of care that a reasonably prudent person would exercise in the same or similar circumstances. It also identifies specific violations that meet the definition of negligence and states that a grower is not subject to more than 1 negligent violation per growing season. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (cc), SECTION 601 (1) (a) – (d) and 601 (6).

- 7.2 ***Final Rule Requirement - Provides for corrective action plan for negligent violations: 1) failure to provide legal description of land on which the producer produces hemp; 2) failure to obtain a license or other required authorization from the State; 3) produces cannabis with THC exceeding 1.0 percent. (hemp producers do not commit negligent violation if they make reasonable efforts to grow hemp and the cannabis (marijuana) does not have a total delta-9-THC concentration of more than 1.0 percent on a dry weight basis. [990.6 (b), (c)]***

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act identifies the following negligent violations, failure to provide a legal description for each field, greenhouse, building, or other location where industrial hemp will be grown; failure to obtain a grower registration; and growing industrial hemp that exceeds the acceptable THC level but does not have more than 1.0% total delta-9-THC on a dry weight basis. The Act provides that if a grower commits one of the aforementioned negligent violations, the Department shall issue a notice of violation and the terms of a corrective action plan that the grower must comply with. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 601 (1) (a)-(c), (2).

- 7.3 ***Final Rule Requirement - Procedures to provide for the correction of negligent violations: 1) a reasonable date to correct the violation; 2) that the producer periodically report on its compliance with the state hemp plan and corrective action plan for 2 years from date of the negligent violation; 3) violations are not subject to federal, state, tribal, or local government criminal enforcement action; 4) provides that a negligent violation 3 times within a 5- year period is ineligible to produce hemp for a period of 5 years from the date of the 3rd violation; 5) state or tribal government shall conduct inspections to determine if corrective action plan has been implemented. [990.6 (c) (1) – (5)]***

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act requires the Department to issue a notice of violation and terms of a corrective action plan to a grower if they commit a negligent violation as described in the Act. Growers are required to comply with the terms of the corrective action plan which will include a reasonable date by which the grower will correct the negligent violation and a requirement that the grower shall make periodic reports to the Department, for not less than two years, on the progress the grower has made toward compliance with the requirements of the state hemp plan and corrective action plan. Additionally, the Act states that a negligent violation under the Act is not subject to criminal enforcement and that a grower that negligently violates the act 3 times in a 5-year period is ineligible to register as a grower for 5 years from the date of the third violation. The Department will conduct inspections to confirm implementation of corrective action plans. These inspections will be performed as needed. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 601 (3) (a) – (b), (4), (5) and (7).

7.4 Final Rule Requirement - Procedures for producer violations made with a culpable mental state greater than negligence: Producer shall be reported to the U.S. Attorney General and the chief law enforcement officer of the state or tribal government. Procedures for negligent violation shall not apply to culpable violations. [990.6 (d)]

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act defines “culpable mental state greater than negligence” to act intentionally, knowingly, willfully, or recklessly. Penalty provisions are prescribed in the Act for a person with a culpable metal state greater than negligence violates the Act. The Act provides that the Department shall report to the U.S. Attorney General, the USDA and the chief law enforcement officer of the State any violation committed with a culpable mental state greater than negligence. The Act provides that except for a negligent violation, a person violates the Act if a person does any of the following:

- (a) Intentionally grows or is in possession of cannabis with a total delta-9-THC content greater than the acceptable THC level.
- (b) Makes a false or misleading statement, as determined by the Department, to the Department or a law enforcement agency.
- (c) Fails to comply with an order from the Department or a law enforcement agency.
- (d) Materially falsifies information required in an application.
- (e) Commits any other violation of the Act, a rule promulgate under the Act, or an order issued under the Act.

LEGAL AUTHORITY – PA 220 OF 2020, SECTION 602 (a) –(e), SECTION 609 (1) (a) – (c), (12).

7.5 Final Rule Requirement - Procedures for addressing felonies: 1) provides for a 10-year ineligibility restriction for persons with a State or Felony conviction relating to a controlled substance; 2) provides for controlled substance felony conviction exception for participants in state hemp pilot program authorized under the 2014 Agricultural Act before December 20, 2018; 3) procedures for business entities to determine which participants are considered to be “key” or have executive managerial control. 4) define who is participating in the plan or program and is subject to the felony conviction restriction (to determine whether a person is subject to the felony conviction restriction, the State must obtain a criminal history report for that person); and identify at least one individual as participating in the plan. [990.6 (e)] [Legal opinion on authorities for hemp production]

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act requires grower applicants, or if the applicant is not an individual, all key participants, to submit a fingerprint based criminal history report that is prepared by the Federal Bureau of Investigations (FBI) or another entity approved by

the Department. Criminal History Report data must ensure that the applicant/key participant of the applicant, was not convicted of a controlled substance felony in the immediately preceding 10-year period.

Key participant is defined in the Act and includes individuals that have a direct or indirect financial interest in the person or business producing hemp or a person in a corporate entity at an executive level that is regularly responsible for decision making impacting the growing of industrial hemp.

A key participant includes, but is not limited to, for a sole proprietorship, a sole proprietor, for a partnership, a partner, and for a corporation, an individual with executive managerial control including, but not limited to, a chief executive officer, a chief operating officer, or a chief financial officer. Key participant does not include positions such as farm, field, or shift managers.

With respect to colleges and universities conducting hemp research, the principal investigator is considered the applicant, with co-researchers as key participants. Criminal history reports must be included for these individuals.

The Act provides that the Department must deny an application for registration if the applicant, or if the applicant is not an individual, a key participant of the applicant was convicted of a controlled substance felony in the immediately preceding 10-year period. This ineligibility requirement does not apply if the applicant grew industrial hemp before December 20, 2018 as a pilot program participant under the agricultural act of 2014, Public Law 113-79 and the applicant or the key participant's conviction occurred before December 20, 2018. LEGAL AUTHORITY – PA 220 OF 2020, SECTION 103 (b), (h), (i), (x) (i) – (iii) (y), SECTION 201 (2) (e), and SECTION 213 (2) (h) (i) – (ii)

7.6 *Final Rule Requirement - Procedures stating that any persons who materially falsify any information in their application shall be deemed ineligible to participate in the program. [990.6 (f)]*

DEPARTMENT RESPONSE:

The Industrial Hemp Growers Act states that a grower shall not materially falsify information required on their grower applications. Any grower violating this provision is ineligible to participate in the program. LEGAL AUTHORITY – SECTION 602 (d), SECTION 609 (2).

8. CERTIFICATION THAT THE STATE HAS RESOURCES AND PERSONNEL TO CARRY OUT REQUIRED FARM BILL PRACTICES AND PROCEDURES. [990.3 (A) (9)]

DEPARTMENT RESPONSE:

The Department certifies that it has the resources and personnel necessary to carry out the practices and procedures contained in this state hemp plan. This certification

includes support needed for issuing grower registrations to persons meeting all requirements, conducting a random number of inspections taking samples, performing sample testing, and implementing needed enforcement actions.

STATE OF MICHIGAN,
Michigan Department of Agriculture and Rural Development (MDARD)

A handwritten signature in blue ink that reads "Gary McDowell". The signature is written in a cursive, flowing style.

Gary McDowell, Director
MDARD

Date: June 8, 2022

9. ATTACHMENTS

Attachment A – PA 220 of 2020, as amended

Attachment B – Industrial Hemp Standard Sampling Plan

Attachment C – Standard Operating Procedures for Determination of Total THC, Total CBD, and CBN using Chromatographic Methods

Attachment D – Measurement of Uncertainty

Attachment E – Controlled Substance Registration Certificate

Attachment F – Performance-Based Sampling Plan

INDUSTRIAL HEMP GROWERS ACT
Act 220 of 2020

AN ACT to create an industrial hemp program; to authorize certain activities involving industrial hemp to require the registration of persons engaged in certain activities; to provide for the sampling and testing of industrial hemp; to provide for the collection of fees; to create certain funds; to provide for the powers and duties of certain state departments and officers and state agencies and officials; to prohibit certain acts; to prescribe civil sanctions; and to repeal acts and parts of acts.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

The People of the State of Michigan enact:

CHAPTER I
General Provisions

333.29101 Short title.

Sec. 101. This act shall be known and may be cited as the "industrial hemp growers act".

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

***** 333.29103 THIS SECTION IS AMENDED EFFECTIVE OCTOBER 11, 2021: See 333.29103.amended

333.29103 Definitions.

Sec. 103. As used in this act:

(a) "Acceptable THC level" means the application of the measurement of uncertainty to the reported total delta-9-THC concentration level on a dry weight basis that produces a distribution or range that includes 0.3% or less total delta-9-THC.

(b) "Applicant" means a person that submits an application for a registration.

(c) "Cannabis" means the plant *Cannabis sativa*L. and any part of that plant, whether growing or not.

(d) "Compliance monitoring testing facility" means a laboratory that meets both of the following requirements:

(i) Is registered with the DEA to conduct chemical analysis of controlled substances under 21 CFR 1301.13.

(ii) Performs routine compliance monitoring testing of unofficial hemp samples throughout the growing season.

(e) "Controlled substance felony" means a felony violation of the laws of any state having to do with controlled substances or a felony violation of federal law having to do with controlled substances.

(f) "Conviction" means a plea of guilty or nolo contendere, or a finding of guilt related to a controlled substance felony, unless 1 of the following applies:

(i) The finding of guilt is subsequently expunged.

(ii) The finding of guilt is set aside under 1965 PA 213, MCL 780.621 to 780.624, or otherwise expunged.

(iii) The individual is pardoned.

(g) "Corrective action plan" means a plan created under section 601.

(h) "Criminal history record information" means that term as defined in section 1a of 1925 PA 289, MCL 28.241a.

(i) "Criminal history report" means a report that meets all of the following requirements:

(i) Is prepared by the United States Federal Bureau of Investigation or another authority approved by the department.

(ii) Includes fingerprint-based criminal history record information.

(iii) Is completed not more than 60 days before an application is submitted under section 201.

(j) "Culpable mental state greater than negligence" means to act intentionally, knowingly, willfully, or recklessly.

(k) "DEA" means the United States Drug Enforcement Administration.

(l) "Department" means the department of agriculture and rural development.

(m) "Designated sampling agent" means a federal, state, or local law enforcement agent authorized by the department to collect official samples under section 401.

(n) "Dispose" means an activity that transitions industrial hemp into a nonretrievable or noningestible form of industrial hemp under section 407.

(o) "Dry weight basis" means the ratio of the amount of moisture in cannabis to the amount of solid in cannabis.

(p) "Dwelling" means a house, building, tent, trailer, vehicle, or other shelter that is occupied in whole or in part as a home, residence, living place, or sleeping place for 1 or more individuals either permanently or transiently, or any portion thereof.

(q) "Fund" means the industrial hemp fund created in section 107.

(r) "Good standing" means all fees or fines owed under this act are paid and there are no outstanding fees or fines owed to the department.

(s) "GPS coordinates" means latitude and longitude coordinates derived from a global positioning system that are taken from a central point within a growing area or structure and that include decimal degrees to 6 places after the decimal.

(t) "Grow" or "growing", unless the context requires otherwise, means to plant, propagate, cultivate, or harvest live plants or viable seed. Grow or growing includes drying and storing harvested industrial hemp, possessing live industrial hemp plants or viable seed on a premises where the live industrial hemp plants or viable seed are grown, growing industrial hemp for the purposes of conducting research, and selling harvested industrial hemp to a processor-handler licensed under the industrial hemp research and development act, 2014 PA 547, MCL 286.841 to 286.859, or processor licensed under the medical marijuana facilities licensing act, 2016 PA 281, MCL 333.27101 to 333.27801, as authorized under this act. Grow or growing does not include selling an intermediary, in-process, or finished industrial hemp product or smokable hemp flower.

(u) "Grower" means a person that is required to be registered under section 201.

(v) "Industrial hemp" means that term as defined in section 7106 of the public health code, 1978 PA 368, MCL 333.7106.

(w) "Industrial hemp plan" means the plan created under section 105.

(x) "Key participant" means a person that has a direct or indirect financial interest in the person or business producing hemp or a person in a corporate entity at an executive level that is regularly responsible for decision making impacting the growing of industrial hemp. A key participant includes, but is not limited to, any of the following:

(i) For a sole proprietorship, a sole proprietor.

(ii) For a partnership, a partner.

(iii) For a corporation, an individual with executive managerial control including, but not limited to, a chief executive officer, a chief operating officer, or a chief financial officer.

(y) Key participant does not include positions such as farm, field, or shift managers.

(z) "Lot" means either of the following:

(i) A contiguous area in a field, greenhouse, or other indoor growing area that contains the same variety or strain of cannabis throughout.

(ii) A farm, tract, field, or subfield as these terms are defined in 7 CFR 718.2.

(aa) "Marihuana" means that term as defined in section 7106 of the public health code, 1978 PA 368, MCL 333.7106.

(bb) "Measurement of uncertainty" means the parameter associated with the result of a measurement that characterizes the dispersion of the values that could reasonably be attributed to the particular quantity subject to the measurement.

(cc) "Negligence" means the failure to exercise the level of care that a reasonably prudent person would exercise in the same or similar circumstances.

(dd) "Noncompliant industrial hemp" means industrial hemp that is not in compliance with this act or the rules promulgated under this act.

(ee) "Official hemp sample" means a sample of an industrial hemp lot that is collected by a designated sampling agent under section 401 in accordance with department sampling protocols and is tested by a regulatory testing facility.

(ff) "Percentage of THC on a dry weight basis" means the percentage, by weight, of THC in cannabis after excluding the moisture from the cannabis.

(gg) "Person" means an individual, partnership, corporation, association, college or university, or other legal entity.

(hh) "Postdecarboxylation test" means a test of cannabis for delta-9-THC after a carboxyl group is eliminated from delta-9-THC acid.

(ii) "Program" means the industrial hemp program established by this act.

(jj) "Registration" means a grower registration granted under this act.

(kk) "Regulatory testing facility" means a laboratory that meets all of the following requirements:

(i) Is registered with the DEA.

- (ii) Is authorized to conduct chemical analysis of controlled substances pursuant to 21 CFR 1301.13.
- (iii) Meets the requirements under section 403.
- (iv) Conducts testing of official hemp samples.
- (ll) "Remediate" means an activity that transitions noncompliant industrial hemp into industrial hemp that is in compliance with this act and the rules promulgated under this act under section 407.
- (mm) "THC" means tetrahydrocannabinol.
- (nn) "Total delta-9-THC" means the total available tetrahydrocannabinol measured as the sum of delta-9-tetrahydrocannabinol and 87.7% of the delta-9-tetrahydrocannabinol acid reported on a dry weight basis.
- (oo) "Unofficial hemp sample" means a sample of industrial hemp collected by a grower for routine compliance monitoring testing throughout the growing season for testing by a compliance monitoring testing facility.
- (pp) "USDA" means the United States Department of Agriculture.
- (qq) "Variety" means a subdivision of a species that has the following characteristics:
 - (i) The subdivision is uniform, in the sense that variations between the subdivision and other subdivisions in essential and distinctive characteristics are describable.
 - (ii) The subdivision is distinct, in the sense that the subdivision can be differentiated by 1 or more identifiable morphological, physiological, or other characteristics from all other known subdivisions.
 - (iii) The subdivision is stable, in the sense that the subdivision will remain uniform and distinct if reproduced.
- (rr) "Viable seed" means seed that has a germination rate of greater than 0.0%.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

***** 333.29103.amended THIS AMENDED SECTION IS EFFECTIVE OCTOBER 11, 2021 *****

333.29103.amended Definitions.

Sec. 103. As used in this act:

- (a) "Acceptable THC level" means the application of the measurement of uncertainty to the reported total delta-9-THC concentration level on a dry weight basis that produces a distribution or range that includes 0.3% or less total delta-9-THC.
- (b) "Applicant" means a person that submits an application for a registration.
- (c) "Cannabis" means the plant *Cannabis sativa* L. and any part of that plant, whether growing or not.
- (d) "Compliance monitoring testing facility" means a laboratory that meets both of the following requirements:
 - (i) Is registered with the DEA to conduct chemical analysis of controlled substances under 21 CFR 1301.13.
 - (ii) Performs routine compliance monitoring testing of unofficial hemp samples throughout the growing season.
- (e) "Controlled substance felony" means a felony violation of the laws of any state having to do with controlled substances or a felony violation of federal law having to do with controlled substances.
- (f) "Conviction" means a plea of guilty or nolo contendere, or a finding of guilt related to a controlled substance felony, unless 1 of the following applies:
 - (i) The finding of guilt is subsequently expunged.
 - (ii) The finding of guilt is set aside under 1965 PA 213, MCL 780.621 to 780.624, or otherwise expunged.
 - (iii) The individual is pardoned.
- (g) "Corrective action plan" means a plan created under section 601.
- (h) "Criminal history record information" means that term as defined in section 1a of 1925 PA 289, MCL 28.241a.
 - (i) "Criminal history report" means a report that meets all of the following requirements:
 - (i) Is prepared by the United States Federal Bureau of Investigation or another authority approved by the department.
 - (ii) Includes fingerprint-based criminal history record information.
 - (iii) Is completed not more than 60 days before an application is submitted under section 201.
 - (j) "Culpable mental state greater than negligence" means to act intentionally, knowingly, willfully, or recklessly.
- (k) "DEA" means the United States Drug Enforcement Administration.
- (l) "Department" means the department of agriculture and rural development.
- (m) "Designated sampling agent" means a federal, state, or local law enforcement agent authorized by the

department to collect official samples under section 401.

(n) "Dispose" means an activity that transitions industrial hemp into a nonretrievable or noningestible form of industrial hemp under section 407.

(o) "Dry weight basis" means the ratio of the amount of moisture in cannabis to the amount of solid in cannabis.

(p) "Dwelling" means a house, building, tent, trailer, vehicle, or other shelter that is occupied in whole or in part as a home, residence, living place, or sleeping place for 1 or more individuals either permanently or transiently, or any portion thereof.

(q) "Fund" means the industrial hemp fund created in section 107.

(r) "Good standing" means all fees or fines owed under this act are paid and there are no outstanding fees or fines owed to the department.

(s) "GPS coordinates" means latitude and longitude coordinates derived from a global positioning system that are taken from a central point within a growing area or structure and that include decimal degrees to 6 places after the decimal.

(t) "Grow" or "growing", unless the context requires otherwise, means to plant, propagate, cultivate, or harvest live plants or viable seed. Grow or growing includes drying and storing harvested industrial hemp, possessing live industrial hemp plants or viable seed on a premises where the live industrial hemp plants or viable seed are grown, growing industrial hemp for the purposes of conducting research, and selling harvested industrial hemp to a processor-handler licensed under the industrial hemp research and development act, 2014 PA 547, MCL 286.841 to 286.859, or processor licensed under the medical marihuana facilities licensing act, 2016 PA 281, MCL 333.27101 to 333.27801, as authorized under this act. Grow or growing does not include selling an intermediary, in-process, or finished industrial hemp product or smokable hemp flower.

(u) "Grower" means a person that is required to be registered under section 201.

(v) "Industrial hemp" means that term as defined in section 3 of the Michigan Regulation and Taxation of Marihuana Act, 2018 IL 1, MCL 333.27953.

(w) "Industrial hemp plan" means the plan created under section 105.

(x) "Key participant" means a person that has a direct or indirect financial interest in the person or business producing hemp or a person in a corporate entity at an executive level that is regularly responsible for decision making impacting the growing of industrial hemp. A key participant includes, but is not limited to, any of the following:

(i) For a sole proprietorship, a sole proprietor.

(ii) For a partnership, a partner.

(iii) For a corporation, an individual with executive managerial control including, but not limited to, a chief executive officer, a chief operating officer, or a chief financial officer.

(y) Key participant does not include positions such as farm, field, or shift managers.

(z) "Lot" means either of the following:

(i) A contiguous area in a field, greenhouse, or other indoor growing area that contains the same variety or strain of cannabis throughout.

(ii) A farm, tract, field, or subfield as these terms are defined in 7 CFR 718.2.

(aa) "Marihuana" means that term as defined in section 3 of the Michigan Regulation and Taxation of Marihuana Act, 2018 IL 1, MCL 333.27953.

(bb) "Measurement of uncertainty" means the parameter associated with the result of a measurement that characterizes the dispersion of the values that could reasonably be attributed to the particular quantity subject to the measurement.

(cc) "Negligence" means the failure to exercise the level of care that a reasonably prudent person would exercise in the same or similar circumstances.

(dd) "Noncompliant industrial hemp" means industrial hemp that is not in compliance with this act or the rules promulgated under this act.

(ee) "Official hemp sample" means a sample of an industrial hemp lot that is collected by a designated sampling agent under section 401 in accordance with department sampling protocols and is tested by a regulatory testing facility.

(ff) "Percentage of THC on a dry weight basis" means the percentage, by weight, of THC in cannabis after excluding the moisture from the cannabis.

(gg) "Person" means an individual, partnership, corporation, association, college or university, or other legal entity.

(hh) "Postdecarboxylation test" means a test of cannabis for delta-9-THC after a carboxyl group is eliminated from delta-9-THC acid.

(ii) "Program" means the industrial hemp program established by this act.

- (jj) "Registration" means a grower registration granted under this act.
- (kk) "Regulatory testing facility" means a laboratory that meets all of the following requirements:
 - (i) Is registered with the DEA.
 - (ii) Is authorized to conduct chemical analysis of controlled substances pursuant to 21 CFR 1301.13.
 - (iii) Meets the requirements under section 403.
 - (iv) Conducts testing of official hemp samples.
- (ll) "Remediate" means an activity that transitions noncompliant industrial hemp into industrial hemp that is in compliance with this act and the rules promulgated under this act under section 407.
- (mm) "THC" means that term as defined in section 3 of the Michigan Regulation and Taxation of Marihuana Act, 2018 IL 1, MCL 333.27953.
- (nn) "Total delta-9-THC" means the total available tetrahydrocannabinol measured as the sum of delta-9-tetrahydrocannabinol and 87.7% of the delta-9-tetrahydrocannabinol acid reported on a dry weight basis.
- (oo) "Unofficial hemp sample" means a sample of industrial hemp collected by a grower for routine compliance monitoring testing throughout the growing season for testing by a compliance monitoring testing facility.
- (pp) "USDA" means the United States Department of Agriculture.
- (qq) "Variety" means a subdivision of a species that has the following characteristics:
 - (i) The subdivision is uniform, in the sense that variations between the subdivision and other subdivisions in essential and distinctive characteristics are describable.
 - (ii) The subdivision is distinct, in the sense that the subdivision can be differentiated by 1 or more identifiable morphological, physiological, or other characteristics from all other known subdivisions.
 - (iii) The subdivision is stable, in the sense that the subdivision will remain uniform and distinct if reproduced.
- (rr) "Viable seed" means seed that has a germination rate of greater than 0.0%.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021;—Am. 2021, Act 58, Eff. Oct. 11, 2021

333.29105 Industrial hemp program; USDA approval.

Sec. 105. (1) The department shall establish, operate, and administer an industrial hemp program.

(2) The department shall develop and submit to the USDA for approval an industrial hemp plan for this state that complies with 7 USC 1639o to 1639s. Upon approval, the department shall use the industrial hemp plan to implement the program.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

333.29107 Industrial hemp fund.

Sec. 107. (1) The industrial hemp fund is created within the state treasury.

(2) The state treasurer may receive the fees collected under section 511 for deposit into the fund. The state treasurer may also receive money or other assets from any other source for deposit into the fund. The state treasurer shall credit to the fund interest and earnings from fund investments.

(3) Money in the fund at the close of the fiscal year remains in the fund and does not lapse to the general fund.

(4) The department is the administrator of the fund for auditing purposes.

(5) The department shall expend money from the fund to establish, operate, and enforce the program.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

CHAPTER II

Application and Registration

333.29201 Grower registration; application; requirements.

Sec. 201. (1) A person shall not grow industrial hemp in this state unless the person is a grower.

(2) A person applying for a registration under this section shall do so on an application and in a manner provided by the department. The applicant shall include with the application all of the following information:

(a) The applicant's full name, date of birth, mailing address, telephone number, and electronic mail address. If the applicant is not an individual, the application must include the EIN number of the applicant and for each key participant, his or her full name, date of birth, title, and electronic mail address.

(b) The total acreage and greenhouse or other indoor square footage where industrial hemp will be grown.

(c) The address and legal description of and GPS coordinates for each field, greenhouse, building, or other

location where industrial hemp will be grown.

(d) Maps depicting each field, greenhouse, building, or other location where industrial hemp will be grown that indicate entrances, field boundaries, and specific locations corresponding to the GPS coordinates provided under subdivision (c).

(e) A criminal history report for the applicant, or, if the applicant is not an individual, a criminal history report for each key participant.

(3) The department shall grant an applicant described in this section a registration to grow industrial hemp if the applicant does all of the following:

- (a) Submits a completed application under subsection (2).
- (b) Pays the applicable fees under section 511.
- (c) Meets the qualifications for registration.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

333.29211 Initial registration; expiration; renewal; nontransferability.

Sec. 211. (1) An initial registration granted by the department under this act expires at midnight on January 31 immediately following the date on which the registration is granted.

(2) Other than a registration granted under subsection (1), a registration is valid for 1 year beginning on February 1 and expiring at midnight on the following January 31.

(3) To renew a registration, an applicant must do all of the following:

- (a) Submit an application on a form and in a manner provided by the department.
- (b) If the application is submitted on or before January 31, pay the registration fee under section 511.

(c) If an application is submitted after January 31, pay the registration fee under section 511 and a late fee of \$250.00.

(4) If an applicant provides express written consent to disclose personal information on an application, the applicant's name, email address, and telephone number may be disclosed to a grower, a processor-handler licensed under the industrial hemp research and development act, 2014 PA 547, MCL 286.841 to 286.859, or a processor licensed under the medical marijuana facilities licensing act, 2016 PA 281, MCL 333.27101 to 333.27801. If the applicant does not provide express written consent to disclose personal information on the application, any information submitted by the applicant to the department on the application is exempt from disclosure under the freedom of information act, 1976 PA 442, MCL 15.231 to 15.246. This subsection does not apply to the disclosure of personal information to a law enforcement agency.

(5) A registration is nontransferable.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29213 Denial of application; notification.

Sec. 213. (1) The department shall approve or deny an application for a registration within 120 days after the completed application is submitted.

(2) The department shall deny an application for a registration if any of the following apply:

- (a) The application is incomplete.
- (b) If the applicant is an individual, the applicant is under the age of 18.
- (c) The applicant's location for growing industrial hemp is not located in this state.

(d) The applicant has not demonstrated, as determined by the department, a willingness to comply with this act or rules promulgated under this act.

(e) The applicant has unpaid fees or civil fines owed to this state under this act.

(f) The applicant has made a false statement or representation, as determined by the department, to the department or a law enforcement agency.

(g) The applicant had a registration revoked in the immediately preceding 5-year period.

(h) The applicant or, if the applicant is not an individual, a key participant of the applicant was convicted of a controlled substance felony in the immediately preceding 10-year period. This subdivision does not apply if both of the following conditions are met:

(i) The applicant or key participant grew industrial hemp before December 20, 2018, as a pilot program participant under the agricultural act of 2014, Public Law 113-79.

(ii) The applicant's or key participant's conviction occurred before December 20, 2018.

(3) If the department denies an application because it is incomplete, the department shall notify the applicant of the denial within 120 days after the application is submitted, by letter or by electronic mail, and state the deficiency and request additional information.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

333.29215 Documentation of registration.

Sec. 215. The department shall issue a document to a grower that evidences the granting of a registration.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

333.29217 Appeal of denied application; hearing.

Sec. 217. (1) If the department denies an application for a registration, the applicant may appeal the denial by submitting a written request for a hearing to the department. The applicant must submit the request to the department not more than 15 days after the date of the denial.

(2) The department shall conduct a hearing requested under this section pursuant to the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

CHAPTER III Grower Registration

333.29301 Report to USDA Farm Service Agency; grower duties.

Sec. 301. (1) After a grower is granted a registration under chapter II and not more than 60 days before the grower plants any industrial hemp, the grower shall report the following information to the USDA Farm Service Agency:

(a) The address and total acreage of and GPS coordinates for each field, greenhouse, building, or other location where industrial hemp will be grown.

(b) The grower's registration number.

(2) A grower shall do all of the following:

(a) Allow the department or a law enforcement agency to enter onto and inspect all premises where industrial hemp is or will be located, with or without cause and with or without advance notice.

(b) On request from the department or a law enforcement agency, produce a copy of the grower's registration for inspection.

(c) Contact the department to collect an official hemp sample under section 401.

(d) Harvest the industrial hemp lot within 30 days after an official hemp sample is collected under section 401.

(e) Dispose of or remediate under section 407, without compensation, any industrial hemp lot determined to be noncompliant under section 405.

(f) Dispose of the following, without compensation, under section 407:

(i) Industrial hemp that is at a location that is not disclosed on the grower's application under section 201.

(ii) Industrial hemp that is grown in violation of this act.

(g) Report all of the following information to the department by November 30 of each year:

(i) Total acreage of industrial hemp that the grower grew in the immediately preceding growing season.

(ii) Total acreage of industrial hemp that the grower harvested in the immediately preceding growing season.

(iii) Total acreage of industrial hemp that the grower disposed of in the immediately preceding growing season.

(h) Use only a compliance monitoring testing facility to test unofficial hemp samples for compliance monitoring to determine whether the industrial hemp is in compliance with this act.

(i) If the department is inspecting or investigating a complaint, the grower or the grower's authorized agent must be present and do all of the following:

(i) Allow the department to have access to all structures directly related to the production of industrial hemp including, but not limited to, a barn, machine shed, greenhouse, or storage area.

(ii) Provide business records including books, accounts, records, files, and any other documents in print or electronic media that the department determines is relevant or necessary for the inspection or investigation.

(iii) Allow a law enforcement agency to accompany the department during an inspection or investigation.

(iv) Allow the department to collect official hemp samples for the purpose of completing an inspection or investigation.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29303 Prohibitions on grower.

Sec. 303. A grower shall not do any of the following:

(a) Grow industrial hemp that is not in compliance with the grower's registration.

(b) Grow industrial hemp in a location that is not disclosed on the grower's application under section 201.

(c) Grow industrial hemp in a location that is not owned or completely controlled by the grower. As used in this subdivision, "completely controlled" means to be solely responsible for all of the industrial hemp grown at a location.

(d) Grow industrial hemp in a dwelling.

(e) Grow a variety of industrial hemp that is on the list created under section 505.

(f) Sell or transport, or permit the sale or transport of, viable industrial hemp plants or viable seed.

(g) Harvest industrial hemp before an official hemp sample is collected under section 401.

(h) Sell raw industrial hemp to a person in this state that is not licensed as a processor-handler under the industrial hemp research and development act, 2014 PA 547, MCL 286.841 to 286.859, or as a processor under the medical marijuana facilities licensing act, 2016 PA 281, MCL 333.27101 to 333.27801, as authorized under this act.

(i) Dispose of industrial hemp without submitting a notice of intent to dispose to the department under section 407(6)(a). This subdivision does not apply to a grower that disposes of industrial hemp affected by poor health, pests, disease, or weather or to prevent cross-pollination of male or hermaphrodite industrial hemp plants.

(j) Sell an intermediary, in-process, or finished industrial hemp product or smokable hemp flower, unless the grower is licensed as a processor-handler under the industrial hemp research and development act, 2014 PA 547, MCL 286.841 to 286.859, or as a processor under the medical marijuana facilities licensing act, 2016 PA 281, MCL 333.27101 to 333.27801.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29305 Sign posting requirements.

Sec. 305. (1) A grower shall post signage in a conspicuous location at each boundary line of each location where industrial hemp is grown. The signage must include all of the following:

(a) The statement, "Industrial Hemp Registered with the Michigan Department of Agriculture and Rural Development".

(b) The grower's name.

(c) The grower's registration number.

(2) The signage described under subsection (1) must meet all of the following requirements:

(a) Be a minimum of 8 inches by 10 inches.

(b) Use print that is clearly legible and not smaller than 3/8 inch tall.

(c) Be made of weather-resistant material.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29307 Record of sale of raw industrial hemp.

Sec. 307. A grower shall provide a record of sale of raw industrial hemp to a processor-handler licensed under the industrial hemp research and development act, 2014 PA 547, MCL 286.841 to 286.859, or a processor licensed under the medical marijuana facilities licensing act, 2016 PA 281, MCL 333.27101 to 333.27801. The record of sale must contain all of the following information:

(a) The name and license number of the processor-handler or processor purchasing the industrial hemp.

(b) The total weight of industrial hemp purchased.

(c) The total sale price of the industrial hemp.

(d) The date of the sale.

(e) The certified report of the total delta-9-THC testing under section 405 for each variety of industrial hemp purchased.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29309 Maintenance of records.

Sec. 309. (1) A grower shall maintain records that contain all of the following information:

(a) Each record of sale generated under section 307.

(b) The name and mailing address of any person from whom the grower purchased viable industrial hemp.

(c) The name of each variety of industrial hemp the grower grows.

(d) Evidence that the information required to be reported under section 301 was submitted and received by the USDA Farm Service Agency.

(e) A notice of disposal generated under section 407(6)(b), if applicable.

(2) A grower shall maintain the records under subsection (1) for 5 years and make the records available to the department on request.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29311 Growing locations; approval required.

Sec. 311. (1) Before implementing a modification to a growing location listed in a registration, the grower must submit a growing location modification request on a form provided by the department and the required fee under section 511, and obtain written approval from the department.

(2) The department shall not approve a growing location modification request under this section unless the grower has paid the growing location modification fee in full.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29313 Sale of industrial hemp to processor.

Sec. 313. A grower may sell industrial hemp to a processor that is licensed under the medical marijuana facilities licensing act, 2016 PA 281, MCL 333.27101 to 333.27801.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

CHAPTER IV

Sampling, Testing, and Disposal

333.29401 Harvesting of industrial hemp crop; sampling requirements.

Sec. 401. (1) A grower that intends to harvest an industrial hemp lot shall contact the department not more than 30 days or less than 20 days before the grower's anticipated harvest to collect an official hemp sample of each lot of industrial hemp grown. A designated sampling agent shall collect an official hemp sample before the grower's anticipated harvest, and the grower or the grower's authorized representative must be present.

(2) When a designated sampling agent collects an official hemp sample, the grower shall provide the designated sampling agent with complete and unrestricted access to both of the following during normal business hours:

(a) All cannabis.

(b) All acreage, greenhouses, indoor square footage, fields, buildings, or other locations, including any location listed in the application under section 201, where cannabis is growing or stored.

(3) The department shall transport or cause to be transported an official hemp sample collected under this section to a regulatory testing facility for total delta-9-THC testing under section 403.

(4) A grower that requests the collection of an official hemp sample under this section must be in good standing. An official hemp sample will not be collected until any outstanding fee or fine under this act is paid.

(5) A grower may collect an unofficial hemp sample and submit the unofficial hemp sample to a compliance monitoring testing facility for compliance monitoring at any time to determine whether the industrial hemp is in compliance with this act.

(6) The department may use performance-based sampling that allows for reduced or no regulatory sampling of specific certified seed, varieties yielding consistently compliant hemp, lots used for academic research by a college or university, historical performance of the grower, or other factors, which have the potential to ensure at a confidence level of 95% that no more than 1% of the plants in each lot would be noncompliant.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29403 Regulatory testing facility or compliance monitoring testing facility; requirements; duties; report.

Sec. 403. (1) A regulatory testing facility that performs total delta-9-THC testing must do all of the following:

(a) Adopt a laboratory quality assurance program that ensures the validity and reliability of the total delta-9-THC test results.

(b) Adopt an analytical method selection, validation, and verification procedure that ensures that the total delta-9-THC testing method is appropriate.

(c) Demonstrate that the total delta-9-THC testing ensures consistent and accurate analytical performance.

(d) Adopt method performance selection specifications that ensure that the total delta-9-THC testing methods are sufficient to detect the total delta-9-THC as required under this act.

(e) Report the measurement of uncertainty on the certified report of the total delta-9-THC test.

(f) Adopt a total delta-9-THC testing method that includes a postdecarboxylation test or other similar method.

(2) A compliance monitoring testing facility or regulatory testing facility that performs total delta-9-THC testing shall do both of the following:

- (a) Ensure that an official hemp sample or unofficial hemp sample is not commingled with any other official hemp sample or unofficial hemp sample.
- (b) Assign a sample identification number to each official hemp sample or unofficial hemp sample.
- (3) A regulatory testing facility or compliance monitoring testing facility shall report all of the following information to the grower for each test performed:
 - (a) The grower's full name and mailing address.
 - (b) The grower's registration number.
 - (c) Each sample identification number assigned under subsection (1)(h).
 - (d) The testing facility's name and DEA registration number, if applicable.
 - (e) The date the total delta-9-THC testing was completed.
 - (f) The total delta-9-THC.
- (4) The requirement for regulatory testing facilities and compliance monitoring testing facilities to be registered with the DEA is effective on December 31, 2022.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

Compiler's note: In subsection (3)(c), the reference to "subsection (1)(h)" evidently should read "subsection (2)(b)".

333.29405 Testing results; certified report; harvesting timeline.

Sec. 405. (1) If the results of the total delta-9-THC test of an official hemp sample indicate a total delta-9-THC concentration of not more than the acceptable THC level, the regulatory testing facility shall provide to the grower and the department a certified report that states the results of the total delta-9-THC test.

(2) If the results of the total delta-9-THC test of an official hemp sample indicate a total delta-9-THC concentration that is greater than the acceptable THC level, the regulatory testing facility shall provide the grower and the department a certified report that states the results of the total delta-9-THC test, and the grower must dispose of or remediate the noncompliant industrial hemp lot under section 407.

(3) A grower shall harvest an industrial hemp lot within 30 days after an official hemp sample is collected under section 401. If the grower is unable to harvest the industrial hemp lot within the 30-day period because of any of the following, the grower may submit a request to the department to collect a second official hemp sample under section 401:

- (a) Weather.
- (b) Agricultural practices.
- (c) Equipment failure.
- (d) Any other reason approved by the department.

(4) A second official hemp sample collected under subsection (3) must be tested under section 403, and the grower must harvest the remaining industrial hemp lot within 30 days after the second official sample is collected under section 401. A grower shall not request the department to collect a second official sample for testing under subsection (3) unless both of the following apply:

- (a) The grower is in good standing with the department.
- (b) The request to collect a second official sample is not for the purpose of delaying the harvest to increase cannabinoid concentration.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29407 Destruction or remediation of noncompliant hemp; timeline; methods; grower duties; exceptions.

Sec. 407. (1) A grower that receives a certified report under section 405(2) shall, within 30 days after receiving the certified report, dispose of the noncompliant hemp lot under subsection (2) or remediate the noncompliant industrial hemp lot under subsection (3).

(2) Except as provided in subsection (8), a grower shall dispose of a noncompliant industrial hemp lot using 1 of the following methods:

- (a) Plowing under using a curved plow blade to rotate the subsoil to the surface and bury the industrial hemp below the subsoil.
- (b) Mulching, disking, or composting the industrial hemp and blending the industrial hemp with existing soil, manure, or other biomass material.
- (c) Mowing, deep burial, or burning.

(3) Except as provided in subsection (8), a grower shall remediate a noncompliant industrial hemp lot using 1 of the following methods:

- (a) Removing all of the floral material and disposing of the floral material under subsection (2).
- (b) Shredding the industrial hemp plant into a biomass-like material.

(4) If a grower remediates a noncompliant industrial hemp lot under subsection (3), the grower shall

contact the department to collect an official hemp sample of the industrial hemp lot under section 401. The official hemp sample must be tested by a regulatory testing facility under section 403. If the results of the total delta-9-THC test indicate a total delta-9-THC concentration of not more than the acceptable THC level, the grower must harvest the industrial hemp lot within 30 days after the official hemp sample is collected under section 401. If the results of the total delta-9-THC test indicate a total delta-9-THC concentration that is greater than the acceptable THC level, the grower must dispose of the industrial hemp lot under subsection (2). The regulatory testing facility shall provide the grower and the department a certified report that states the results of any total delta-9-THC test completed under this subsection.

(5) The industrial hemp disposed of under subsection (2) must be rendered nonretrievable or noningestible.

(6) A grower that disposes of industrial hemp under subsection (2) shall do both of the following:

(a) Submit a notice of intent to dispose to the department at least 48 hours before disposing of the industrial hemp. The grower shall submit the notice of intent to dispose on a form and in a manner provided by the department.

(b) Submit a notice of disposal to the department within 48 hours after the industrial hemp is disposed of under subsection (2) that contains all of the following information:

(i) The date of the disposal.

(ii) The method of disposal.

(iii) The total acreage or square footage disposed of.

(iv) The reason for disposal.

(v) Photographic or video evidence of the disposal.

(7) The grower shall allow an agent of the department to be present during any disposal or remediation activities conducted under this section.

(8) Industrial hemp that is disposed of for any of the following reasons is not subject to the disposal requirements under this section:

(a) Poor health.

(b) Pests.

(c) Disease.

(d) Weather.

(e) To prevent cross-pollination of male or hermaphrodite industrial hemp plants.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29409 Effective date of Chapter IV.

Sec. 409. The provisions of this chapter are effective beginning November 1, 2020.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

CHAPTER V Administration

333.29501 Rules.

Sec. 501. The department may promulgate rules to implement this act under the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

333.29503 Department reporting requirements.

Sec. 503. (1) By the first of each month, the department shall report all of the following to the USDA:

(a) For each grower, the information provided on an application submitted under section 201.

(b) Each grower's registration number.

(c) The status of each grower registration.

(d) Any changes or updates to a grower's information provided under subdivision (a).

(e) An indication that there were no changes or updates to the reports previously submitted under this subsection, if applicable.

(f) The date for which the information contained in subdivisions (a), (b), (c), and (d) is current.

(g) The period covered by the report.

(2) If a grower is required to dispose of an industrial hemp lot under section 407, by the first of each month, the department shall report all of the following to the USDA:

(a) The information provided on the grower's application submitted under section 201.

(b) The grower's registration number.

(c) The total acreage or square footage of industrial hemp that was disposed of.

(d) The date on which the industrial hemp was destroyed.

(3) Not later than December 15 of each year, the department shall report all of the following information to the USDA:

(a) The total acreage of industrial hemp that was grown in the immediately preceding growing season.

(b) The total acreage of industrial hemp that was harvested in the immediately preceding growing season.

(c) The total acreage of industrial hemp that was disposed of in the immediately preceding growing season.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29505 List of prohibited industrial hemp varieties; website; enforcement response policy.

Sec. 505. (1) The department may create and maintain on its website a list of prohibited industrial hemp varieties.

(2) The department shall develop an enforcement response policy for use under chapter VI. The enforcement response policy must provide for consideration and application of all of the following factors:

(a) Whether a grower has committed 1 or more violations under chapter VI.

(b) The severity of a violation under chapter VI.

(c) Whether a person has had previous contact with the department about violations or attempted violations under chapter VI.

(d) Past enforcement actions under chapter VI.

(e) Any other circumstances as determined by the department.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29507 Application maintenance.

Sec. 507. The department shall maintain an application submitted under section 201 for 5 years.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

333.29509 Official regulatory testing facility.

Sec. 509. (1) The department's laboratory is the official regulatory testing facility for testing official hemp samples under chapter IV.

(2) The department may contract with a third-party laboratory to conduct the testing of official hemp samples under chapter IV. A third-party laboratory must meet all of the following requirements:

(a) Be registered with the DEA.

(b) Meet the standards under chapter IV.

(c) Provide copies of any certified report that states the results of a total delta-9-THC test completed under section 403 to the department within 24 hours after the total delta-9-THC test is completed.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29511 Grower fees.

Sec. 511. (1) A grower is subject to the following fees, as applicable:

(a) A registration fee of \$1,250.00.

(b) A growing location modification fee of \$50.00 for each growing location modification request form submitted under section 311.

(2) A grower shall pay a fee required under this act at the time an application is submitted under section 201 or at the time the growing location modification request form is submitted under section 311. The fee must be paid using a method prescribed by the department.

(3) A fee required under this act is nonrefundable and nontransferable.

(4) A grower shall pay a fee charged for total delta-9-THC testing under chapter IV within 15 days after receiving the invoice. A fee under this subsection is limited to the reasonable costs of conducting the testing.

(5) A grower shall pay a fee charged for the collection of an official hemp sample within 15 days after receiving the invoice. A fee under this subsection is limited to the reasonable costs of collecting the official hemp sample.

(6) The department may refer a fee charged under subsection (4) or (5) that remains unpaid for more than 180 days to the department of treasury for collection.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29513 Local rule, regulation, code, or ordinance; prohibited.

Sec. 513. A political subdivision of this state shall not adopt a rule, regulation, code, or ordinance that restricts or limits the requirements under this act.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

333.29515 Annual inspection.

Sec. 515. The department shall conduct an annual inspection of randomly selected growers to verify that industrial hemp is grown in compliance with this act.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020.

CHAPTER VI Violations and Penalties

333.29601 Negligent violations of this act; notice; corrective action plan; penalties.

Sec. 601. (1) A grower negligently violates this act if the grower does any of the following:

(a) Fails to provide a legal description for each field, greenhouse, building, or other location where industrial hemp will be grown under section 201.

(b) Fails to obtain a registration.

(c) Grows industrial hemp that exceeds the acceptable THC level but does not have more than 1.0% total delta-9-THC on a dry weight basis.

(d) Any other violation that the department determines is negligent under subsection (7).

(2) If a grower violates subsection (1), the department shall issue the grower a notice of violation and the terms of a corrective action plan. The grower must comply with the terms of the corrective action plan.

(3) The department shall develop a corrective action plan under subsection (2) or (7) that includes the following terms:

(a) A reasonable date by which the grower will correct the negligent violation.

(b) A requirement that for not less than 2 years after a violation under subsection (1), the grower shall make periodic reports to the department about the grower's progress and compliance with the requirements of the corrective action plan.

(4) A grower that negligently violates this act 3 times in a 5-year period is ineligible to register as a grower for 5 years from the date of the third violation.

(5) A negligent violation under this section is not subject to criminal enforcement.

(6) A grower is not subject to more than 1 negligent violation under subsection (1) per growing season.

(7) In addition to a negligent violation listed in subsection (1), the department may determine that any other violation of this act is a negligent violation. If the department determines that a grower negligently violated this act, the department shall issue the grower a notice of violation and the terms of a corrective action plan. The grower must comply with the terms of the corrective action plan. The department shall use the enforcement response policy created under section 505 to determine whether a violation of this act is a negligent violation.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29602 Violations of this act.

Sec. 602. Except for a negligent violation under section 601(1), a person violates this act if the person does any of the following:

(a) Intentionally grows or is in possession of cannabis with a total delta-9-THC content greater than the acceptable THC level.

(b) Makes a false or misleading statement, as determined by the department, to the department or a law enforcement agency.

(c) Fails to comply with an order from the department or a law enforcement agency.

(d) Materially falsifies information required under section 201.

(e) Commits any other violation of this act, a rule promulgated under this act, or an order issued under this act.

History: Add. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29603 Investigations; registration suspension; notice.

Sec. 603. (1) If a grower violates or is suspected of violating section 602(a), (b), (c), or (e), the department shall investigate and may suspend the grower's registration for not more than 60 days.

(2) If the department suspends a registration under this section, the department shall notify the grower in writing that the registration is suspended.

(3) If a registration is suspended under this section, the grower shall not harvest or remove industrial hemp from the location where the industrial hemp was located at the time the department issued the notice of suspension, except as authorized in writing by the department.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29605 Revocation of registration; hearing; suspension removal; effect on other registrations.

Sec. 605. (1) The department shall not permanently revoke a registration suspended under section 603 unless the department notifies the grower of the allegation against the grower and gives the grower an opportunity for a hearing to appeal the revocation.

(2) The department shall schedule a hearing on a revocation under subsection (1) for a date as soon as practicable that is not more than 60 days after the date of notification of a registration suspension.

(3) The department shall conduct the hearing required under this section pursuant to the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328.

(4) If the department finds by a preponderance of the evidence that a person committed a violation under section 602(a), (b), (c), or (e) is true, the department shall revoke the registration. The revocation is effective immediately, and the department or a law enforcement agency must order the grower to dispose of all cannabis that is in the grower's possession under section 407.

(5) The department or a law enforcement agency shall not compensate or indemnify the value of the cannabis that is destroyed or confiscated under this section.

(6) If the department revokes a registration, the grower is barred from participating in the program in any capacity for a minimum of 5 years from the date on which the registration was revoked.

(7) If the department does not find by a preponderance of the evidence that a person committed a violation under section 602(a), (b), (c), or (e) is true, the department shall remove the suspension imposed under section 603 within 24 hours of the department's determination.

(8) If a grower commits a violation under section 602(a), (b), (c), or (e) 3 times within a 5-year period, the grower is barred from participating in the program in any capacity for a minimum of 5 years from the date of the grower's third violation.

(9) A suspension, revocation, or denial of a registration of a person who is an individual may result in the suspension, revocation, or denial of any other registration held or applied for by that individual under this act. The registration of a corporation, partnership, or other association may be suspended when a registration or registration application of a partner, trustee, director or officer, member, or a person exercising control of the corporation, partnership, or other association is suspended, revoked, or denied.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29607 Violation of MCL 333.29602; misdemeanor.

Sec. 607. A grower that commits a violation under section 602 is guilty of a misdemeanor punishable by imprisonment for not more than 90 days or a fine of not more than \$5,000.00, or both.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

333.29609 Violation of MCL 333.29601 or 333.29602; administrative fine and penalties; civil action; affirmative defense.

Sec. 609. (1) A grower that commits a violation under section 601 or 602 may be subject to an administrative fine. On the request of a person to whom an administrative fine is issued, the department shall conduct a hearing pursuant to the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328. The department shall impose an administrative fine authorized under this section as follows:

(a) For a first violation, an administrative fine of not less than \$100.00 or more than \$500.00, plus the actual costs of the investigation and double the amount of any economic benefit associated with the violation.

(b) For a second violation that occurs within 5 years after a violation under subdivision (a), an administrative fine of not less than \$500.00 or more than \$1,000.00, plus the actual costs of the investigation and double the amount of any economic benefit associated with the violation.

(c) For a third or subsequent violation that occurs within 5 years after a violation under subdivision (a), an administrative fine of not less than \$1,000.00 or more than \$2,000.00, plus the actual costs of the investigation and double the amount of any economic benefit associated with the violation.

(2) A grower that commits a violation under section 602(d) is ineligible to participate in the program.

(3) In addition to imposing an administrative fine under subsection (1), the department may do any of the following:

(a) Issue a cease and desist order, either orally or in writing. The department must inform the grower of the reasons for the cease and desist order. A cease and desist order issued under this subdivision is effective immediately, and failure to comply may subject the grower to an administrative fine under subsection (1).

(b) Bring an action to enjoin a violation or attempted violation under section 602 in the county in which the

violation occurs or is about to occur.

(c) Bring a civil action to restrain, by temporary or permanent injunction, a violation under section 602. The action may be brought in the circuit court for the county where the violation occurred. The court may issue a temporary or permanent injunction and issue other equitable orders or judgments.

(4) The attorney general may file a civil action for a violation under section 602. A person that commits or attempts to commit a violation under section 602 may be ordered to pay a civil fine of not more than \$5,000.00 for each violation or attempted violation. In addition, the attorney general may bring an action in circuit court to recover the reasonable costs of the investigation from a grower that committed or attempted to commit a violation under section 602. Money recovered under this subsection must be forwarded to the state treasurer for deposit into the fund.

(5) A decision of the department under this section is subject to judicial review as provided by law.

(6) The department shall advise the attorney general of the failure of any person to pay an administrative fine imposed under subsection (1). The attorney general shall bring an action to recover the fine.

(7) Any administrative fine, investigation costs, or recovery of an economic benefit associated with a violation that is collected under this section must be paid to the state treasury and deposited into the fund.

(8) A person that violates this act is liable for all damages sustained by a purchaser of a product sold in violation of this act. In an enforcement action, a court may order, in addition to other sanctions provided by law, restitution to a party injured by the purchase of a product sold in violation of this act.

(9) As an affirmative defense to any action filed under this section, in addition to any other lawful defense, a grower may present evidence that, at the time of the alleged violation or attempted violation, the grower was in compliance with this act and the rules promulgated under this act.

(10) If the department determines that a grower individually, or by the action of an agent or employee, or as the agent or employee of another, committed a violation under section 602, that did not result in significant harm to public health or the environment, the department may issue a warning instead of imposing an administrative fine under subsection (1).

(11) The applicable provisions of the revised judicature act of 1961, 1961 PA 236, MCL 600.101 to 600.9948, apply to civil actions filed under this section.

(12) The department shall report to the United States Attorney General, the USDA, and the chief law enforcement officer of this state any violation under this chapter committed with a culpable mental state greater than negligence.

(13) The department shall use the enforcement response policy in determining what actions to pursue under this section.

History: 2020, Act 220, Imd. Eff. Oct. 16, 2020;—Am. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

CHAPTER VII

Emergency Rule Codification

333.29701 Repealed. 2021, Act 4, Imd. Eff. Mar. 24, 2021.

Compiler's note: The repealed section pertained to growers registered under the industrial hemp research and development act.

CHAPTER VIII

Colleges and Universities

***** 333.29801.added *THIS ADDED SECTION DOES NOT TAKE EFFECT UNLESS ACT 547 OF 2014 IS REPEALED. (See enacting section 2 of Act 4 of 2021.)* *****

333.29801.added Colleges or universities; growing of industrial hemp for research; requirements; "college or university" defined.

Sec. 801. (1) A college or university that grows industrial hemp for the purpose of conducting research shall do all of the following:

(a) Register as a grower under chapter II.

(b) Collect samples of each lot of industrial hemp and complete a total delta-9-THC test as required under chapter IV. If the college or university adopts alternative methods for collecting a sample and completing a total delta-9-THC test, the college or university does not have to comply with the requirements of chapter IV. A total delta-9-THC test conducted under this subdivision must achieve a confidence level of 95% with respect to the acceptable THC level.

(c) Dispose of noncompliant industrial hemp under section 407.


(2) As used in this section, "college or university" means a college or university described in section 4, 5,

or 6 of article VIII of the state constitution of 1963 or a junior college or community college described in section 7 of article VIII of the state constitution of 1963.

History: Add. 2021, Act 4, Eff. (pending).

Compiler's note: Enacting section 2 of Act 4 of 2021 provides:

"Enacting section 2. Section 801 of the industrial hemp growers act, 2020 PA 220, MCL 333.29801, does not take effect unless the industrial hemp research and development act, 2014 PA 547, MCL 286.841 to 286.859, is repealed."

	Pesticide and Plant Pest Management Division	Document #: Attachment B	Version #: 2
			Page 1 of 9
Title: Industrial Hemp Standard Sampling Plan			Effective Date: 5/6/2022


1. Definitions

Definitions 1.1 through 1.7 are found in PA 220 of 2020, the Industrial Hemp Growers Act, as amended.

- 1.1 Cannabis – the plant *Cannabis sativa* L. and any part of that plant, whether growing or not.
- 1.2 Unofficial hemp sample – a sample of industrial hemp collected by a grower for routine compliance monitoring testing throughout the growing season.
- 1.3 DEA - United States Drug Enforcement Administration
- 1.4 Industrial Hemp – as defined in section 3 of the Michigan Regulation and Taxation of Marihuana Act, 2018 IL 1, MCL 333.27953, “(i) A plant of the genus *Cannabis*, whether growing or not, with a THC concentration of 0.3% or less on a dry-weight basis. (ii) A part of a plant of the genus *Cannabis*, whether growing or not, with a THC concentration of 0.3% or less on a dry-weight basis. (iii) The seeds of a plant of the genus *Cannabis* with a THC concentration of 0.3% or less on a dry-weight basis. (iv) If it has a THC concentration of 0.3% or less on a dry-weight basis, a compound, manufacture, derivative, mixture, preparation, extract, cannabinoid, acid, salt, isomer, or salt of an isomer of any of the following: (A) A plant of the genus *Cannabis*. (B) A part of a plant of the genus *Cannabis*...” (the definition further defines hemp products).
- 1.5 Lot – a contiguous (connected) area in a field, greenhouse, or indoor growing area that contains the same variety or strain of *Cannabis* throughout. Noncontiguous fields/growing areas are separate lots. Separate greenhouses/hoop houses should be considered separate lots (more information below).
- 1.6 Official hemp sample – a sample from an industrial hemp lot that is collected by a designated sampling agent in accordance with department sampling SOP and is tested by a regulatory testing facility.
- 1.7 Designated sampling agent – a federal, state, or local law enforcement agent that MDARD authorizes to collect official hemp samples.
- 1.8 SOP - standard operating procedure
- 1.9 THC - tetrahydrocannabinol

2. Background

- 2.1 The Industrial Hemp Growers Act requires sampling of *Cannabis* to confirm whether the crop is hemp or marijuana prior to harvesting. Sampling must be conducted by an MDARD-approved designated sampling agent.
 - 2.2 Since the THC content of hemp generally peaks as the plant ripens, the timing of when sampling occurs is important to accurately measure THC concentration and monitor compliance with Michigan’s hemp law. Regulatory sampling must be conducted prior to the anticipated harvest date. Growers are required to contact MDARD at least 20 days before the anticipated harvest date and no more than 30 days prior.
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	Pesticide and Plant Pest Management Division	Document #: Attachment B	Version #: 2
			Page 2 of 9
Title: Industrial Hemp Standard Sampling Plan			Effective Date: 5/6/2022

2.3 The sample is intended to be representative of the THC content in a “lot” of hemp as identified by the grower. Hemp growers may not harvest hemp prior to the hemp being sampled for THC concentration.

3. Purpose & Scope

3.1 This document describes how MDARD will be conducting sampling of *Cannabis* as part of the Michigan Hemp Production Plan. This document does not establish SOPs for intake of sampling requests, sampling packaging, laboratory testing, reporting, data management, transportation, shipping, disposal, remediation, or performance-based preharvest sampling.

3.2 Official regulatory samples collected by designated sampling agents are acceptable for submission to a qualified, DEA-registered laboratory. MDARD’s Geagley Laboratory is ISO 17025 accredited and registered with the DEA. The Geagley Laboratory will be the only laboratory analyzing official regulatory samples for MDARD. Note that after December 31, 2022, all labs testing hemp, whether for official regulatory samples or compliance monitoring samples, must be registered with the DEA (MCL333.29403(4)).

4. Authority

4.1 MDARD has the authority to enter onto and inspect all premises where industrial hemp is or will be located, with or without cause and with or without advance notice per the Industrial Hemp Growers Act (MCL333.29301(2)(a)).

4.2 The Department, not the grower, conducts official regulatory sampling. The grower must provide MDARD complete and unrestricted access to all cannabis and all acreage, greenhouses, indoor square footage, fields, buildings, or other locations, including any location listed on the grower registration application, where cannabis is growing or stored (MCL333.29401(2)).


5. Designated Sampling Agents

5.1 Official regulatory sampling will be conducted by MDARD-approved designated sampling agents. At this time, all agents will be MDARD inspectors.

5.2 A sampling agent will become certified to collect official regulatory samples by reviewing the “MDARD Sampling Agent Training” PowerPoint and MDARD-PH-SOP-805, Industrial Hemp Sampling. Notification will be provided via email to the Hemp Program Specialist of the date training was completed.

5.3 MDARD will issue a training certificate and maintain a list of designated sampling agents. This list will be published at www.michigan.gov/industrialhemp.

5.4 MDARD may choose to approve other federal, state, or local law enforcement personnel as designated sampling agents once training has been completed.

	Pesticide and Plant Pest Management Division	Document #: Attachment B	Version #: 2
			Page 3 of 9
Title: Industrial Hemp Standard Sampling Plan			Effective Date: 5/6/2022

6. Biosecurity


- 6.1 Clean sampling tool with an appropriate disinfectant before beginning sample collection and between lots.
- 6.2 Change disposable gloves between lots.
- 6.3 Dispose of single-use coveralls (if grower requires Tyvek use) and gloves in an appropriate receptacle before leaving the growers' property or in a designated receptacle in the vehicle. Ensure that reusable coveralls are appropriately cleaned prior to next use.

7. Recommended Sampling Equipment

- Pruners/Clippers
- Sample collection bags
- Permanent Pens
- Stapler/staples
- Container for sample collection
- Industrial Hemp Sampling Inspection & Report on Sample form
- Clipboard
- Preharvest form information
- Preharvest Contact Checklist
- Chain of custody forms
- Grower map and copy of application
- Security tape/stickers
- Disposable nitrile gloves
- Alcohol wipes/other disinfectant
- Spray paint
- Phone-GPS-Camera
- Tyvek suits
- Face masks
- Rain gear, boots, disposable booties
- Trash bags

8. Sampling Plan

- 8.1 Once a sample is requested by a grower, the Industrial Hemp program will confirm that 1) the grower is currently registered; 2) there are no unpaid fines on record; and 3) there are no unpaid sample visit or laboratory testing fees on record. The grower must be in good standing prior to sampling being performed. Once the grower has been approved for sampling, a sampling agent will be assigned.
- 8.2 Although not critical prior to the visit, the sampling agent may obtain the Grower Registration application from the Program Specialist and review lot locations, map, and GPS coordinates that Grower provided. Compare with sampling request.
- 8.3 The sampling agent will review the grower's online sampling request location and lot information and estimate the number of cuttings to be collected following guidance (see below), along with the number of composite samples to be collected.

	Pesticide and Plant Pest Management Division	Document #: Attachment B	Version #: 2
			Page 4 of 9
Title: Industrial Hemp Standard Sampling Plan			Effective Date: 5/6/2022

- 8.4 The sampling agent should use the Industrial Hemp Grower Contact Checklist for Sampling Agent (PH-FORM-805.2) to contact the grower to arrange a sampling/inspection time, collect additional lot information, discuss requirements, address biosafety concerns, and fees.
- 8.5 The sampling agent will meet the grower on site, display credentials, review the process with the grower, and confirm who will be present throughout the sampling event. A REPRESENTATIVE MUST BE PRESENT DURING SAMPLING PER MCL333.29401(1). The sampling agent will review Sample Collection Acknowledgements” on the Industrial Hemp Sampling Inspection & Report on Sample form before beginning sampling.
- 8.6 The sampling agent will confirm that lots with Cannabis match lots, maps, and GPS on grower Registration application. Growers must only grow hemp in locations disclosed on their registration application (or site modification form) per MCL333.29303(b) and MCL333.29601(1)(a). Describe findings on the Industrial Hemp Sampling Inspection & Report on Sample form. GPS coordinates should be roughly the center of a growing area.
- 8.7 Should the grower choose to divide existing lots, ensure the grower marks the boundaries between the sub-lots with flagging, stakes, spray paint, etc. (in case one lot tests hot and must be destroyed).
- 8.8 The sampling agent will take photographs showing full area of each lot to be sampled to aid in recollection should a lot need to be identified as non-compliant by the lab.
- 8.9 The sampling agent will look for *Cannabis* plants outside lots on maps provided to MDARD and describe on report. If a hemp lot appears to be harvested and sampling was not performed on the lot, and no disposal request was approved, cease the inspection contact the Program Specialist immediately. Growers can dispose of hemp plants due to poor health, pests, diseases, weather damage, or to eliminate hermaphrodites to prevent cross-pollination, and a disposal request is not needed. If even a portion of a lot is missing and you believe it was not removed due to the issues above, an investigation will be conducted immediately.
- 8.10 The sampling agent will enter a growing area, strategically examine the growing area, establish an approach for navigating the growing area, and collect individual specimens from plants to obtain a representative sample of hemp from the designated lot.
- 8.11 The sampling agent should use a sawtooth pattern when sampling the field (Figure 1) and adapt as needed to navigate around tightly spaced rows in a greenhouse (Figure 2). The sampling agent may deviate from the pattern as necessary to account for field conditions and to ensure that all parts of the field are adequately and proportionately sampled to produce a representative sample.

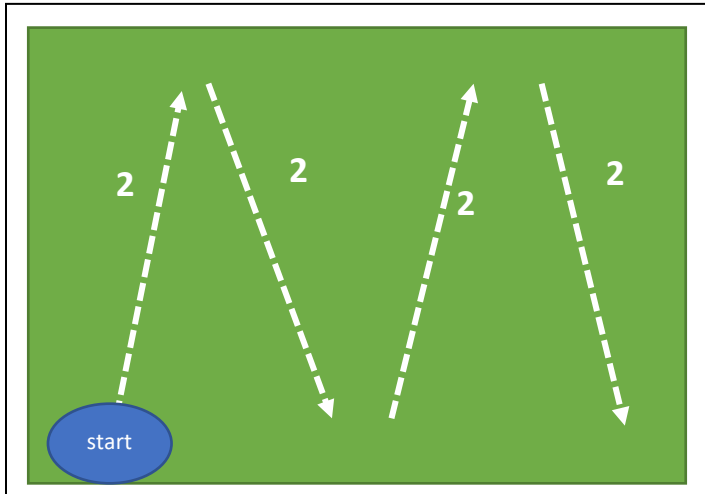


Figure 1. Typical sampling pattern starting in the lower left corner of a field. The numbers indicate the approximate number of plants to take cuttings from (1 cutting per plant) per path when collecting 8 total cuttings to make 1 composite sample for this 3-acre lot.

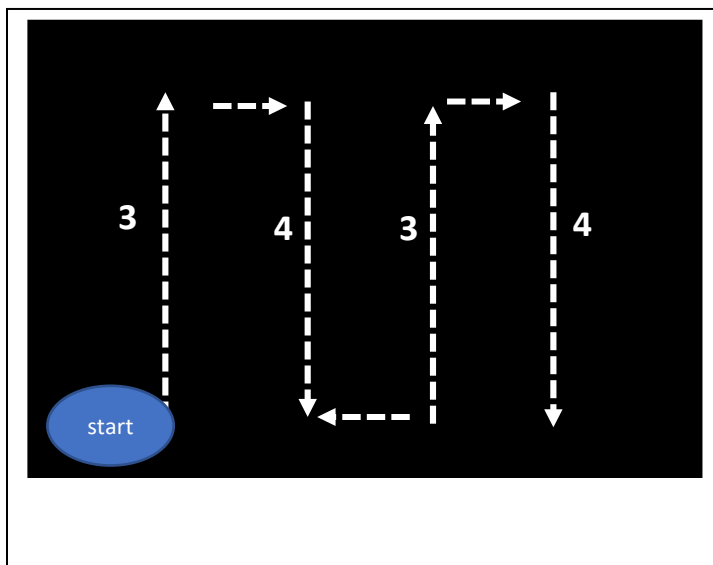



Figure 2. Modified sampling pattern for planting rows that cannot be easily walked through (such as a dense fiber planting or crowded greenhouse lot). Example shows collecting 14 total cuttings for 1 sample from the 9-acre area.

8.12 Conducting Sampling

- 8.12.1 Plants and plant material selected for official sampling shall be determined solely by the Department. All samples shall become the property of the Department and are nonreturnable.
- 8.12.2 Sanitize pruners with alcohol wipes. Don gloves and other PPE that may be required by the grower.
- 8.12.3 A cutting shall be obtained from ONLY female flowers, from branches at the top 1/3 of the plant. All samples must be collected from the flowering tops of the plant by cutting the


	Pesticide and Plant Pest Management Division	Document #: Attachment B	Version #: 2
			Page 6 of 9
Title: Industrial Hemp Standard Sampling Plan			Effective Date: 5/6/2022

top five to eight inches from the “main stem” (that includes the leaves and flowers), “terminal bud” (that occurs at the end of a stem), or “central cola” (cut stem that could develop into a bud) of the flowering top of the plant (Figure 3).

Figure 3. Locations for a cutting (note: take only 1 cutting per plant)



- 8.12.4 Cuttings should be representative of the lot.
- 8.12.5 Sampling agents should avoid sampling dead, diseased, heavily infested, or mechanically injured plants. Avoid sampling plants in standing water. Avoid collection near field and greenhouse edges. Avoid sampling plants that do not look to be homogenous – you may need to discuss splitting the grower’s lot to account for varieties that appear phenotypically different.
- 8.12.6 A separate sample must be taken from each non-contiguous lot of a given variety and for each variety.
- 8.12.7 A composite sample for the lot shall consist of **one cutting per plant**. Refer to the table (Table 1) below to determine the minimum number of plants to be sampled for each lot. More plants may need to be sampled depending on the size of the buds collected. A composite sample should loosely fill at 3/4 of a small, lined sampling bag.
- 8.12.8 Place all cuttings from a single lot into 1 paper bag (1 lot = 1 composite sample). Fold down the bag with at least 2 folds.
- 8.12.9 Attached the laboratory bar code sticker, and secure bag with MDARD official sample tape. Fill out information on sample tape: Sampling Agent Name, Bar Code Number and Date. Record bar code sticker number next to appropriate lot on the Industrial Hemp Sampling Inspection & Report on Sample form.

	Pesticide and Plant Pest Management Division	Document #: Attachment B	Version #: 2
			Page 7 of 9
Title: Industrial Hemp Standard Sampling Plan			Effective Date: 5/6/2022

- 8.12.10 Sanitize pruners, doff gloves, proceed to next lot, and repeated sampling steps.
- 8.12.11 Place all samples into a box, bucket, or larger paper bag for transportation. DO NOT place into plastic bags to prevent condensation. DO NOT use ice packs or place samples in a refrigerator.
- 8.12.12 Samples collected during a visit should always be maintained by the sampling agent to ensure proper security and chain of custody.
- 8.12.13 The sampling agent will seal composite sample bag with MDARD sample tape and apply a bar code sticker. The sampling agent will complete an Industrial Hemp Sampling Inspection & Report on Sample Form for all samples before leaving the sampling location and follow SOPs for either delivery to Geagley Laboratory or USPS shipping.

Table 1. Number of Plants to Sample

Sampling numbers are adapted from USDA’s formula as described in the [“Sampling Guidelines for Hemp U.S. Domestic Hemp Production Program Issued January 15, 2021”](#) document, calculated with a 95% confidence and 1% failure rate. This ensures, at a confidence level of 95 percent, that no more than 1% percent of the plants in each lot would exceed the acceptable level of THC in hemp.

For lots 0 to 18 acres, including greenhouses, the USDA sample size = 1 plant/acre and add 5 plants to ensure adequate sample size for lab analysis. For 21-100 acres, 30 cuttings will be collected, and an additional 10 cuttings will be collected for each increase in acreage as shown below:

Acreage of Lot	Randomly Select this <u>Minimum</u> Number of Plants <i>(take 1 cutting per plant for a composite sample to fill at least ¾ of a small, lined sample bag)</i>
0-1	6
2	7
3	8
4	9
5	10
6	11
7	12
8	13
9	14
10	15
11	16
12	17



Title: Industrial Hemp Standard Sampling Plan

Effective Date:

5/6/2022

13	18
14	19
15	20
16	21
17	22
18	23
19	23
20	24
21-100	30
101-200	40
201-300	50
301-400	60
401-500...	70...


9. Resampling

9.1 A grower that fails to harvest within 30 days of sampling can request a second official regulatory sample only when the failure harvest is due to weather conditions, agricultural practices, equipment failure, or another reason approved by MDARD. Resampling will not occur simply because harvest is delayed to increase cannabinoid concentration (MCL333.29405(3)).

10. Performance-Based Sampling

10.1 Per MCL333.29407(6), the department may use performance-based sampling that allows for reduced or no regulatory sampling of specific certified seed varieties yielding consistently compliant hemp, lots used for academic research by colleges or universities, if a grower has consistently produced compliant hemp plants over an extended period of time, or other factors. The plan must ensure at a confidence level of 95% that no more than 1% of the plants in each lot would be noncompliant, and the plan must be submitted for approval by USDA as part of the state’s hemp production plan. Procedures describing when performance-based sampling can be utilized are addressed in the Department’s Performance-Based Sampling Plan for specific cultivation scenarios such as college/university research, immature plants, fiber/grain varieties from certified seed, and more. The actual process of collecting and submitting samples described within this plan still apply.

Performance-based sampling does not prevent the Department from conducting random inspections or sampling and testing of lots at any time. The Department reserves the right to conduct sampling at any time to ensure compliance with the acceptable THC level.

	Pesticide and Plant Pest Management Division	Document #: Attachment B	Version #: 2
			Page 9 of 9
Title: Industrial Hemp Standard Sampling Plan			Effective Date: 5/6/2022

11. Other Sampling

- 11.1 Growers that receive a test report showing a lot with non-compliant THC may choose to remediate the lot by either removing and disposing floral material and utilizing the remaining plant or shredding the entire plant into a biomass-like material. Growers choosing remediation must contact MDARD to collect an official regulatory sample no later than 20 days before and no earlier than 30 days before the anticipated remediation date. If testing shows THC levels to be non-compliant, the lot must be disposed of. The grower must notify the department at least 48 hours prior to disposal by submitting a notice of intent to dispose on the department’s website. The grower must also provide a notice of disposal within 48 hours of the action being taken (MCL333.29407(4)).
- 11.2 The department has the authority to collect samples during routine inspections and investigations (MCL333.29301(2)(h)(iv)). All samples collected will follow the same preharvest sampling plan described above and SOP. All inspection and investigation samples will be analyzed by MDARD’s Geagley Laboratory.

Standard Operating Procedure			
Michigan Department of Agriculture and Rural Development, Laboratory Division			
Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods			Effective Date: August 12, 2021
SOP No: FFD.08.MTA.04	Revision: 04	Replaces: Version 03	Revision Date: August 12, 2021
<p>1. Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods</p> <p>2. Scope, Application, Rationale: Michigan Public Act 4 of 2021 specifies “Industrial hemp” means the plant <i>Cannabis sativa</i> L. and its parts including the viable seeds of that plant and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9-tetrahydrocannabinol concentration of not more than 0.3% on a dry weight basis. Industrial hemp includes industrial hemp commodities and products and topical or ingestible animal and consumer products derived from the plant <i>Cannabis sativa</i> L. with a delta-9-tetrahydrocannabinol concentration of not more than 0.3% on a dry weight basis. If the reported total THC quantitated value is 0.37% or greater, the plant is considered violative and cannot be used or labeled as hemp.</p> <p>3. Summary of Method: A small portion of a homogenized <i>Cannabis sativa</i> L. plant is extracted, analyzed and quantitated using gas chromatography flame ionization detection (GCFID) to determine the amount of total THC, total CBD, and CBN in the sample. The total THC amount shall be used to determine whether the plant is legally considered industrial hemp or marijuana. Any sample with a reported total THC quantitation of 0.37% or greater shall be confirmed by LCMSMS. The amounts of total CBD, and CBN shall be provided for additional information and may be considered estimated values.</p> <p>4. Definitions:</p> <p>4.1 CBD: Cannabidiol</p> <p>4.2 CBDa: Cannabidiolic acid</p> <p>4.3 CBN: Cannabinol</p> <p>4.4 GCFID: Gas chromatography with flame ionization detection</p> <p>4.5 Industrial Hemp Sample Prep Sheet: form FFD.08.FOAA current revision; located in folder S:\Chemistry\CANNABIS\SAMPLE DATA\Worksheet Templates</p> <p>4.6 LCMSMS: Liquid chromatography with tandem mass spectroscopy</p> <p>4.7 QC Worksheet: an excel spreadsheet detailing quantitation standard and spike information; located in folder S:\Chemistry\CANNABIS\SAMPLE DATA</p> <p>4.8 THC: Δ9-Tetrahydrocannabinol</p> <p>4.9 THCa: Tetrahydrocannabinolic acid</p> <p>4.10 Total CBD: Summation of quantified amounts of CBD and CBDa in a sample</p> <p>4.11 Total THC: Summation of quantified amounts of THC and THCa in a sample</p> <p>4.12 Worksheet Template: an excel spreadsheet that shall be saved under the appropriate set name that contains sample numbers, weights, and other information related to the current set; located in folder S:\Chemistry\CANNABIS\SAMPLE DATA\Worksheet Templates.</p> <p>5. Safety:</p> <p>5.1 Acetonitrile (CH₃CN); CAS No. 75-05-8; Caution. Flammable. Poisonous.</p> <p>5.2 Air, compressed; Contains gas under pressure and may explode if heated.</p> <p>5.3 Formic Acid (CH₂O₂); CAS No. 64-18-6; Caution. Caustic. Corrosive. Combustible liquid and vapor. Causes burns by all exposure routes. Hygroscopic.</p>			

Standard Operating Procedure

Michigan Department of Agriculture and Rural Development, Laboratory Division

Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods

Effective Date: August 12, 2021

SOP No: FFD.08.MTA.04

Revision: 04

Replaces: Version 03

Revision Date: August 12, 2021

- 5.4 Helium, compressed; CAS No.7440-59-7; Contains gas under pressure and may explode if heated.
- 5.5 Hydrogen, compressed; CAS No. 1333-74-0; Extremely flammable gas. Contains gas under pressure and may explode if heated. Burns with invisible flame.
- 5.6 Methanol (CH₃OH); CAS No. 67-56-1; Caution. Flammable. Poisonous.

6. Significance: Legal matters may result from analysis of submitted samples. Accurate quantitation is necessary to provide the grower and department with the information to determine if the crop is legally considered industrial hemp or is in violation.

7. Apparatus:

- 7.1 GCFID analytical system consisting of Shimadzu GC-2010 Plus Gas Chromatograph; Shimadzu AOC-20s Auto Sampler; Shimadzu AOC-20i Auto Injector; Hydrogen Flame Ionization Detector; Agilent J&W Capillary GC Column HP-5 (30 m length x 0.320 mm I.D. x 0.25 µm film thickness) part number 19091J-413 or equivalent. Windows based computer and data acquisition storage system called LabSolutions.
- 7.2 LCMSMS analytical system consisting of Shimadzu model LCMS-8045 Liquid Chromatograph Mass Spectrometer; model DGU-20A_{5R} degassing unit; model LC-20AD_{XR} liquid chromatograph pumps; model SIL-20AC_{XR} autosampler; model CTO-20A column oven; Shimadzu NexLeaf CBX for Potency analytical column (2.7 µm, 150 x 4.6 mm) part number 220-91525-70 or equivalent. Also includes NexLeaf Guard cartridge (5 x 4.6 mm) part number 220-91525-72 and Guard holder part number 220-91525-73. Windows based computer and data acquisition storage system called LabSolutions.

8. Materials or Reagents:

- 8.1 2010 Geno/Grinder – SPEX SamplePrep LLC; use for sample extraction
- 8.2 Acetonitrile – HPLC grade or better
- 8.3 Air – compressed gas cylinder; used for GCFID analysis
- 8.4 Aluminum pans and lids – various sizes; used for sample preparation
- 8.5 Analytical balance
- 8.6 Autosampler vials, inserts, and caps
- 8.7 Biohazard bag – bag that shall be used for disposal of extraneous material following sample homogenization and for final sample disposal following analysis
- 8.8 Blixer 2 – Robot-coupe USA, Inc.; use for sample homogenization
- 8.9 Brushes – various sizes/types to be used in sample transfer following homogenization and for washing the Blixer 2 and glassware
- 8.10 Cannabinoids Standard Mix, Restek catalog number 34014; solution containing CBD, CBN, and Δ⁹-THC, each at 1000 µg/ml.
- 8.11 Centrifuge tubes – 50 ml disposable polypropylene tubes with caps
- 8.12 Dispensette, S Organic, Digital – automatic solvent dispenser set to dispense 40.0 ml
- 8.13 Filter (degas LC solvents) – 0.45 µm nylon (or equivalent)
- 8.14 Filter (sample clarification) – 13 mm, 0.2 µm PTFE acrodisc (or equivalent)
- 8.15 Formic acid – reagent grade

Standard Operating Procedure			
Michigan Department of Agriculture and Rural Development, Laboratory Division			
Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods			Effective Date: August 12, 2021
SOP No: FFD.08.MTA.04	Revision: 04	Replaces: Version 03	Revision Date: August 12, 2021
<p>8.16 Glass Wool – Shimadzu catalog number 221-48600</p> <p>8.17 Gloves, heat resistant – should be worn when removing items from oven</p> <p>8.18 Gloves – disposable; nitrile or equivalent</p> <p>8.19 Graduated cylinders – various sizes</p> <p>8.20 Helium – compressed gas cylinder; used for GCFID analysis</p> <p>8.21 Hydrogen – compressed gas cylinder; used for GCFID analysis</p> <p>8.22 Inlet liner – Cyclo splitter, 3.5 mm x 5.0 x 95, Restek catalog number 22073</p> <p>8.23 Methanol – lab grade for rinsing Blixer 2 components and HPLC grade or better for sample extraction</p> <p>8.24 Micropipettes – various sizes; with appropriate tips</p> <p>8.25 Mobile phase A – water + 0.1% formic acid; used for LCMSMS analysis</p> <p>8.26 Mobile phase B – acetonitrile + 0.1% formic acid; used for LCMSMS analysis</p> <p>8.27 Moisture Analyzer – Mettler-Toledo, Model HC103; with aluminum sample pans</p> <p>8.28 Oven – use for sample drying</p> <p>8.29 Paper plates – disposable; nine inch or equivalent</p> <p>8.30 Reference standard solutions</p> <p>8.30.1 <i>Quantitation standards</i></p> <ul style="list-style-type: none"> • Using the Cannabinoids Standard Mix (section 8.10), appropriate micropipettes, and acetonitrile, follow the dilution schedule as outlined in the latest QC Worksheet to produce a set of five levels of quantitation standards. Each quantitation standard is good for six months and stored in a freezer. • An aliquot of each standard level shall be added to individual vial inserts within properly labeled autosampler vials for each set of samples analyzed. A new set of standards shall be made for each set of samples. <p>8.30.2 <i>Spike solution</i></p> <ul style="list-style-type: none"> • The Cannabinoids Standard Mix (section 8.10) shall be used for spiking. Spike volume is found in the latest QC Worksheet. <p>8.31 Syringe – disposable; 3 ml slip tip (or equivalent)</p> <p>8.32 Test tubes – disposable; used for sample dilution as needed</p> <p>8.33 Volumetric flasks – various sizes</p> <p>8.34 Water – HPLC grade or better</p> <p>9. Sampling:</p> <p>9.1 Samples shall be provided by the MDARD Pesticide and Plant Pest Management Division Industrial Hemp Program.</p> <p>9.2 All samples shall be contained in a paper bag with the appropriate documentation attached.</p> <p>10. Interferences or Bias:</p>			

Standard Operating Procedure

Michigan Department of Agriculture and Rural Development, Laboratory Division

Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods

Effective Date: August 12, 2021

SOP No: FFD.08.MTA.04

Revision: 04

Replaces: Version 03

Revision Date: August 12, 2021

- 10.1 To help ensure complete decarboxylation of THCa to THC and CBDa to CBD, a small wad of glass wool is inserted into the GC inlet liner and placed just above the start of the cyclo configuration.
- 10.2 GCFID analysis will result in three peaks appearing in the chromatogram, one each for total THC, total CBD, and CBN.
- 10.3 LCMSMS analysis will result in five peaks appearing in the chromatogram, one each for THC, THCa, CBD, CBDa, and CBN. THC and CBD are structural isomers, as are THCa and CBDa. Therefore, the identification of these compounds is possible only through comparison of their respective retention times.

11. Instrument Parameters:

11.1 GCFID

- 11.1.1 Injection volume: 1.0 μ l
- 11.1.2 Injection Mode: Split
- 11.1.3 Split Ratio: 20.0
- 11.1.4 Injector Temperature: 320° C
- 11.1.5 Detector Temperature: 300° C
- 11.1.6 Detector Makeup Gas: Helium
- 11.1.7 Detector Makeup Flow: 25.0 ml/min
- 11.1.8 Detector H₂ Flow: 35.0 ml/min
- 11.1.9 Detector Air Flow: 350.0 ml/min
- 11.1.10 Column Oven Temperature Program (10 minute total run time):

Rate (° C / min)	Temperature (° C)	Hold Time (min)
initial condition	200.0	0.00
15.0	300.0	3.33

11.2 LCMSMS

- 11.2.1 Injection volume: 1.0 μ l
- 11.2.2 Column Temperature: 40.0° C
- 11.2.3 Flow Rate: 0.5000 ml/min
- 11.2.4 Data Acquisition Start Time: 4.000 min
- 11.2.5 Data Acquisition End Time: 9.000 min
- 11.2.6 LC Gradient Program (10 minute total run time):

Time (minutes)	% Mobile Phase A	% Mobile Phase B
initial condition	25.0	75.0
1.00	10.0	90.0
8.50	10.0	90.0

Standard Operating Procedure

Michigan Department of Agriculture and Rural Development, Laboratory Division

Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods

Effective Date: August 12, 2021

SOP No: FFD.08.MTA.04

Revision: 04

Replaces: Version 03

Revision Date: August 12, 2021

8.60

25.0

75.0

11.2.7 LCMSMS parameters are found in annex 1.

12. Calibration:

- 12.1 A minimum four-point calibration curve shall be created for total THC, total CBD, and CBN with each set of samples analyzed.
- 12.2 The correlation coefficient (r^2) shall be ≥ 0.995 for each calibration.
- 12.3 The response of total THC, total CBD, and CBN respectively shall each ideally fall within the range of the quantitation standards, thereby within the acceptable calibration range, for a valid quantitation.
- 12.4 For total responses below the lowest standard, a single point calibration using the low standard may be used (section 15.2).
- 12.5 For total responses above the highest standard, but within 20% of the highest standard, a single point calibration using the high standard may be used (section 15.2).
- 12.6 For total responses exceeding 20% of their highest standard response, a sample dilution and re-analysis will need to be done if an estimated value is not acceptable.

13. Procedure:

13.1 Drying and Weighing

- 13.1.1 Empty entire sample from the paper bag into a labeled aluminum pan.
- 13.1.2 Gently agitate the pan to disperse the sample evenly, then loosely fit a cover on the pan and place the pan into an oven for a minimum of two hours at 95° C (200° F).
- 13.1.3 On an Industrial Hemp Sample Prep Sheet, record the start date and time the sample and placed into the oven and the end date and time when it was removed.

13.2 Grinding

- 13.2.1 Allow the sample to come to room temperature, then transfer the entire sample to the Blixer 2 and homogenize thoroughly.
- 13.2.2 Pour the sample on to a paper plate and then into a properly labeled sample container.

13.3 Moisture Content

- 13.3.1 Working with the moisture analyzer, tare an aluminum sample pan and then add 2.0 ± 0.1 g of sample, spreading the sample evenly in the sample pan.
- 13.3.2 Close the lid and start the analysis. Normal reading time is between 3 and 15 minutes.
- 13.3.3 A moisture reading of below 15% indicates the sample is dry enough to begin extraction; a moisture reading of 15% or greater will require the sample to be re-dried. Record the data on the Industrial Hemp Sample Prep Sheet.

13.4 Extraction

Standard Operating Procedure

Michigan Department of Agriculture and Rural Development, Laboratory Division

Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods

Effective Date: August 12, 2021

SOP No: FFD.08.MTA.04

Revision: 04

Replaces: Version 03

Revision Date: August 12, 2021

- 13.4.1 Weigh 0.20 ± 0.002 g of each sample and of the control material for a matrix blank into separate and correctly labeled 50 ml polypropylene centrifuge tubes. Record the weights on a Worksheet Template.
- 13.4.2 Weigh 0.20 ± 0.02 g of the control material for a matrix spike into a separate and correctly labeled 50 ml polypropylene centrifuge tube. Record the weight on the Worksheet Template
- 13.4.3 Add 40 ml of methanol to each tube using the dispensette or a graduated cylinder and screw cap on tightly, then place the tube(s) into the Geno/Grinder and lock into place. Set the rate value to 500 rpm and the total shake time shall be 5 minutes.
- 13.4.4 Remove the tube(s) and allow the sample(s) to settle for several minutes.
- 13.4.5 Filter a portion of the final sample extract through a sample clarification filter attached to a disposable syringe, discarding the first few drops, and into a labeled autosampler vial, then cap. Extract is now ready for injection and analysis.
- 13.4.6 If the original analysis of a sample reveals a dilution is necessary, dilute an aliquot of the filtered extract with methanol as required.

14. Quality Control:

- 14.1 This SOP shall be reviewed biennially by Section staff.
- 14.2 This SOP shall be audited biennially by the QAO.

15. Calculations:

- 15.1 The following calculation shall be used for quantitation purposes:

$$\text{Amount (\%)} = [(R \times V) / W] / 10,000$$

R = raw result calculated from calibration curve ($\mu\text{g/ml}$)

V = volume of extraction solution (ml)

W = sample weight (g)

10,000 is the conversion factor from ppm to percent

- 15.2 A single point calibration for quantitation shall be done by comparing analyte response versus the standard concentration and response as follows:

$$\text{analyte conc. (\mu g/ml)} = \frac{[\text{analyte response}] \times [\text{std conc. (\mu g/ml)}]}{[\text{std response}]}$$

16. **Report:** All sample quantitation shall be truncated to two decimal places for reporting purposes.

17. **Method Performance:** Refer to S:\Chemistry\CANNABIS\CANNABIS Control Data.

18. Responsibilities:

- 18.1 The analyst shall be responsible for ensuring proper quantitation procedures are followed when reporting results.
- 18.2 The analyst shall be responsible for data interpretation and ensuring all quality control criteria have been met and additional analysis completed if needed.

Standard Operating Procedure			
Michigan Department of Agriculture and Rural Development, Laboratory Division			
Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods			Effective Date: August 12, 2021
SOP No: FFD.08.MTA.04	Revision: 04	Replaces: Version 03	Revision Date: August 12, 2021

18.3 Section staff will dispose of dried samples in a biohazard bag and sample containers in the trash when notified by section supervisor or scientist. Sample extracts shall be disposed in the appropriate hazardous waste container and centrifuge tubes shall be disposed in the trash.

19. References:

- 19.1 Citty, C, et al. (2019). Cannabinoid Profiling of Hemp Seed Oil by Liquid Chromatography Coupled to High-Resolution Mass Spectrometry. *Frontiers in Plant Science* 10:120.
- 19.2 Michigan Public Act 4 of 2021.
- 19.3 SOP PT-METH-031, Colorado Department of Agriculture. (2014).

20. Troubleshooting: To help prevent sample carryover during the sample preparation step, a new aluminum pan shall be used for each sample, and the Blixer 2 mixing bowl and blade shall be washed with soap and water, rinsed with methanol, and air dried between samples.

21. Approval:

Approval:	
Reviewed by:	
Signature	Date
Approved by:	
Signature	Date
<p>Michigan Department of Agriculture & Rural Development Laboratory Division Geagley Laboratory 1615 S. Harrison Rd. East Lansing, MI 48823-5224 (517) 337-5040</p>	

Standard Operating Procedure

Michigan Department of Agriculture and Rural Development, Laboratory Division

Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods

Effective Date: August 12, 2021

SOP No: FFD.08.MTA.04

Revision: 04

Replaces: Version 03

Revision Date: August 12, 2021

Annex 1

LCMSMS Parameters

Compound Name	Precursor Ion (m/z)	Product Ion (m/z)	Dwell Time (msec)	Q1 Pre Bias (V)	Collision Energy (V)	Q3 Pre Bias (V)
CBDa (Q)	359.40	341.30	30.0	-13.0	-15.0	-24.0
CBDa (C1)	359.40	219.30	30.0	-27.0	-31.0	-23.0
CBDa (C2)	359.40	261.30	30.0	-26.0	-22.0	-28.0
CBD (Q)	315.30	193.30	30.0	-11.0	-23.0	-21.0
CBD (C1)	315.30	123.30	30.0	-11.0	-35.0	-23.0
CBD (C2)	315.30	259.30	30.0	-11.0	-19.0	-18.0
CBN (Q)	311.40	223.30	30.0	-23.0	-21.0	-16.0
CBN (C1)	311.40	293.30	30.0	-23.0	-15.0	-22.0
CBN (C2)	311.40	195.30	30.0	-23.0	-26.0	-20.0
THC (Q)	315.30	193.30	30.0	-11.0	-23.0	-21.0
THC (C1)	315.30	123.30	30.0	-11.0	-35.0	-23.0
THC (C2)	315.30	259.30	30.0	-11.0	-19.0	-18.0
THCa (Q)	359.40	341.30	30.0	-13.0	-15.0	-24.0
THCa (C1)	359.40	219.30	30.0	-27.0	-31.0	-23.0
THCa (C2)	359.40	261.30	30.0	-26.0	-22.0	-28.0

Standard Operating Procedure			
Michigan Department of Agriculture and Rural Development, Laboratory Division			
Title: Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods			Effective Date: August 12, 2021
SOP No: FFD.08.MTA.04	Revision: 04	Replaces: Version 03	Revision Date: August 12, 2021

Annex 2

Revision History

Revision Level	Description	Initials	Date (mm/dd/yyyy)
01	Clarification and rewriting of various sections to incorporate a more accurate overall SOP.	EKS/TG	9/13/2019
02	Rewrite portions of sections two and three; update section 12; rewrite 13.2.2; add 15.2.	TG	2/11/2020
03	Change Public Act 461 to Public Act 4 of 2021	GBD	3/29/2021
04	Update 4.5, 4.7, 4.12, 8.6, 11.1.8, sections 16 and 17; add 8.10; rewrite 8.29 as updated 8.30; remove 8.31 and 12.1.	TG	8/12/2021

UNCONTROLLED

Attachment D – Measurement of Uncertainty



Laboratory Division

The measurement uncertainty for the process titled, "Determination of Total THC, Total CBD, and CBN Using Chromatographic Methods," was determined using guidelines published by the United States Food and Drug Administration (FDA) and the Association of Official Analytical Chemists (AOAC). A certified reference material was procured and analyzed at the necessary detection levels and statistically relevant repetitions. The measurement uncertainty (Mu) for these data was then calculated using the procedure laid out in the National Institute of Standards and Technology (NIST) SOP 29.

Attachment E – Controlled Substance Registration Certificate

CONTROLLED SUBSTANCE REGISTRATION CERTIFICATE UNITED STATES DEPARTMENT OF JUSTICE DRUG ENFORCEMENT ADMINISTRATION WASHINGTON D.C. 20537		
DEA REGISTRATION NUMBER	THIS REGISTRATION EXPIRES	FEE PAID
PM0085440	01-31-2022	FEE EXEMPT
SCHEDULES	BUSINESS ACTIVITY	ISSUE DATE
1,2,2N, 3,3N,4,5	ANALYTICAL LAB	12-07-2020
MICHIGAN DEPT OF AGRICULTURE GINA LYNN-BAUMAN DEWITT 1615 S HARRISON RD LABORATORY DIVISION EAST LANSING, MI 48823-5224		
THIS CERTIFICATE IS NOT TRANSFERABLE ON CHANGE OF OWNERSHIP, CONTROL, LOCATION, OR BUSINESS ACTIVITY, AND IT IS NOT VALID AFTER THE EXPIRATION DATE.		

Form DEA-223 (9/2016)

Sections 304 and 1008 (21 USC 824 and 958) of the Controlled Substances Act of 1970, as amended, provide that the Attorney General may revoke or suspend a registration to manufacture, distribute, dispense, import or export a controlled substance.



Title: Performance-Based Sampling Plan

Effective Date:

6/3/2022

Table of Contents

1. Definitions 1
2. Background 2
3. Purpose 2
4. Scope 3
5. Responsibilities 3
6. Standard Sampling 3
7. Research and Development at Colleges and Universities 3
8. Sprouts and Microgreens Sampling 5
9. Hemp Greens Sampling 5
10. Immature Clones/Transplants Sampling 5
11. Mother Plants at Clone/Transplant Grower Locations 6
12. Certified Seed - Fiber and Grain Hemp Varieties Sampling 6
13. Cannabinoid Varieties 7
14. Grower History of Compliance 7

1. Definitions

- 1.1 Performance-based sampling – methods for sampling and testing hemp which allows for less than 100% of all hemp lots planted in the state to be sampled and tested by the Department.
1.2 Department – Michigan Department of Agriculture and Rural Development.
1.3 Confidence level of 95% - high confidence that no more than 1% of the plants in each lot would produce non-compliant hemp plants.
1.4 College or university – defined in PA 220 as “a college or university described in section 4, 5, or 6 of article VIII of the state constitution of 1963 or a junior college or community college described in section 7 of article VIII of the state constitution of 1963.”
1.5 Harvest - the act of gathering an industrial hemp lot, collecting viable seed, or moving a lot from a location disclosed on the grower registration to an undisclosed location.
1.6 Hemp Microgreens- immature hemp seedlings grown for human consumption that are harvested above the soil or substrate line, prior to flowering, and not more than 14 days after germination.
1.7 Hemp Greens – hemp leaves from immature plants, grown for human consumption, and no more than ten (10) inches tall and are not flowering.



Title: Performance-Based Sampling Plan

Effective Date:

6/3/2022

- 1.8 **Hemp Sprouts** – germinated hemp seeds for human consumption that are harvested in their entirety (seed, root, and stem), have undeveloped or underdeveloped cotyledons, and true leaves have not begun to emerge. Sprouts usually take less than one week to grow. Sprouts could also be harvested above the soil or substrate line, but in that case would be considered microgreens.
- 1.9 **Hemp Transplants**- hemp seedlings, rooted cuttings, immature plants produced from tissue culture, or other means of reproduction, which are not harvested but transplanted into a large container or field to mature for harvest. The movement of transplants from their original location to the crop production location is not considered a harvest.
- 1.10 **Certified Seed** - the progeny of Breeder, Foundation, or Registered seed handled to maintain satisfactory genetic purity and varietal identity and Certified to AOSCA (Association of Official Seed Certifying Agencies) standards and having an official AOSCA seed label. (This does not include state's THC compliance verification programs.)
- 1.11 **PA 220** – Public Act 220 of 2020, the Industrial Hemp Growers Act, as amended.
- 1.12 **Standard sampling** – every lot and every grower is sampled and tested by the Department.

2. Background


2.1 The Department's preharvest sampling procedure requires standard sampling of every lot of hemp prior to harvest in accordance with USDA's Final Rule, 7 CFR Part 990.3, and Public Act 220 of 2020, the Industrial Hemp Growers Act. However, both the Final Rule and Act allow states to develop performance-based sampling approaches that ensure A) a confidence level of 95 percent that no more than one percent of the plants in each lot exceed the acceptable THC concentration and B) a representative sample is collected that represents a homogenous composition of the lot. The performance-based methods herein meet the following criteria as described in Part 990.3(a)(2)(iii)(A) and (B):

- (A) The alternative method must be part of the State or Tribe's hemp plan and is subject to USDA approval.*
- (B) The alternative method must have the potential to ensure, at a confidence level of 95 percent, that the Cannabis plant species Cannabis sativa L. that will be subject to the alternative method will not test above the acceptable hemp THC level. The alternative method may consider one or more of the following factors:*

- (1) Seed certification process or process that identifies varieties that have consistently demonstrated to result in compliant hemp plants in that State or territory of the Indian Tribe;*
- (2) Whether the producer is conducting research on hemp;*
- (3) Whether a producer has consistently produced compliant hemp plants over an extended period of time; and*
- (4) Factors similar to those in this paragraph (a)(2)(iii)(B).*

3. Purpose

The purpose of performance-based sampling is to allow the Department to reduce preharvest sampling of every lot of hemp grown in the state (called "standard sampling") under specific conditions. This not only reduces the burden on the Department of sampling typically compliant

 Pesticide and Plant Pest Management Division	ATTACHMENT F	Version #: 2.0
		Page 3 of 7
Title: Performance-Based Sampling Plan		Effective Date: 6/3/2022

hemp but also lessens sampling and testing costs for registered hemp growers. The goal is to ensure at a confidence level of 95 percent that no more than one percent of the plants in each lot will exceed the acceptable hemp THC level and ensure that a representative sample is collected that represents a homogeneous composition of the lot.

4. Scope

This document pertains only to the collection of preharvest hemp samples. Standard operating procedures for conducting sampling are documented in MDARD-PPPM-PH-SOP-805.

5. Responsibilities

- 5.1 Designated sampling agents – trained and certified department sampling agents perform sampling at growers assigned to them in the spring of each year.
- 5.2 Hemp program specialist – reviews and approves applications for college/university hemp research alternative sampling and testing methods and ensures sampling agents follow this performance-based sampling SOP for cultivation scenarios identified below.
- 5.3 Registered hemp grower – must submit a request to the Department for performance-based sampling with respect to research, immature plants, mother plants, and hemp grown for fiber/grain production from certified seed.

6. Standard Sampling

- 6.1 Performance-based sampling does not exclude the Department from conducting sampling inspections at any hemp grower lot or lots. The Department maintains authorities as described in PA 220 of 2020, as amended, to inspect facilities, collect records and samples, and test samples to ensure compliance with the acceptable THC level.
- 6.2 Any lot of hemp that is produced from seeds saved from a previous year's crop (not specifically bred for reproduction) shall be sampled and tested.
- 6.3 Any lot shall only be eligible for performance-based sampling consideration if the registered grower maintains records documenting the variety's compliance with the acceptable THC concentration.

7. Research and Development at Colleges and Universities

- 7.1 The principal investigator (PI) must be registered as a hemp grower with the Department. Multiple PIs may be registered at an institution.
- 7.2 The Department will not collect fees for Hemp Grower Registrations issued to a college or university hemp researcher if the project is for research only **and** the hemp does not enter commerce.
- 7.3 Colleges and universities performing industrial hemp research must allow for the collection of official hemp samples and total delta-9-THC testing by the Department as required under chapter IV of PA 220 for any hemp that will be harvested and/or entering the stream of commerce. If harvesting activities are not performed, then preharvest sampling is not required. However, the hemp lot must be disposed of within 15 days of the conclusion of its use as research plants.



Title: Performance-Based Sampling Plan

Effective Date:

6/3/2022

7.4 If the hemp will be harvested and the college or university would like approval for an alternative sampling method where the Department does not collect preharvest samples, the following requirements apply:

- 7.4.1 The researcher must apply to the Department by providing a plan that includes the scope of the research and proposed standard operating procedures for cultivation, harvesting, sampling, testing, and disposal. Timeframe for the research must be stated.
- 7.4.2 The plan must confirm that all research locations where hemp will be grown or handled, including greenhouses, fields, processing/storage areas, and labs, were identified on the registration application or if not, included with the plan.
- 7.4.3 The plan must identify name, address, phone number, and Hemp Registration Number of each grower not employed by the college or university that will be utilized for growing hemp for the research. Note that these registered growers are also responsible for following all PA 220 requirements including but not limited to recordkeeping and disposal of research lots.
- 7.4.4 The plan must include a statement acknowledging that the hemp cannot enter the stream of commerce.
- 7.4.5 The plan must include a statement acknowledging that the Department may conduct inspections, investigations, and sampling to ensure compliance with PA 220 and the researcher's plan.
- 7.4.6 The plan must include procedures to ensure the researcher disposes of all noncompliant hemp in accordance with Section 407 of PA 220 by completing disposal via routes described in the Act; providing a Notice of Intent to Dispose to the Department; and if not witnessed by the Department, providing a Notice of Disposal for all hemp disposed of, which includes photographic evidence for verification. Disposal steps are outlined [here](#).
- 7.4.7 The plan must confirm that compliant hemp must be disposed of within 15 days of the conclusion of its use as research plants. The notification process noted above does not need to be completed for compliant hemp. However, a disposal record must be maintained.
- 7.4.8 The plan must state the researcher will follow PA 220 requirements for recordkeeping, record retention, and field/greenhouse posting.
- 7.4.9 The plan must state that the researcher will follow USDA Farm Service Agency reporting requirements for crop acreage reporting. Per the FSA, crops not entering the stream of commerce are not required to be broken down by lot (variety) on the acreage report (a campus could be considered one lot), and the planting date can be reported as the average planting date if lots were planted over multiple dates. Find more information [here](#).
- 7.4.10 The plan must state that the researcher will allow THC test results to be reviewed by the Department upon request, consistent with PA 220 authority.

7.5 Although the Department must assess a negligent violation should research lots exceed 1% delta-9-THC, the Department may use discretion in developing a Corrective Action Plan for the college or university.

7.6 Alternative sampling plans will not be accepted from private research institutions.



Title: Performance-Based Sampling Plan

Effective Date:

6/3/2022

8. Sprouts and Microgreens Sampling

- 8.1 Due to low levels of cannabinoids in very immature plants such as sprouts and microgreens, sampling and testing of every harvest of every lot is not practical or necessary.
- 8.2 The Department collects information of grower registration applications as to whether a grower intends to grow hemp for microgreen production. The Department will sample and test at least one lot of each variety grown in a season per hemp grower. For example, if a microgreens grower produces flats of Variety X ready for sale at intervals of every 14 days, the Department will sample at least one lot of Variety X each year.
- 8.3 Growers will ensure seeds used to cultivate hemp microgreens are from *Cannabis* varieties that meet the definition of industrial hemp and maintain records of sources as required in PA 220.
- 8.4 Microgreen growers will be subject to random inspections and sampling.

9. Hemp Greens Sampling

- 9.1 While the definition of industrial hemp includes all parts of the plant, leaves from plants less than 10 inches tall typically have low levels of cannabinoids, making it unnecessary to sample and test every lot grown for hemp greens.
- 9.2 The Department will sample and test at least one lot of each variety grown in a season per hemp grower. For example, if a greens grower produces flats of Variety Y ready for sale at intervals of every 25 days, the Department will sample at least one lot of Variety Y each year.
- 9.3 Growers will ensure seeds or plants used to cultivate hemp greens are from *Cannabis* varieties that meet the definition of industrial hemp and maintain records of sources as required in PA 220.
- 9.4 Hemp greens growers are subject to random inspections and sampling.

10. Immature Clones/Transplants Sampling

- 10.1 Sampling is not required for immature plants when they are not harvested but transplanted into a larger container or field to mature prior to harvesting. The movement of transplants from their original location to another location owned or leased by the same registered grower and identified on their grower Registration Application is not considered a harvest.
- 10.2 If clones/transplants/immature plants are moved to another individual or business, the action is considered a harvest and preharvest sampling is required by the Department. The grower can only move the plants to another registered grower or licensed hemp processor-handler (for example, for potting and tagging prior to sale to other registered growers) in accordance with PA 220 (note that the licensed processor cannot grow the hemp without being a registered hemp grower)
- 10.3 The Department will sample and test at least one lot of each variety grown in a season per hemp grower. For example, if a clone grower produces flats of Variety Z ready for sale at intervals of every 25 days, the Department will sample at least one lot of Variety Z each year. This is reduced because the mature plant will be subject to sampling and testing prior to harvest.
- 10.4 Hemp clone/transplant/immature plant growers are subject to random inspections and sampling.



Title: Performance-Based Sampling Plan

Effective Date:


6/3/2022

11. Mother Plants at Clone/Transplant Grower Locations

- 11.1 Hemp Mother Plants have an acceptable THC level that can be demonstrated via a Certificate of Analysis from floral material sampled at plant maturity. Hemp Mother Plants are used for cloning purposes.
- 11.2 Hemp Mother Plans may be sampled by the Department at any time and may not be subject to future testing if results show THC compliance.
- 11.3 Mother plants with compliant THC lab results are not expected to yield noncompliant clones. However, should the grower discover clones are noncompliant through seasonal monitoring, the grower must contact the Department to provide a Notice of Intent to Dispose of the lot or request remediation sampling once a remediation option has been selected, in accordance with PA 220. At the Department's request, the grower must supply a list of clone purchaser names, addresses, and purchase dates within one year of the noncompliant test results and notify purchasers of those results. The Department will sample the mother plants at the grower's expense and proceed with the same disposal or remediation options should the mother plants test noncompliant. The grower will be placed on a yearly inspection schedule for the noncompliant mother plant variety for 2 subsequent growth cycles. The variety will be moved back to every other year if testing of the variety is compliant for 2 growth cycles.
- 11.4 The grower must maintain lab testing results that provide THC results of the mother plant and documentation that positively links the clone lot to the mother plant.
- 11.5 Growers must maintain a copy of the record of sale to the processor; a record of the person from whom the grower purchased the viable industrial hemp; and the variety purchased, in accordance with PA 220.

12. Certified Seed - Fiber and Grain Hemp Varieties Sampling

- 12.1 To qualify for performance-based sampling for certified seed, the hemp grower must be growing hemp varieties for fiber or grain production using certified seed. Hemp varieties grown for fiber or grain typically test below the acceptable THC maximum. For this reason, hemp growers cultivating only fiber or grain varieties will be sampled every other year as opposed to yearly. As such, 100% of the grain/fiber growers would be sampled over a 2-year period.
- 12.2 If testing shows a noncompliant THC level, the grower will be placed on a yearly inspection schedule for that variety for 2 subsequent growth cycles. The variety will be moved back to every other year if testing of the variety is compliant for 2 growth cycles.
- 12.3 The grower must provide the Department with the following:
 - 12.3.1 Copies of certified seed labels for each fiber/grain lot planted.
 - 12.3.2 Copies of all invoices of purchased seed to verify size of certified lots and that the lot has not been supplemented with non-certified seed.
- 12.4 A list of approved fiber and grain varieties for sampling every 2 years will be updated yearly and published at www.Michigan.gov/IndustrialHemp. Sources for determining approved varieties will include but not be limited to MDARD Geagley Laboratory testing data, Michigan State University, other in-state variety trials, and neighboring state research.

 <p>Pesticide and Plant Pest Management Division</p>	ATTACHMENT F	Version #: 2.0
		Page 7 of 7
Title: Performance-Based Sampling Plan		Effective Date: 6/3/2022

13. Cannabinoid Varieties

At this time, the Department will continue to sample all hemp lots grown for cannabinoid production except in relation to the categories above (college/university research, immature plants, mother plants, certified seed for fiber/grain crops).

14. Grower History of Compliance

14.1 Excluding the scenarios above, it is the Department’s intention to sample and test every lot of hemp prior to harvest every year. If it is not feasible to sample and test every lot, the Department may begin performance-based sampling based on grower history of compliance.

14.2 Growers operating under a Corrective Action Plan will always be inspected and sampled.

14.3 New growers will always be inspected and sampled.

14.4 Hemp growers that are also licensed to grow medical or recreational marijuana or are licensed caregivers will always be inspected and sampled.

14.4.1 A registered grower who has met all three of the requirements below may not be subject to standard sampling:

- a. Cultivated hemp for the past 3 consecutive years.
- b. Underwent THC testing by the Department each of the past 3 years and received THC testing results below the acceptable THC level each of those years.
- c. Is currently growing the same variety(ies) as in the past 3 years and can demonstrate this via records showing seed/transplant source and compliance with acceptable THC levels.

14.5 Should performance-based sampling be utilized regarding grower history of compliance, the Department will still sample approximately 50% of these growers yearly.