

BASIC
AIR CONTAMINANT DISCHARGE PERMIT

Lane Regional Air Protection Agency
1010 Main Street
Springfield, OR 97477
(541) 736-1056

This permit is being issued in accordance with the provisions of LRAPA's Rules and Regulations and based on the land use compatibility findings included in the permit record.

ISSUED TO:

HempNova Lifetech (Oregon) Corp.
706 Oscar Street
Eugene, OR 97402
<https://www.hempnova.ca/>

PLANT SITE LOCATION:

706 Oscar Street
Eugene, OR 97402


INFORMATION RELIED UPON:

Application No.: 65733
Date Received: 12/20/2019

**LAND USE COMPATIBILITY
STATEMENT:**

Approving Authority: City of Eugene
Approval Date: 05/08/2019

ISSUED BY THE LANE REGIONAL AIR PROTECTION AGENCY



Merlyn L. Hough, Director

FEB 7 2020

Dated

Source(s) Permitted to Discharge Air Contaminants (LRAPA Section 37-0020):

Table 1 Code	Source Description	SIC
Part A, 2.	Boilers and other fuel-burning equipment (with or without #2 diesel oil back-up) of 2.0 or more MMBTU but less than 10 MMBTU/hour heat input.	4961

1.0 STATEMENT OF PURPOSE

- 1.1 Permitted Activities** The permittee is allowed to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, revoked or rescinded as long as the permittee complies with the conditions of this permit.

2.0 GENERAL EMISSION STANDARDS AND LIMITS

- 2.1 Visible emission limits** Emissions from any air contaminant source must not equal or exceed 20% opacity for a period aggregating more than 3 minutes in any one hour. "Opacity" means the degree to which emissions, excluding uncombined water, reduce transmission of light and obscure the view of an object in the background.
- 2.2 Particulate Matter Weight Standards** Particulate matter emissions from any air contaminant source must not exceed 0.10 grains per dry standard cubic foot, adjusted to 50 percent excess air for fuel burning equipment that burns fuels other than wood.
- 2.3 Particulate Emission Limitations for Sources Other Than Fuel Burning Equipment** Particulate matter emissions from any air contaminant source must not exceed 0.10 grains per dry standard cubic foot.
- 2.4 Process Weight Emission Limitation** The permittee must not cause, suffer, allow, or permit the emissions of particulate matter in any one hour from any process in excess of the amount shown in LRAPA Section 32-8010, for the process weight rate allocated to such process.
- 2.5 Particulate Matter Fallout** The permittee must not cause or permit the emission of particulate matter larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person.
- 2.6 Nuisance and Odors** The permittee must not cause or allow air contaminants from any source subject to regulation by LRAPA to cause a nuisance. Nuisance conditions will be verified by LRAPA personnel.
- 2.7 Other Regulations** In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements

enforceable by LRAPA.

3.0 RECORDKEEPING AND REPORTING REQUIREMENTS

- 3.1 Records** The permittee must maintain records of the information identified in Condition 3.2 for at least five (5) years from the date of the record.
- 3.2 Reports** The permittee is required to report to LRAPA by **February 15th** of each year the following information:
- a. the total amount of natural gas combusted by all hemp dryers, in therms, during the previous calendar year, and
 - b. the total amount of dried hemp produced, in tons, during the previous calendar year.
- 3.3 Permit Renewal** An application to renew the existing permit is due by no later than 30 days prior to the expiration date of a Basic ACDP.
- 3.4 Construction or Modification Notices** The permittee must notify LRAPA before adding new or modifying existing equipment to the extent that process equipment is substantially changed or added to, or emissions are significantly changed or increased.
- 3.5 Notice of Change of Ownership or Company Name** The permittee must promptly notify LRAPA of any change of mailing address, company name, or plant ownership. The permit will expire 60 days after a change in the legal entity owning/operating the facility unless application, with appropriate fees, is made to transfer the permit to the new entity.
- 3.6 Where to Send Reports and Notices** The reports and notices, with the permit number prominently displayed, must be sent to the LRAPA office identified on the cover page of the permit.
- ### 4.0 FEES
- 4.1 Fees** The Annual Fees specified in LRAPA Section 37-8020, Table 2, Part 2 and Part 3 for a Basic ACDP are due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by LRAPA regulations, will be mailed prior to the above date.

5.0 GENERAL CONDITIONS

- 5.1 Masking of Emissions** The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.
- 5.2 Outdoor Burning** The permittee may not conduct any outdoor burning except as allowed by LRAPA Title 47.
- 5.3 Asbestos** All activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction, and maintenance must be performed by persons certified for asbestos abatement projects. Accumulation of asbestos containing material is prohibited. If you have asbestos questions, contact the LRAPA office identified below.
- 5.4 Permit Availability** The permittee must have a copy of the permit available at all times.
- 5.5 LRAPA Inspections** The permittee must allow the LRAPA's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468.095.
- 5.6 Legal Disclaimers** The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
- 5.7 Permit Revocation** This permit is subject to revocation for cause as provided in LRAPA Section 37-0082.
- 5.8 LRAPA Contact** Call the LRAPA office in Springfield at (541) 736-1056.

Lane Regional Air Protection Agency

**BASIC
 AIR CONTAMINANT DISCHARGE PERMIT
 REVIEW REPORT**

HempNova Lifetech (Oregon) Corp.
 706 Oscar Street
 Eugene, OR 97402
 (805) 228-4367
<https://www.hempnova.ca/>

Reports			NSPS	NESHAP	Public Notice
Annual	Semi-annual	Excess Emissions			
Feb 15	NA	NA	NA	NA	I

1. The proposed permit is an initial permit for a new facility constructed in 2019 at 706 Oscar Street in Eugene.
2. The permittee operates a hemp drying operation. The facility consists of four (4) natural-gas indirect-fired continuously-fed belt dryers. Each dryer has a maximum heat input rating of 5.0 MMBtu per hour. Each dryer has a maximum hourly capacity of approximately 2,000 pounds of wet biomass per hour. The typical output material moisture content is under 12% by weight. The potential emissions from the drying operations are based on a hemp drying season of September through December.
3. This facility qualifies for a Basic ACDP because the facility consists of individual fuel burning equipment that has a maximum heat input rating of 2.0 or more MMBtu per hour but less than 10 MMBtu per hour.
4. The facility is not subject to any New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAP).
5. The facility is located in an area that has been designated an attainment area for PM_{2.5}, ozone (VOC), NO₂, SO₂, Pb and a maintenance area for CO and PM₁₀.
6. LRAPA has determined that sources that qualify for a Basic ACDP will not have significant emissions. In most cases, the emissions will not exceed 5 tons of PM or PM₁₀ or 10 tons of any other pollutant. Therefore, the Basic ACDP does not include Plant Site Emission Limits and it is not necessary to estimate emissions for each individual source.
7. Pursuant to LRAPA Subsection 37-0056(4), issuance of a new or renewed Basic Air Contaminant Discharge Permit requires public notice in accordance with LRAPA

Paragraph 31-0030(3)(a). Therefore, there will be no prior notice or public participation. However, LRAPA will maintain a list of all permit actions processed under Category I and make the list available for public review.

JJW/RCR
02/06/2020

HempNova Lifetech (Oregon) Corp.
Emission Detail Sheets
Plant Site Emission Limits

Pollutant	Original Baseline (TPY)	Previous Netting Basis (TPY)	Proposed Netting Basis (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)	Unassigned Emissions (TPY)	PSEL Increase Over Netting Basis (TPY)	PTE (TPY)	SER (TPY)
PM	0	NA	0	NA	NA	0	NA	2.78	25
PM ₁₀	0	NA	0	NA	NA	0	NA	0.76	15
PM _{2.5}	NA	NA	0	NA	NA	0	NA	0.19	10
CO	0	NA	0	NA	NA	0	NA	2.37	100
NO _x	0	NA	0	NA	NA	0	NA	2.82	40
SO ₂	0	NA	0	NA	NA	0	NA	4.8E-02	40
VOC	0	NA	0	NA	NA	0	NA	5.57	40
GHG (CO ₂ eq.)	0	NA	0	NA	NA	0	NA	3,372	75,000
Individual FHAP	NA	NA	NA	NA	NA	NA	NA	1.0E-03	NA
Aggregate FHAP	NA	NA	NA	NA	NA	NA	NA	3.3E-03	NA

Notes:

A Basic ACDP may not contain a PSEL

HempNova Lifetech (Oregon) Corp.
Emission Detail Sheets
Dryer Emission Calculations

Dryer Specifications

Max Heat Input	5	MMBtu/hr
Heat Value - NG	1,020	MMBtu/MMCF
Max Hrs Operation	2,880	hr/yr
Total Number	4	dryers
Dryer Thruput (Wet) - Each	2,000	lbs/hr

Criteria Pollutants

Dryer NG Combustion Pollutant	Emission Factor	Emission Factor Units	Each Dryer		All Dryers	
			Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)
PM/PM10/PM2.5	2.5	lbs/MMCF	1.2E-02	1.8E-02	4.9E-02	7.1E-02
Carbon Monoxide	84	lbs/MMCF	0.41	0.59	1.65	2.37
Nitrogen Oxides	100	lbs/MMCF	0.49	0.71	1.96	2.82
Sulfur Dioxide	1.7	lbs/MMCF	8.3E-03	1.2E-02	3.3E-02	4.8E-02
VOCs	5.5	lbs/MMCF	2.7E-02	3.9E-02	0.11	0.16
GHGs (CO2 equiv.)	117	lbs/MMBtu	585	843	2,342	3,372

Drying Operation Pollutant	Emission Factor	Emission Factor Units	Each Dryer		All Dryers	
			Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)
PM	0.47	lb/ton	0.47	0.68	1.88	2.71
PM10	0.12	lb/ton	0.12	0.17	0.48	0.69
PM2.5	0.020	lb/ton	0.02	0.03	0.08	0.12
VOC (as propane)	0.94	lb/ton	0.94	1.35	3.76	5.41

FHAP Emissions

Pollutant	NG Emission Factor (lb/MMCF)	Each Dryer		All Dryers	
		Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)
Organics					
Acetaldehyde	0.0043	2.1E-05	3.0E-05	8.4E-05	1.2E-04
Acrolein	0.0027	1.3E-05	1.9E-05	5.3E-05	7.6E-05
Benzene	0.0080	3.9E-05	5.6E-05	1.6E-04	2.3E-04
Ethyl Benzene	0.0095	4.7E-05	6.7E-05	1.9E-04	2.7E-04
Formaldehyde	0.0170	8.3E-05	1.2E-04	3.3E-04	4.8E-04
Hexane	0.0063	3.1E-05	4.4E-05	1.2E-04	1.8E-04
Naphthalene	0.0003	1.5E-06	2.1E-06	5.9E-06	8.5E-06
PAHs (inc. naphthalene)	0.0004	2.0E-06	2.8E-06	7.8E-06	1.1E-05
Toluene	0.0366	1.8E-04	2.6E-04	7.2E-04	1.0E-03
Xylenes	0.0272	1.3E-04	1.9E-04	5.3E-04	7.7E-04
Metals					
Arsenic	2.0E-04	9.8E-07	1.4E-06	3.9E-06	5.6E-06
Beryllium	1.2E-05	5.9E-08	8.5E-08	2.4E-07	3.4E-07
Cadmium	1.1E-03	5.4E-06	7.8E-06	2.2E-05	3.1E-05
Total Chromium	1.4E-03	6.9E-06	9.9E-06	2.7E-05	4.0E-05

Pollutant	NG Emission Factor (lb/MMCF)	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)
Manganese	3.8E-04	1.9E-06	2.7E-06	7.5E-06	1.1E-05
Mercury	2.6E-04	1.3E-06	1.8E-06	5.1E-06	7.3E-06
Nickel	2.1E-03	1.0E-05	1.5E-05	4.1E-05	5.9E-05
Selenium	2.4E-05	1.2E-07	1.7E-07	4.7E-07	6.8E-07
Total =	0.12		8.3E-04		3.3E-03
Max. Individual =	0.04		2.6E-04		1.0E-03

GHG-Related Emission Factors

Pollutant	Natural Gas (kg/MMBtu)	GWP
Carbon Dioxide (CO ₂)	53.06	1
Methane (CH ₄)	1.0E-03	25
Nitrous Oxide (N ₂ O)	1.0E-04	298

Notes:

Potential annual emissions are based on a hemp drying season of 4 months (with each month consisting of 30 days)

NG combustion criteria pollutant emissions are from ODEQ AQ-EF05 - Emission Factors from Gas Fired Boilers (uncont. medium boilers < 100 million Btu/hr)

NG combustion GHG emissions are from US EPA 40 CFR 98, Tables C-1 and C-2 and the appropriate GWP

PM/PM₁₀/PM_{2.5} emissions from drying operations are from US EPA AP-42 Section 9.9.1 - Grain Elevators and Processes (Rack Dryers - self cleaning screens)

VOC emissions from drying operations are from US EPA AP-42 Section 10.6.2 - Particleboard Manufacturing (Rotary dryer, green, direct NG fired, softwood > 50% moisture)

VOC PTE emissions from drying operations conservatively calculated with wet throughput rather than dry throughput

FHAP emission factors, except for metals from NG combustion, are from Ventura County APCD "AB 2588 Combustion Emission Factors".

FHAP emission factors for metals from NG combustion are from US EPA AP-42 Section 1.4 - Natural Gas Combustion (07/1998)