State of Utah

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Department of
Environmental Quality

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Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-IN160240001-20

November 2, 2020

Damon Hooker
Oatly, Inc.
450 North Depot Drive #3
Ogden, UT 84404

Dear Mr. Hooker:

Re: Intent to Approve:
New Oatmilk Product Manufacturing Plant
Project Number: N160240001

The attached document is the Intent to Approve (ITA) for the above-referenced project. The ITA is subject to public review. Any comments received shall be considered before an Approval Order (AO) is issued. The Division of Air Quality is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Future correspondence on this ITA should include the engineer's name, **Jake Ries,** as well as the DAQE number as shown on the upper right-hand corner of this letter. Jake Ries, can be reached at (385) 306-6530 or jries@utah.gov, if you have any questions.

Sincerely,

Alan D. Humpherys, Manager
New Source Review Section

ADH:JR:sa

cc: Weber-Morgan Health Department

STATE OF UTAH
Department of Environmental Quality
Division of Air Quality

INTENT TO APPROVE
DAQE-IN160240001-20
New Oatmilk Product Manufacturing Plant

Prepared By
Jake Ries, Engineer
(385) 306-6530
jries@utah.gov

Issued to
Oatly, Inc. - Oatmilk Product Manufacturing Plant

Issued On
November 2, 2020

New Source Review Section Manager
Alan D. Humpherys

TABLE OF CONTENTS

GENERAL INFORMATION

CONTACT/LOCATION INFORMATION

Owner Name
Oatly, Inc.

Source Name
Oatly, Inc. - Oatmilk Product Manufacturing Plant

Mailing Address
450 North Depot Drive #3
Ogden, UT 84404

Physical Address
450 North Depot Drive #3
Ogden, UT 84404

Source Contact
Name Damon Hooker
Phone (801) 678-4879
Email damon.hooker@oatly.com

UTM Coordinates
416,462 m Easting
4,569,082 m Northing
Datum NAD83
UTM Zone 12

SIC code 2023 (Dairy Products - Dry, Condensed & Evaporated)

SOURCE INFORMATION

General Description
Oatly, Inc. (Oatly) is planning to construct a manufacturing plant for oatmilk products. The facility unloads oat kernels from trucks and railcars to storage silos. The oat kernels are transferred from the silos to the process lines. The process grinds the kernels in water and then further processes them with enzymes and heat treatment to remove fibers through a decanting process and produces an oatbase ingredient. Flavors, oils, and sugar are added to the oatbase ingredient to make the final products. The product goes through another heat treatment before being packaged for commercial sales and shipped off site.

NSR Classification
New Minor Source

Source Classification
Located in Salt Lake City CO Maintenance Area, Northern Wasatch Front O3 NAA, Salt Lake City UT $PM_{2.5}$ NAA
Weber County
Airs Source Size: B

Applicable Federal Standards
NSPS (Part 60), A: General Provisions
NSPS (Part 60), Dc: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Project Description
Oatly has requested to construct an oatmilk product manufacturing plant located in Ogden, Weber County. Emissions from this new facility are primarily fugitive VOC from liquid ingredients and criteria pollutants from natural gas combustion. Equipment on site consists of two (2) natural gas-fired boilers, and six (6) storage silos. Oatly employs fabric filter dust collectors to control PM_{10} and $PM_{2.5}$ emissions from on-site processes.

SUMMARY OF EMISSIONS

The emissions listed below are an estimate of the total potential emissions from the source. Some rounding of emissions is possible.

Criteria Pollutant	Change (TPY)	Total (TPY)
CO_2 Equivalent		28669.00
Carbon Monoxide		7.44
Nitrogen Oxides		6.84
Particulate Matter - PM_{10}		3.81
Particulate Matter - $PM_{2.5}$		2.43
Sulfur Dioxide		0.14
Volatile Organic Compounds		5.38

Hazardous Air Pollutant	Change (lbs/yr)	Total (lbs/yr)
Generic HAPs (CAS #GHAPS)		42
Hexane (CAS #110543)		854
	Change (TPY)	**Total (TPY)**
Total HAPs		0.45

PUBLIC NOTICE STATEMENT

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of UAC R307. Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Director.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notification of the ITA will be published in the Ogden Standard Examiner on November 4, 2020. During the public comment period, the proposal and the evaluation of its impact on air quality will be available for the public to review and provide comment. If anyone so requests a public hearing within 15 days of publication, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated. The proposed conditions of the AO may be changed as a result of the comments received.

SECTION I: GENERAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

I.1	All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and 40 CFR. Unless noted otherwise, references cited in these AO conditions refer to those rules. [R307-101]
I.2	The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
I.3	Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved. [R307-401-1]

I.4	All records referenced in this AO or in other applicable rules, which are required to be kept by the owner/operator, shall be made available to the Director or Director's representative upon request, and the records shall include the two-year period prior to the date of the request. Unless otherwise specified in this AO or in other applicable state and federal rules, records shall be kept for a minimum of two (2) years. [R307-401-8]
I.5	At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded. [R307-401-4]
I.6	The owner/operator shall comply with UAC R307-107. General Requirements: Breakdowns. [R307-107]
I.7	The owner/operator shall comply with UAC R307-150 Series. Emission Inventories. [R307-150]
I.8	The owner/operator shall submit documentation of the status of construction or modification to the Director within 18 months from the date of this AO. This AO may become invalid if construction is not commenced within 18 months from the date of this AO or if construction is discontinued for 18 months or more. To ensure proper credit when notifying the Director, send the documentation to the Director, attn.: NSR Section. [R307-401-18]

SECTION II: PERMITTED EQUIPMENT

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.A THE APPROVED EQUIPMENT

II.A.1	**Oatmilk Product Manufacturing Plant**
II.A.2	**Two (2) Batch Tanks** **Liquid Ingredient Addition** Addition of cocoa flavoring ingredient
II.A.3	**Two (2) Solid Ingredient Addition Stations** **Solid Ingredient Addition** Addition of miscellaneous flavoring ingredients
II.A.4	**Six (6) Storage Silos** Contains Oat Kernels
II.A.5	**One (1) Silo Baghouse** Capacity: 1,450 CFM Controls: Oat Kernel Unloading
II.A.6	**Two (2) Transfer Baghouses** Capacity: 650 CFM each Controls: Transfer Lines

II.A.7	**One (1) Solid Ingredient Baghouse** Capacity: 1,770 CFM Bag Rating: 0.005 gr/cfm Controls: Solid Ingredient Addition
II.A.8	**Two (2) Boilers** Rating: 21.83 MMBtu/hr each Control: Ultra-Low NO_x (9ppm or less) Fuel: Natural Gas
II.A.9	**Various Heaters** Rating: <5 MMBtu/hr each Fuel: Natural Gas Listed for informational purposes only.

SECTION II: SPECIAL PROVISIONS

The intent is to issue an air quality AO authorizing the project with the following recommended conditions and that failure to comply with any of the conditions may constitute a violation of the AO.

II.B REQUIREMENTS AND LIMITATIONS

II.B.1	**Site-wide Requirements**
II.B.1.a	The owner/operator shall not exceed the following processing limitations: A. 190,530 tons of oat kernels unloaded from railcars and trucks to the storage silos per rolling 12-month period. B. 31,536 tons of oat kernels transferred through the storage silos to the process lines per rolling 12-month period. [R307-401-8]
II.B.1.a.1	To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the 20th day of each month using data from the previous 12 months. Records of processing shall be kept for all periods when the plant is in operation. Amount of oat kernels processed shall be determine by processing records. The records of processing shall be kept on a daily basis. [R307-401-8]
II.B.1.b	The owner/operator shall not allow visible emissions from any stationary point or fugitive emission source on site to exceed 10% opacity. [R307-401-8]
II.B.1.b.1	Opacity observations of emissions from stationary sources shall be conducted while in operation in accordance with 40 CFR 60, Appendix A, Method 9. [R307-401-8]
II.B.2	**Baghouse Requirements**
II.B.2.a	The owner/operator shall route emissions from railcar and truck unloading to the Silo Baghouse before venting to the atmosphere. [R307-401-8]
II.B.2.b	The owner/operator shall route emissions from transferring oat kernels to the Transfer Baghouse before venting to the atmosphere. [R307-401-8]

II.B.2.c	The owner/operator shall route emissions from the addition and mixing of solid ingredients to the Solid Ingredient Baghouse before venting to the atmosphere. [R307-401-8]
II.B.2.d	The owner/operator shall install manometers or magnehelic pressure gauges to measure the differential pressure across each baghouse. Each baghouse shall operate within the static pressure range recommended by the respective manufacturer for normal operations. The monitoring device shall measure the pressure drop in one-inch water column increments or less. [R307-401-8]
II.B.2.d.1	Pressure drop readings shall be recorded at least once during each week of operation while the baghouse is operating. Records documenting the pressure drop shall be kept in a log and shall include the following: A. Unit identification B. Pressure drop readings C. Date of reading [R307-401-8]
II.B.2.d.2	Each pressure gauge shall be located such that an inspector/operator can safely read the indicator at any time. [R307-401-8]
II.B.2.e	The owner/operator shall calibrate each instrument in accordance with the manufacturer's instructions and recommendations or replaced at least once every 12 months. The owner/operator shall maintain the documentation of calibrations or replacements. [R307-401-8]
II.B.3	**Boiler Requirement**
II.B.3.a	The owner/operator shall only use natural gas as fuel in each of the boilers. [R307-401-8]
II.B.3.b	The owner/operator shall install two (2) boilers that are certified to meet the following emission rates: A. NO_x 9 ppm B. CO 25 ppm [R307-401-8]
II.B.3.b.1	To demonstrate compliance with the emission rate, the owner/operator shall keep a record of the manufacturer's certification of the emission rate. The record shall be kept for the life of the equipment. [R307-401-8]
II.B.4	**VOC Requirements**
II.B.4.a	The owner/operator shall not emit more than 4.07 tons per rolling 12-month period of VOCs from evaporative sources (liquid ingredient addition) on site. [R307-401-8]
II.B.4.a.1	The owner/operator shall calculate a new 12-month total by the 20th day of each month using data from the previous 12 months. The owner/operator shall use a mass-balance method to calculate emissions from evaporative sources. The owner/operator may use the following equations with applicable units to comply with the mass-balance method: VOCs = [% VOCs by Weight/100] x [Density] x [Volume Consumed] [R307-401-8]

II.B.4.a.2	The owner/operator shall use a mass-balance method to quantify any amount of VOCs reclaimed. The owner/operator shall subtract the amount of VOCs reclaimed from the quantities calculated above to provide the monthly total emissions of VOCs. [R307-401-8]
II.B.4.a.3	The owner/operator shall keep records each month of the following: A. The name (as per SDS) of each VOC-emitting material B. The maximum percent by weight of VOCs in each material used C. The density of each material used D. The volume of each VOC-emitting material used E. The amount of VOCs emitted from each material F. The amount of VOCs reclaimed and/or controlled from each material G. The total amount of VOCs emitted from all materials (in tons) [R307-401-8]

PERMIT HISTORY

This Approval Order shall be based on the following documents:

Is Derived From	NOI dated May 27, 2020
Incorporates	Additional Information dated July 6, 2020
Incorporates	Additional Information dated October 6, 2020
Incorporates	Additional Information dated October 20, 2020

ACRONYMS

The following lists commonly used acronyms and associated translations as they apply to this document:

40 CFR	Title 40 of the Code of Federal Regulations
AO	Approval Order
BACT	Best Available Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CDS	Classification Data System (used by Environmental Protection Agency to classify sources by size/type)
CEM	Continuous emissions monitor
CEMS	Continuous emissions monitoring system
CFR	Code of Federal Regulations
CMS	Continuous monitoring system
CO	Carbon monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent - Title 40 of the Code of Federal Regulations Part 98, Subpart A, Table A-1
COM	Continuous opacity monitor
DAQ/UDAQ	Division of Air Quality
DAQE	This is a document tracking code for internal Division of Air Quality use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - Title 40 of the Code of Federal Regulations 52.21 (b)(49)(i)
GWP	Global Warming Potential - Title 40 of the Code of Federal Regulations Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/YR	Pounds per year
MACT	Maximum Achievable Control Technology
MMBTU	Million British Thermal Units
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOI	Notice of Intent
NO_x	Oxides of nitrogen
NSPS	New Source Performance Standard
NSR	New Source Review
PM_{10}	Particulate matter less than 10 microns in size
$PM_{2.5}$	Particulate matter less than 2.5 microns in size
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
R307	Rules Series 307
R307-401	Rules Series 307 - Section 401
SO_2	Sulfur dioxide
Title IV	Title IV of the Clean Air Act
Title V	Title V of the Clean Air Act
TPY	Tons per year
UAC	Utah Administrative Code
VOC	Volatile organic compounds