



State of Utah

GARY R. HERBERT
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Department of Environmental Quality

Alan Matheson
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQE-AN141970005-17

August 15, 2017

Justin Garner
3form Material Solutions, Inc.
2300 South 2300 West, Suite B
West Valley City, UT 84119

Dear Mr. Garner:

Re: Approval Order: Modification to Approval Order DAQE-AN141970004-15 to Add Equipment
and Revise Emissions
Project Number: N14197-0005

The attached document is the Approval Order for the above-referenced project. Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. The project engineer for this action is Ms. Catherine Wyffels, who may be reached at (801) 536-4232.

Sincerely,

Bryce C. Bird
Director

BCB:CW:kw

cc: Salt Lake Valley Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**APPROVAL ORDER: Modification to Approval Order
DAQE-AN141970004-15 to Add Equipment
and Revise Emissions**

**Prepared By: Ms. Catherine Wyffels, Engineer
Phone: (801) 536-4232
Email: cwyffels@utah.gov**

APPROVAL ORDER NUMBER

DAQE-AN141970005-17

Date: August 15, 2017

**3form Material Solutions, Inc.
Ecoresin Panels Plant
Source Contact:
Justin Garner
Phone: (801) 649-2699
Email: justin.garner@3-form.com**

**Bryce C. Bird
Director**

Abstract

3form Material Solutions, Inc. (3form) has requested a modification to AO DAQE-AN141970004-15, dated April 22, 2015, to add equipment to the Ecoresin Panels Plant and update emissions. The new equipment includes a laser machine and a panel saw. The plant operates two (2) paint booths; one (1) paint mix room; one (1) powder coating booth; several cutting machines such as laser machines, saws, shapers, polishers, and planers; and several small natural gas-fired heaters. The baghouse controls emissions from all cutting machines used at the plant. Emissions from the cutting machines were revised based on the baghouse capacity. VOCs and HAPs emissions were also revised to reflect current operational levels.

The plant is located in Salt Lake County, which is a NAA of the NAAQS for PM₁₀, PM_{2.5} and SO₂, and is a maintenance area for CO and ozone. NSPS, NESHAP and MACT regulations do not apply to this source. Title V of the 1990 CAA does not apply to this source.

The PTE, in TPY, will change as follows: PM₁₀ + 2.40, PM_{2.5} + 2.40, VOC -14.66, and HAPs -19.64.

The PTE, in TPY, will be as follows: PM₁₀ = 4.64, PM_{2.5} (a subset of PM₁₀) = 4.64, NO_x = 0.64, CO = 0.43, VOCs = 10.00, HAPs = 5.00, and CO_{2e} = 541.

This air quality AO authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order. This AO is issued to, and applies to the following:

Name of Permittee:

3form Material Solutions, Inc.
2300 South 2300 West, Suite B
West Valley City, UT 84119

Permitted Location:

Ecoresin Panels Plant
955 South 3800 West
Salt Lake City, UT 84104

UTM coordinates: 417,305 m Easting, 4,511,293 m Northing, UTM Zone 12
UTM Datum: NAD27

SIC code: 2542 (Office & Store Fixtures, Partitions, Shelving, & Lockers, Except Wood)

Section I: GENERAL PROVISIONS

- 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: SPECIAL PROVISIONS

II.A The approved installations shall consist of the following equipment:

II.A.1 Ecoresin Panels Plant

Ecoresin Panels Plant

II.A.2 Paint Booths

One (1) Main and one (1) Sample Paint Booths equipped with filters

II.A.3 Mix Room

One (1) mix room

II.A.4 Degreaser

One (1) VOC condensation unit

II.A.5 Baghouse

One (1) baghouse venting to the atmosphere from April 1 through October 31, and inside the building for the rest of the year. The baghouse will control emissions from all cutting machines such as laser machines, saws, shapers, polishers, and planers used at the plant.

II.A.6 Ovens

Two (2) natural gas-fired ovens rated at 1.2 and 1.5 MMBtu/hr

II.A.7 Heaters

Twelve (12) natural gas-fired heaters rated at less than 5 MMBtu/hr each

II.A.8 Powder Coating Booth

One (1) powder coating booth (vents to the inside of the building, listed for information only)

II.A.9 Updraft Systems

Two (2) paint booth updraft systems rated at 1.5 and 1.7 MMBtu/hr

II.B Requirements and Limitations

II.B.1 Limitations on the Paint Booths and the Mix Room

- II.B.1.a The paint booths shall be each equipped with a set of filters to control particulate emissions. All air exiting the paint booths shall pass through this control system before being vented to the atmosphere (outside building/operation). [R307-401-8]
- II.B.1.b Visible emissions from the paint booths and the mix room shall be limited to 10% opacity. [R307-401-8]
- II.B.1.b.1 Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-401-8]
- II.B.1.c All VOC-containing materials and VOC-laden rags shall be stored in covered containers (except when in use). [R307-401-8]
- II.B.1.d The plant-wide emissions of VOCs and HAPs from the paint booths, the mix room and associated operations shall not exceed:
- 10 tons per rolling 12-month period for VOCs (including HAPs)
 0.005 tons per rolling 12-month period for hexamethylene-1,6-diisocyanate
 1.42 tons per rolling 12-month period for methanol
 2.03 tons per rolling 12-month period for toluene
 5 tons per rolling 12-month period for total HAPs combined
- [R307-401-8]
- II.B.1.d.1 Compliance with each limitation shall be determined on a rolling 12-month total. No later than 20 days after the end of each month, a new 12-month total shall be calculated using data from the previous 12 months. [R307-401-8]
- II.B.1.d.2 The plant-wide emissions of VOCs and HAPs shall be determined by maintaining a record of VOCs- and HAPs-emitting materials used each month. The record shall include the following data for each material used:
- A. Name of the VOC- and HAPs-emitting material, such as: paint, adhesive, solvent, thinner, reducers, chemical compounds, isocyanates, etc.
 - B. Density of each material used (pound per gallon).
 - C. Percent by weight of all VOC or HAPs in each material used.
 - D. Gallons of each VOC- or HAP- emitting material used.
 - E. The amount of VOCs and HAPs emitted monthly shall be calculated using the following formulas as appropriate:

VOC = (% VOC by Weight/100) x [Density (lb/gal)] x Gal Consumed x 1 ton/2000 lbs

HAP = (% HAP by Weight/100) x [Density (lb/gal)] x Gal Consumed x 1 ton/2000 lbs
 - F. The amount of VOC or HAP emitted monthly from all materials used.

- G. The amount of VOCs or HAPs reclaimed for the month shall be similarly quantified and subtracted from the quantities calculated above to provide the monthly total VOC or HAP emissions.

[R307-401-8]

II.B.2 **Requirements on the VOC Condensation Unit**

- II.B.2.a The owner/operator shall comply with the applicable requirements under R307-335 for degreasing and solvent cleaning operations. [R307-335]

II.B.3 **Limitations on the Baghouse and the Powder Coating Booth**

- II.B.3.a The baghouse shall control emissions from all cutting machines, such as laser machines, saws, shapers, polishers, and planers. All exhaust air from these processes shall be routed through the baghouse. [R307-401-8]

- II.B.3.b The baghouse shall vent to the atmosphere from April 1 through October 31 and shall vent inside the building for the remaining months. [R307-401-8]

- II.B.3.b.1 Records of baghouse venting shall be kept and maintained in a logbook for all periods when the plant is in operation. The records shall include the following items:

- A. The dates the baghouse is switched to vent inside, and
- B. The dates the baghouse is switched to vent to the atmosphere.

[R307-401-8]

- II.B.3.c A manometer or magnehelic pressure gauge shall be installed to measure the differential pressure across the fabric filter. Static pressure differential across the fabric filter shall be between 1 to 5 inches of water column. The pressure gauge shall be located such that an inspector/operator can safely read the indicator at any time. The reading shall be accurate to within plus or minus 1.0 inch water column. The instrument shall be calibrated according to the manufacturer's instructions at least once every 12 months. Recording of the reading is required daily when the baghouse vents to the atmosphere. [R307-401-8]

- II.B.3.d Visible emissions from the baghouse shall be limited to 10% opacity. [R307-401-8]

- II.B.3.d.1 Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. [R307-401-8]

- II.B.3.e The powder coating operations shall vent to the inside of the building. [R307-401-8]

PERMIT HISTORY

This AO is based on the following documents:

Incorporates	Additional Information dated May 25, 2017
Is Derived From	NOI dated February 27, 2017
Supersedes	AO DAQE-AN141970004-15 dated April 22, 2015

ADMINISTRATIVE CODING

The following information is for UDAQ internal classification use only:

Salt Lake County

CDS B

Nonattainment or Maintenance Area

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 EPA 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 ₂ e	Carbon Dioxide Equivalent - 40 CFR 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 UDAQ use
EPA	Environmental Protection Agency
FDCP	Fugitive dust control plan
GHG	Greenhouse Gas(es) - 40 CFR 52.21 (b)(49)(i)
GWP	Global Warming Potential - 40 CFR Part 86.1818-12(a)
HAP or HAPs	Hazardous air pollutant(s)
ITA	Intent to Approve
LB/HR	Pounds per hour
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