



State of Utah

GARY R. HERBERT
Governor

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Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

DAQE-AN0143370001-10

December 14, 2010

James Rothe
Insituform Technologies, Inc.
17988 Edison Avenue
St. Louis, MO 63005

Dear Mr. Rothe:

Re: Approval Order: Construct a New Wetout Facility to Manufacture Flexible Pipeline
Project Number: N014337-0001

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 Camron Harry, who may be reached at (801) 536-4232.

Sincerely,

M. Cheryl Heying, Executive Secretary
Utah Air Quality Board

MCH:CAH:sa

cc: Mike Owens
Southwest Utah Public Health Department

STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

**APPROVAL ORDER: Construct a New Wetout Facility to
Manufacture Flexible Pipeline**

**Prepared By: Camron Harry, Engineer
Phone: (801) 536-4232
Email: caharry@utah.gov**

APPROVAL ORDER NUMBER

DAQE-AN0143370001-10

Date: December 14, 2010

**Insituform Technologies, Inc.
Wetout Facility
Source Contact:
Mr. Roberto Gasparini, Consultant
Phone: (713) 621-4474**

**M. Cheryl Heying
Executive Secretary
Utah Air Quality Board**

Abstract

Insituform Technologies, Inc. (Insituform) is requesting to construct a wetout facility which manufactures flexible pipeline liner. This wetout process involves mixing resin with a catalyst in a static mixer and then extruding the mixed resin through a conveyor and into a plastic liner. These are batch process operations rather than continuous operations. The wetout process is located in Iron County, an attainment area of the NAAQS for all pollutants. Neither NSPS nor NESHAP apply to this source. Title V of the 1990 Clean Air Act does not apply to this source. Insituform is requesting a Styrene limitation of 9.92 tons per year which classifies it as a synthetic minor source (area source).

Emissions for the source will include the following, in tons per year: VOC = 9.92, Styrene = 9.92, Total HAPS = 9.92

The project has been evaluated and found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). A public comment period was held in accordance with UAC R307-401-7 and no comments were received.

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:

Insituform Technologies, Inc.
17988 Edison Avenue
St. Louis, MO 63005

Permitted Location:

Wetout Facility
2255 West 850 North
Cedar City, UT 84000

UTM coordinates: 315,596 m Easting, 4,173,535 m Northing, UTM Zone 12

SIC code: 1623 (Water, Sewer, Pipeline, & Communications & Power Line Construction)

Section I: GENERAL PROVISIONS

- I.1 The limits set forth in this AO shall not be exceeded without prior approval. [R307-401]
- I.2 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.3 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 Executive Secretary or Executive Secretary'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.4 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 Executive Secretary 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.5 The owner/operator shall comply with UAC R307-107. General Requirements: Unavoidable Breakdowns. [R307-107]
- I.6 The owner/operator shall comply with UAC R307-150 Series. Inventories, Testing and Monitoring. [R307-150]
- I.7 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]

Section II: SPECIAL PROVISIONS

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

II.A.1 Wetout Facility Source-wide

II.A.2 Cure In Place Process (CIPP)

The two (2) wetout lines consist of the following NJR Industries manufactured equipment:

1. CIPP Mixer #1
2. CIPP Mixer #2
3. CIPP Conveyor #1
4. CIPP Conveyor #2

II.A.3 Integral Lining System (ILS)

The ILS process consists of the following NJR Industries manufactured equipment:

1. ILS Mixer #3
2. ILS Conveyor #3

II.A.4 Resin Storage Tanks

Four (4) 5,880-gallon (each) resin storage tanks, each with horizontal fixed roofs
Total estimated throughput of 2,969,403 gallons per year

II.A.5 Scrap Resin Building

55-gallon resin storage drum

II.B Requirements and Limitations

II.B.1 Wetout Facility

II.B.1.a Insituform shall notify the Executive Secretary in writing when the installation of the new equipment has been completed and is operational. To ensure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If construction and/or installation have not been completed within 18 months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO. [R307-401-18]

II.B.1.b The owner/operator shall not use any resin containing more than 45 percent by weight of Styrene. Records of consumption shall be determined by examination of resin supplier billing records and associated Material Safety Data Sheets (MSDS) certifying from the manufacturer of the HAP content. Records of consumption shall be kept for all periods when the facility is in operation. [R307-401-8]

II.B.1.c The facility wide emission of HAPs from the associated wetout facility operations shall not exceed the following totals:

9.92 tons per rolling 12-month period for Styrene
9.92 tons per rolling 12-month period for total HAPs

Compliance with these limitations shall be determined on a rolling 12-month total. By the first day of each month a new 12-month total shall be calculated using data from the previous 12 months. Monthly calculations shall be made no later than 20 days after the end of each calendar month. Records of consumption and associated MSDS certified by the manufacturer of HAP content shall be kept for all periods when the plant is in operation. [R307-401-8]

II.B.1.d Styrene emissions shall be determined by maintaining a record of Styrene emitting materials used each month. The record shall include the following data for each Styrene containing materials used:

1. Name of each Styrene emitting material, such as: resin, adhesive, solvent, thinner, reducers, chemical compounds, toxics, isocyanates, etc.
2. Quantity of each material used in gallons and tons
3. Process and equipment the resin is being consumed in, such as CIPP Mixer 1
4. The amount of Styrene emitted monthly by each material used (tons/month)

Resin Styrene emissions from the CIPP and ILS processes shall be determined by applying the following emission factors (EF) to the relevant processes:

CIPP Mixer 1 and Mixer 2: 0.664 lbs Styrene per ton resin
CIPP Conveyor 1 and Conveyor 2: 0.611 lbs Styrene per ton resin
ILS Mixer 3: 0.201 lbs Styrene per ton resin
ILS Conveyor 3: 0.692 lbs Styrene per ton resin
Scrap Resin Curing Area: 0.09 lbs Styrene per gallon resin

The equations used to determine emissions of Styrene from the CIPP and ILS process shall be as follows:

Emissions (tons/month) =
Styrene EF (lb/ton) x Resin Consumption (ton/month) x 1 ton/2000 lbs

The equation used to determine emissions of Styrene from the Scrap Resin Curing Area shall be as follows:

Emissions (ton/month) =
Styrene EF (lbs/gal) x Resin Consumption (gal/month) x 1 ton/2000 lbs

5. The amount of Styrene emitted monthly from all materials used (tons/month)

[R307-401-8]

II.B.1.e

HAP emissions, not including Styrene, shall be determined by maintaining a record of HAP emitting materials used each month. The record shall include the following data for each material used:

1. Name of the HAP emitting material, such as: resin, adhesive, solvent, thinner, reducers, chemical compounds, toxics, isocyanates, etc.
2. Density of each material used (pounds per gallon)
3. Percent by weight of all HAP in each material used
4. Gallons of each HAP emitting material used
5. The amount of HAP emitted monthly by each material used shall be calculated by the following procedure:

$$\text{HAP} = (\% \text{ HAP by Weight}/100) \times [\text{Density (lb/gal)}] \times \text{Gal Consumed} \times 1 \text{ ton}/2000 \text{ lb}$$

6. The amount of HAPs emitted monthly from all materials used

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

Any individual HAP, except for Styrene, emitting more than 500 pounds per rolling 12-month period shall require a modified AO. [R307-401-8]

PERMIT HISTORY

This AO is based on the following documents:

Is Derived From	Additional Information dated October 26, 2010
Is Derived From	Additional Information dated October 25, 2010
Is Derived From	Additional Information dated October 19, 2010
Is Derived From	Additional Information dated October 18, 2010
Is Derived From	NOI Resubmittal dated October 14, 2010
Is Derived From	Notice of Intent dated September 8, 2010

ADMINISTRATIVE CODING

The following information is for UDAQ internal classification use only:

Iron County
CDS SM
Attainment 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
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	Division of Air Quality (typically interchangeable with UDAQ)
DAQE	This is a document tracking code for internal UDAQ use
EPA	Environmental Protection Agency
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
UDAQ	Utah Division of Air Quality (typically interchangeable with DAQ)
VOC	Volatile organic compounds