# MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY AIR QUALITY DIVISION

September 10, 2019

PERMIT TO INSTALL 109-19

ISSUED TO UniFirst Corporation – Arrow Uniform

> LOCATED AT 6400 Monroe Boulevard Taylor, Michigan

IN THE COUNTY OF Wayne

# STATE REGISTRATION NUMBER N7602

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

# August 16, 2019

DATE PERMIT TO INSTALL APPROVED: September 10, 2019	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

# PERMIT TO INSTALL

# **Table of Contents**

COMMON ACRONYMS	2
POLLUTANT / MEASUREMENT ABBREVIATIONS	3
GENERAL CONDITIONS	4
EMISSION UNIT SPECIAL CONDITIONS	6
EMISSION UNIT SUMMARY TABLE	6
FLEXIBLE GROUP SPECIAL CONDITIONS	8
FLEXIBLE GROUP SUMMARY TABLE	8
FGLAUNDRY	9
FGFACILITY CONDITIONS	13
APPENDIX A: Facility-wide HAP Emission Factors for Soiled Shop Towel Laundering	15

## **COMMON ACRONYMS**

AQD BACT CAA CAM CEMS CFR COMS Department/department/EGLE EU FG GACS GC GHGS HVLP ID IRSL ITSL LAER MACT MAERS MAP MSDS NA NAAQS NESHAP NSPS NSR PS PSD PTE PTI RACT ROP SC SCR SCR SCR SNCR SRN TBD TEQ USEPA/EPA VE	Air Quality Division Best Available Control Technology Clean Air Act Compliance Assurance Monitoring Continuous Emission Monitoring System Code of Federal Regulations Continuous Opacity Monitoring System Michigan Department of Environment, Great Lakes, and Energy Emission Unit Flexible Group Gallons of Applied Coating Solids General Condition Greenhouse Gases High Volume Low Pressure* Identification Initial Risk Screening Level Initial Threshold Screening Level Lowest Achievable Emission Rate Maximum Achievable Control Technology Michigan Air Emissions Reporting System Malfunction Abatement Plan Material Safety Data Sheet Not Applicable National Ambient Air Quality Standards National Ambient Air Quality Standards National Emission Standard for Hazardous Air Pollutants New Source Performance Standards New Source Review Performance Specification Prevention of Significant Deterioration Permanent Total Enclosure Permit to Install Reasonable Available Control Technology Renewable Operating Permit Special Condition Selective Catalytic Reduction State Registration Number To Be Determined Toxicity Equivalence Quotient United States Environmental Protection Agency Visible Emissions
VE	VISIBLE ETTISSIONS

# POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm BTU $^{\circ}$ C CO CO <sub>2</sub> e dscf dscm $^{\circ}$ F gr HAP Hg hr HP H2S kW lb m mg mm MM MW NMOC NO <sub>x</sub> ng PM PM10 PM2.5 pph	Actual cubic feet per minute British Thermal Unit Degrees Celsius Carbon Monoxide Carbon Dioxide Equivalent Dry standard cubic foot Dry standard cubic meter Degrees Fahrenheit Grains Hazardous Air Pollutant Mercury Hour Horsepower Hydrogen Sulfide Kilowatt Pound Meter Milligram Millimeter Milligram Millimeter Million Megawatts Non-Methane Organic Compounds Oxides of Nitrogen Nanogram Particulate Matter Particulate Matter equal to or less than 10 microns in diameter Particulate Matter equal to or less than 2.5 microns in diameter Particulate Matter equal to or less than 2.5 microns in diameter Particulate Matter
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmv	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO <sub>2</sub>	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
μg	Microgram
μm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year
y i	1041

### **GENERAL CONDITIONS**

- 1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. (R 336.1201(1))
- 2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. (R 336.1201(4))
- 3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. (R 336.1201(6)(b))
- 4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. (R 336.1201(8), Section 5510 of Act 451, PA 1994)
- 5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. (R 336.1219)
- 6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. (R 336.1901)
- 7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
- 8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
- 9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
- 10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

UniFirst Corporation - Arrow Uniform (N7602) Permit No. 109-19

- 11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). (R 336.1301)
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
- 12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). (R 336.1370)
- 13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. (R 336.2001)

# **EMISSION UNIT SPECIAL CONDITIONS**

# **EMISSION UNIT SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

		Installation Date /	
Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Modification Date	Flexible Group ID
EUW01	600 lb nameplate capacity Braun industrial washing	2017	FGLAUNDRY
EUW02	machine. 600 lb nameplate capacity Braun industrial washing	2017	FGLAUNDRY
201102	machine.	2011	I GERONDICI
EUW03	600 lb nameplate capacity Braun industrial washing machine.	2017	FGLAUNDRY
EUW04	600 lb nameplate capacity Braun industrial washing machine.	2017	FGLAUNDRY
EUW05	600 lb nameplate capacity Braun industrial washing machine.	2019	FGLAUNDRY
EUW06	400 lb nameplate capacity Braun industrial washing machine.	2019	FGLAUNDRY
EUW07	130 lb nameplate capacity Milnor industrial washing machine.	1996	FGLAUNDRY
EUW08	130 lb nameplate capacity Milnor industrial washing machine.	1996	FGLAUNDRY
EUW09	165 lb nameplate capacity Milnor industrial washing machine.	1996	FGLAUNDRY
EUW10	170 lb nameplate capacity Milnor industrial washing machine.	2017	FGLAUNDRY
EUW11	65 lb nameplate capacity Milnor industrial washing machine.	1996	FGLAUNDRY
EUWWT0 1	On-site wastewater treatment system to pre-treat wastewater from the washing machines prior to discharge to the publicly owned wastewater system.	1991 (est.)	FGLAUNDRY
EUWWT0 2	On-site wastewater treatment system to pre-treat wastewater from the washing machines prior to discharge to the publicly owned wastewater system.	1991 (est.)	FGLAUNDRY
EUD01	600 lb nameplate capacity Challenge natural gas-fired industrial dryer with a maximum heat input of 2.90 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	2017	FGLAUNDRY
EUD02	675 lb nameplate capacity Brim natural gas-fired industrial dryer with a maximum heat input of 2.90 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	2016	FGLAUNDRY
EUD03	675 lb nameplate capacity Brim natural gas-fired industrial dryer with a maximum heat input of 2.90 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	2016	FGLAUNDRY
EUD04	300 lb nameplate capacity Milnor natural gas-fired industrial dryer with a maximum heat input of 1.80 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1996	FGLAUNDRY

Emission	Emission Unit Description	Installation Date / Modification	Flexible Group
Unit ID	(Including Process Equipment & Control Device(s))	Date	
EUD05	300 lb nameplate capacity Milnor natural gas-fired industrial dryer with a maximum heat input of 1.80 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1996	FGLAUNDRY
EUD06	300 lb nameplate capacity Milnor natural gas-fired industrial dryer with a maximum heat input of 1.80 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1996	FGLAUNDRY
EUD07	300 lb nameplate capacity Milnor natural gas-fired industrial dryer with a maximum heat input of 1.80 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1996	FGLAUNDRY
EUD08	120 lb nameplate capacity Ajex steam-heated industrial dryer. The exhaust air passes through a lint collector before being vented to the ambient air.	1996	FGLAUNDRY
EUD09	120 lb nameplate capacity Ajex steam-heated industrial dryer. The exhaust air passes through a lint collector before being vented to the ambient air.	1996	FGLAUNDRY
EUD10	100 lb nameplate capacity Cissell natural gas-fired industrial dryer with a maximum heat input of 0.13 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1996	FGLAUNDRY
EUD11	75 lb nameplate capacity UniMac natural gas-fired industrial dryer with a maximum heat input of 0.12 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1996	FGLAUNDRY
EUST01	Colmac natural gas-fired steam tunnel with a maximum heat input of 2.0 MMBtu/hr to remove wrinkles from selected textiles.	1996	FGLAUNDRY
EUST02	Colmac natural gas-fired steam tunnel with a maximum heat input of 2.0 MMBtu/hr to remove wrinkles from selected textiles.	1996	FGLAUNDRY
EUB01	Johnston natural gas-fired boiler with a maximum heat input of 9.95 MMBtu/hr. The boiler produces steam and hot water for the industrial washing machines (EUW01-EUW11).	1996	FGLAUNDRY
EUB02	Johnston natural gas-fired boiler with a maximum heat input of 9.95 MMBtu/hr. The boiler produces steam and hot water for the industrial washing machines (EUW01- EUW11).	1996	FGLAUNDRY

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

# FLEXIBLE GROUP SPECIAL CONDITIONS

### FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Emission Unit IDs
	Industrial laundering operation to wash and dry various textiles including uniforms, floor mats, mops and shop towels. There are eleven industrial washers, nine natural gas-fired industrial dryers, two steam-heated industrial dryers, two natural gas-fired wrinkle-removing steam tunnels, two on-site wastewater treatment systems and two natural gas- fired process boilers.	EUW01, EUW02, EUW03, EUW04, EUW05, EUW06, EUW07, EUW08, EUW09, EUW10, EUW11, EUWWT01, EUWWT02, EUD01, EUD02, EUD03, EUD04, EUD05, EUD06, EUD07, EUD08, EUD09, EUD10, EUD11, EUST01, EUST02, EUB01, EUB02

# FGLAUNDRY FLEXIBLE GROUP CONDITIONS

### **DESCRIPTION**

Industrial laundering operation to wash and dry various textiles including uniforms, floor mats, mops and shop towels. There are eleven industrial washers, nine natural gas-fired industrial dryers, two steam-heated industrial dryers, two natural gas-fired wrinkle-removing steam tunnels, two on-site wastewater treatment systems and two natural gas-fired process boilers.

**Emission Unit:** EUW01, EUW02, EUW03, EUW04, EUW05, EUW06, EUW07, EUW08, EUW09, EUW10, EUW11, EUWWT01, EUWWT02, EUD01, EUD02, EUD03, EUD04, EUD05, EUD06, EUD07, EUD08, EUD09, EUD10, EUD11, EUST01, EUST02, EUB01, EUB02

### POLLUTION CONTROL EQUIPMENT

- Each dryer is equipped with a lint collector.
- The secondary lint collection systems for lint transferred from the Milnor dryers are equipped with lint collectors.

## I. EMISSION LIMIT(S)

		Time Period /		Monitoring /	Underlying Applicable
Pollutant	Limit	<b>Operating Scenario</b>	Equipment	Testing Method	Requirements
1. PM	0.10 lb per 1,000	Hourly	Each dryer in	SC V.1, VI.6	R 336.1205(3),
	lbs of gas <sup>a</sup>		FGLAUNDRY		R 336.1331(1)(a)
2. PM10	0.0019 lb per lb of	Hourly	Each dryer in	SC V.1, VI.6	R 336.1205(3),
	textiles processed		FGLAUNDRY		40 CFR 52.21(c)&(d)
	(soiled weight)				
3. PM2.5	0.0011 lb per lb of	Hourly	Each dryer in	SC V.1, VI.6	R 336.1205(3),
	textiles processed		FGLAUNDRY		40 CFR 52.21(c)&(d)
	(soiled weight)				
4. VOC	10.8 tpy	12-month rolling	FGLAUNDRY	SC VI.7	R 336.1702(a)
		time period as			
		determined at the			
		end of each			
		calendar month			
a Calculated	on a wet gas basis	3			

#### II. MATERIAL LIMIT(S)

- 1. The permittee shall process no more than 12,000 pounds of soiled shop towels per day in FGLAUNDRY.<sup>1</sup> (R 336.1225)
- 2. The permittee shall process no more than 191,666 pounds of soiled shop towels per calendar month in FGLAUNDRY. (R 336.1225(1)&(2), R 336.1702(a))
- 3. The permittee shall process no more than 14,689,300 pounds (soiled weight) of textiles (uniforms, mops, shop towels, etc.) in the dryers (EUD01, EUD02, EUD03, EUD04, EUD05, EUD06, EUD07, EUD08, EUD09, EUD10, and EUD11) portion of FGLAUNDRY per year, based on a 12-month rolling time period as determined at the end of each calendar month. (R 336.1205(3), 40 CFR 52.21(c) & (d))
- 4. The permittee shall burn only sweet natural gas in EUB01 and EUB02. (R 336.1224, R 336.1225(1)&(2), R 336.1702(a), 40 CFR 52.21(c) & (d))

- 5. The permittee shall clean textiles only with water solutions of bleach or detergents in FGLAUNDRY. (R 336.1225, R 336.1702(a))
- 6. The permittee shall not process print towels in FGLAUNDRY. (R 336.1225, R 336.1702(a))
- 7. The permittee shall not process furniture towels in FGLAUNDRY. (R 336.1225, R 336.1702(a))

## III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The heat input capacity of fuel-burning equipment in FGLAUNDRY shall not exceed the maximum values specified below:

	Emission Maximum heat			
	Unit	input, MMBTU/hr		
a.	EUD01	2.90		
b.	EUD02	2.90		
C.	EUD03	2.90		
d.	EUD04	1.80		
e.	EUD05	1.80		
f.	EUD06	1.80		
g.	EUD07	1.80		
h.	EUD10	0.13		
i.	EUD11	0.12		
j.	EUST01	2.00		
k.	EUST02	2.00		
Ι.	EUB01	9.95		
m.	EUB02	9.95		
n.	Total	40.05		

## (R 336.1205(3), R 336.1225(1)&(2), 40 CFR 52.21(c) & (d))

- 2. The permittee shall implement and maintain the approved operation and maintenance plan for the lint collectors associated with the dryers (EUD01, EUD02, EUD03, EUD04, EUD05, EUD06, EUD07, EUD08, EUD09, EUD10, and EUD11) portion of FGLAUNDRY. The plan shall include the following:
  - a) Operation and maintenance criteria for each lint collector, as well as a standardized checklist to document the operation and maintenance of the equipment;
  - b) The work practice standards for the lint collectors;
  - c) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur; and
  - d) A systematic procedure for identifying process equipment, particulate matter control device, and monitoring equipment malfunctions and for implementing corrective actions to address such malfunctions.
  - (R 336.1301, R 336.1910)

## IV. <u>DESIGN/EQUIPMENT PARAMETER(S)</u>

1. The permittee shall not operate the dryers (EUD01, EUD02, EUD03, EUD04, EUD05, EUD06, EUD07, EUD08, EUD09, EUD10, and EUD11) portion of FGLAUNDRY unless all respective lint collectors are installed, maintained and operated in a satisfactory manner in accordance to the operation and maintenance plan required by SC III.2. (R 336.1301, R 336.1910)

## V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

 Upon request of the AQD District Supervisor, a demonstration, by testing at the owner's expense and in accordance with Department requirements, to show compliance with the PM emission limit in SC I.1 for FGLAUNDRY, the PM10 emission limit in SC I.2 for FGLAUNDRY, and the PM2.5 emission limit in SC I.3 for FGLAUNDRY, may be required. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The permittee shall submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1205, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

2. Upon request of the AQD District Supervisor, testing at the owner's expense and in accordance with Department requirements, to determine the VOC emitted while laundering shop towels in FGLAUNDRY, may be required. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A, or 40 CFR Part 51, Appendix M. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The permittee shall submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. (R 336.1205, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004)

#### VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

- 1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))
- 2. The permittee shall record the amount of soiled shop towels, in pounds per day, processed through FGLAUNDRY.<sup>1</sup> (R 336.1225)
- 3. The permittee shall record the amount of soiled shop towels, in pounds per calendar month, processed through FGLAUNDRY. (R 336.1225(1)&(2), R 336.1702(a))
- The permittee shall record the amount of textiles (uniforms, mops, shop towels, etc.) processed through the dryers (EUD01, EUD02, EUD03, EUD04, EUD05, EUD06, EUD07, EUD08, EUD09, EUD10, and EUD11) portion of FGLAUNDRY in pounds (soiled weight) per calendar month and in pounds (soiled weight) per 12-month rolling time period as determined at the end of each calendar month. (R 336.1205(3), 40 CFR 52.21(c) & (d))
- The permittee shall maintain a current listing from the manufacturer of the chemical composition of each detergent material, including the weight percent of each component. The data may consist of Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. (R 336.1225, R 336.1702(a))
- 6. The permittee shall keep, in a satisfactory manner, a record of actions taken under the dryer lint collector operation and maintenance plan. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1910)
- The permittee shall calculate the VOC emission rate from FGLAUNDRY monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1702(a))

## VII. <u>REPORTING</u>

NA

# VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

	Maximum Exhaust Diameter / Dimensions	Minimum Height Above Ground	Underlying Applicable Requirements
Stack & Vent ID	(inches)	(feet)	
1. SVB01	18	40	R 336.1225,
			40 CFR 52.21(c)&(d)
2. SVB02	18	39	R 336.1225,
			40 CFR 52.21(c)&(d)
3. SVD01	30	43	R 336.1225,
			40 CFR 52.21(c)&(d)
4. SVD02	38	48	R 336.1225,
			40 CFR 52.21(c)&(d)
5. SVD03	29	43	R 336.1225,
			40 CFR 52.21(c)&(d)
6. SVD04	24	40	R 336.1225,
			40 CFR 52.21(c)&(d)
7. SVD05	24	40	R 336.1225,
			40 CFR 52.21(c)&(d)
8. SVD06	24	40	R 336.1225,
			40 CFR 52.21(c)&(d)
9. SVD07	24	40	R 336.1225,
			40 CFR 52.21(c)&(d)
10. SVLCS1 (Lint collector	18	39	40 CFR 52.21(c)&(d)
system for D04 & D05)	-		
11. SVLCS2 (Lint collector	18	39	40 CFR 52.21(c)&(d)
system for D06 & D07)			
12. SVD08-D10	20	29	R 336.1225,
			40 CFR 52.21(c)&(d)
13. SVD11	16	27	R 336.1225,
	-		40 CFR 52.21(c)&(d)
14. SVST01-02	16	35	R 336.1225,
	10		40 CFR 52.21(c)&(d)
15. SVWASH01 *	4	29	R 336.1225,
		20	40 CFR 52.21(c)&(d)
16. SVWWT01 *	18 x 18	14	R 336.1225,
		17	40 CFR 52.21(c)&(d)
17. SVWWT02 *	18 x 18	14	R 336.1225,
17. 00000102		14	40 CFR 52.21(c)&(d)
* This vent is not required	la diasharaa unahatrustaa		$40$ CI IX 32.21(C) $\alpha(0)$
	io discharge unobstructed	a venucany upwaru.	

# IX. OTHER REQUIREMENT(S)

NA

#### Footnotes:

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

# **FGFACILITY CONDITIONS**

**DESCRIPTION:** The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment and exempt equipment.

## POLLUTION CONTROL EQUIPMENT

As described for FGLAUNDRY

#### I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Each Individual HAP	8.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1205(3)
2. Aggregate HAPs	22.4 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1205(3)

#### II. MATERIAL LIMIT(S)

1. The permittee shall process no more than 2,300,000 pounds of soiled shop towels in FGFACILITY per year, based on a 12-month rolling time period as determined at the end of each calendar month. (R 336.1205(1)(a))

#### III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

#### IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

#### V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

#### VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

- 1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205(1)(a))
- The permittee shall record the amount of soiled shop towels processed through FGFACILITY in pounds per calendar month and in pounds per 12-month rolling time period as determined at the end of each calendar month. (R 336.1205(1)(a))

UniFirst Corporation - Arrow Uniform (N7602) Permit No. 109-19

 The permittee shall keep monthly records for FGFACILITY of individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month and in tons per 12-month rolling time period as determined at the end of each calendar month. For shop towel laundering, HAP emission factors in Appendix A may be used, or an alternate emission factor approved by the AQD District Supervisor. (R 336.1205(1)(a))

## VII. <u>REPORTING</u>

NA

## VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

# APPENDIX A: Facility-wide HAP Emission Factors for Soiled Shop Towel Laundering

CAS Number	НАР	Facility-wide HAP Emission Factor (pounds of HAP emitted per pound of soiled shop towel laundered)
71-43-2	Benzene	1.22 × 10 <sup>-6</sup>
79-01-6	Trichloroethene (Trichloroethylene)	7.83 × 10 <sup>-6</sup>
91-20-3	Naphthalene	5.75 × 10 <sup>-6</sup>
95-47-6	o-Xylene	7.85 × 10 <sup>-5</sup>
98-82-8	Cumene	1.08 × 10 <sup>-6</sup>
100-41-4	Ethylbenzene	7.48 × 10 <sup>-5</sup>
100-42-5	Styrene	1.16 × 10 <sup>-6</sup>
108-88-3	Toluene	2.99 × 10 <sup>-4</sup>
110-54-3	n-Hexane	3.93 × 10 <sup>-6</sup>
127-18-4	Tetrachloroethylene (Perchloroethylene)	8.03 × 10 <sup>-4</sup>
179601-23-1	m,p-Xylenes	2.52 × 10 <sup>-4</sup>
-	Aggregate (Total) HAPs	0.0015