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

August 15, 2019

PERMIT TO INSTALL
92-19

ISSUED TO
D & D Amalgamated Services, Inc.

LOCATED AT
814 Nola Street
Kalamazoo, Michigan

IN THE COUNTY OF
Kalamazoo

STATE REGISTRATION NUMBER
P1032

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: **July 15, 2019**	
DATE PERMIT TO INSTALL APPROVED: **August 15, 2019**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

COMMON ACRONYMS

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

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H_2S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO_x	Oxides of Nitrogen
ng	Nanogram
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
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO_2	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

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.

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.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUW01	400 lb capacity Washex industrial washing machine.	1975	FGLAUNDRY
EUW03	600 lb capacity Washex industrial washing machine.	1978	FGLAUNDRY
EUW04	600 lb capacity Washex industrial washing machine.	1982	FGLAUNDRY
EUW05	85 lb capacity UniMac industrial washing machine.	1990	FGLAUNDRY
EUD01	400 lb capacity Norman natural gas-fired industrial dryer with a maximum heat input of 2.75 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1975	FGLAUNDRY
EUD02	400 lb capacity Green Challenge natural gas-fired industrial dryer with a maximum heat input of 2.75 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1978	FGLAUNDRY
EUD03	400 lb capacity Blue Challenge natural gas-fired industrial dryer with a maximum heat input of 2.75 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1982	FGLAUNDRY
EUD04	75 lb capacity Speed Queen natural gas-fired industrial dryer with a maximum heat input of 0.165 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1992	FGLAUNDRY
EUD05	75 lb capacity Speed Queen natural gas-fired industrial dryer with a maximum heat input of 0.165 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1992	FGLAUNDRY
EUD06	75 lb capacity Speed Queen natural gas-fired industrial dryer with a maximum heat input of 0.165 MMBtu/hr. The exhaust air passes through a lint collector before being vented to the ambient air.	1992	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	Associated Emission Unit IDs
FGLAUNDRY	Industrial laundering operation to wash and dry various textiles including uniforms, floor mats, mops and shop towels. There are four (4) industrial washers and six (6) natural gas-fired industrial dryers.	EUW01, EUW03, EUW04, EUW05, EUD01, EUD02, EUD03, EUD04, EUD05, EUD06

FGLAUNDRY
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Industrial laundering operation to wash and dry various textiles including uniforms, floor mats, mops and shop towels. There are four (4) industrial washers and six (6) natural gas-fired industrial dryers.

Emission Unit: EUW01, EUW03, EUW04, EUW05, EUD01, EUD02, EUD03, EUD04, EUD05, EUD06

POLLUTION CONTROL EQUIPMENT

Lint collector on EUD01, EUD02, EUD03, EUD04, EUD05, and EUD06

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.10 lbs per 1,000 lbs of gas [a]	Hourly	Each Dryer in FGLAUNDRY	SC V.1	R 336.1205(3), R 336.1331
2. PM10	0.0019 lbs per lb of SST processed [b, c]	Hourly	Each Dryer in FGLAUNDRY	SC V.1	R 336.1205(3), 40 CFR 52.21(c) &(d)
3. PM2.5	0.0011 lbs per lb of SST processed [c]	Hourly	Each Dryer in FGLAUNDRY	SC V.1	R 336.1205(3), 40 CFR 52.21(c) &(d)
4. VOC	40.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGLAUNDRY	SC VI.2	R 336.1205(3), R 336.1225, R 336.1702(a)
5. Tetrachloroethylene (CAS No. 127-18-4)	3.40 tpy [1]	12-month rolling time period as determined at the end of each calendar month	FGLAUNDRY	SC VI.2	R 336.1225(2)
6. Ethylbenzene (CAS No 100-41-4)	0.32 tpy [1]	12-month rolling time period as determined at the end of each calendar month	FGLAUNDRY	SC VI.2	R 336.1225(2)
7. Naphthalene (CAS No. 91-20-3)	49 lb/yr [1]	12-month rolling time period as determined at the end of each calendar month	FGLAUNDRY (See Footnote d)	SC VI.2	R 336.1225(2)

[a] Calculated on a wet gas basis
[b] SST - Soiled Shop Towels
[c] Calculated on a solid weight basis
[d] Includes emissions from all sources of this compound

Emission Factors:
VOC = 8.30×10^{-3} lb/lb SST
Tetrachloroethylene = 8.03×10^{-4} lb/lb SST
Ethylbenzene = 7.48×10^{-5} lb/lb SST
Naphthalene = 5.75×10^{-6} lb/lb SST
Naphthalene = 6.10×10^{-4} lb/10^{6} cubic feet

II. MATERIAL LIMIT(S)

1. The permittee shall process no more than 8,814,750 pounds of soiled shop towels per year in FGLAUNDRY, based on a per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(3), R 336.1225, R 336.1702(a))**

2. The permittee shall clean soiled shop towels only with water solutions of bleach or detergents in FGLAUNDRY. **(R 336.1225, R 336.1702(a))**

3. The permittee shall not process print towels in FGLAUNDRY. **(R 336.1225, R 336.1702(a))**

4. 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 EUD01 shall not exceed a maximum of 2.75 MMBtu per hour. **(R 336.1205(3), R 336.1225, 40 CFR 52.21(c) & (d))**

2. The heat input capacity of EUD02 shall not exceed a maximum of 2.75 MMBtu per hour. **(R 336.1205(3), R 336.1225, 40 CFR 52.21(c) & (d))**

3. The heat input capacity of EUD03 shall not exceed a maximum of 2.75 MMBtu per hour. **(R 336.1205(3), R 336.1225, 40 CFR 52.21(c) & (d))**

4. The heat input capacity of EUD04 shall not exceed a maximum of 0.165 MMBtu per hour. **(R 336.1205(3), R 336.1225, 40 CFR 52.21(c) & (d))**

5. The heat input capacity of EUD05 shall not exceed a maximum of 0.165 MMBtu per hour. **(R 336.1205(3), R 336.1225, 40 CFR 52.21(c) & (d))**

6. The heat input capacity of EUD06 shall not exceed a maximum of 0.165 MMBtu per hour. **(R 336.1205(3), R 336.1225, 40 CFR 52.21(c) & (d))**

7. The permittee shall not operate the dryer (EUD01, EUD02, EUD03, EUD04, EUD05, and EUD06) portion of FGLAUNDRY unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the lint collectors, has been submitted within 45 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the dryer 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.1. **(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))**

1. Upon request of the AQD District Supervisor, the permittee shall verify PM, PM10, and PM2.5 emission rates from the dryer portion of FGLAUNDRY by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below:

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 336.1301, R 336.1331, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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, R 336.1225, R 336.1702, 40 CFR 60.48c(g), 40 CFR 52.21(c) & (d))**

2. The permittee shall keep the following information on a monthly basis for FGLAUNDRY:
   a. The amount, in pounds, of soiled shop towels processed per 12-month rolling time period, as determined at the end of each calendar month.
   b. VOC emission calculations determining the monthly emission rate in pounds per calendar month and in tons per calendar month.
   c. VOC emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   d. Naphthalene, ethylbenzene, and tetrachloroethylene emission calculations determining the monthly emission rate in pounds per calendar month.
   e. Naphthalene, ethylbenzene, and tetrachloroethylene emission calculations determining the annual emission rate in pounds per 12-month rolling time period as determined at the end of each calendar month.

   The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a)**

3. 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)**

4. 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)**

VII. REPORTING

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:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVWASH (Wash area stack for EUW01, EUW03, EUW04, and EUW05)	36	20	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVD01 (EUD01 stack)	20	32	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVD02 (EUD02 stack)	20	32	R 336.1225, 40 CFR 52.21(c) & (d)
4. SVD03 (EUD03 stack)	20	32	R 336.1225, 40 CFR 52.21(c) & (d)
5. SVDRYER (Dryer stack for EUD04, EUD05, and EUD06)	20	32	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).