Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

BUREAU OF AIR MANAGEMENT
NEW SOURCE REVIEW PERMIT
TO CONSTRUCT AND OPERATE A STATIONARY SOURCE

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-3a of the Regulations of Connecticut State Agencies (RCSA).

Owner/Operator	Ametek, Specialty Metal Products Division
Address	21 Toelles Road, P.O. Box 5807, Wallingford, CT 06492
Equipment Location	21 Toelles Road, Wallingford, CT 06492
Equipment Description	A Patterson-Kelley 10 Cubic Foot Twin Shell Blender (P-K S/N BC63103)
Town-Permit Numbers	189-0248
Premises Number	142
Stack Number	53
Permit Issue Date	August 27, 2019
Expiration Date	None

/s/ Betsey C. Wingfield
Betsey C. Wingfield
Deputy Commissioner

8/27/19
Date

This permit specifies necessary terms and conditions for the operation of this equipment to comply with state and federal air quality standards. The Permittee shall at all times comply with the terms and conditions stated herein.

PART I. DESIGN SPECIFICATIONS

A. General Description

Ametek is a manufacturer of various types and sizes of specialty metals and wires. Operations at Its Wallingford facility include metal powder processing, sintering, grinding, degreasing of metal sheets, wire drawing and slitting. A Patterson-Kelley blender is used to dry mix metal powder. The blended metal powder can then be compacted in a rolling mill and the sheets then sintered and rolled down to the specific thickness that is required by the customer.

B. Equipment Design Specifications

1. Type of Blender: Patterson-Kelley 10 Cubic Foot Twin Shell Blender

2. Minimum Batch Time (hr): 1.0

3. Blender Capacity per Batch (lb): 3,000

C. Control Equipment Design Specifications

1. Primary Filter System
   a. Manufacturer: United Air Specialist, Inc. (UAS)
   b. Model: Pulse Type Cartridge SFC 12-3-H55
   c. Type of Control: Pulse Type Cartridge Filter (12 Filters) Dust Collector System
   d. Filter Material: Cellulose/Polyester Blend
   e. Total Filter Area (ft^2): 3060
   f. Maximum Design Pressure Drop (inches H_20): 5.0

2. Secondary Filter System
   a. Manufacturer: Airguard Industries
   b. Model: 4HFL42/2
   c. Type of Control: High Capacity HEPA Filters

3. Combined Filter Systems Control Efficiency
   a. Capture Efficiency (%): 100
   b. Removal Efficiency (%): 99.97
   c. Overall Control Efficiency (%): 99.97

D. Stack Parameters

1. Stack Height (ft): 4.5

2. Stack Diameter (ft): 4

3. Minimum Exhaust Gas Flow Rate (acfm): 5000

4. Minimum Stack Exit Temperature (°F): Ambient

5. Minimum Distance from Stack to Nearest Property Line (ft): 155

PART II. OPERATIONAL CONDITIONS

A. Equipment

1. Minimum Batch Time (hr): 1

2. Maximum Blender Processing Capacity (lb/hr): 3,000

B. Control Equipment

1. Primary Filter System: Pulse Type Cartridge Filter (12 filters) System

2. Secondary Filter System: Airguard High Capacity HEPA Filters

3. Design Pressure Drop Range across the Cartridge Filter System (inches H_20): 2.0 to 5.0

4. Design Pressure Drop Range across HEPA filter System (inches H_20): 1.35 to 5.0

5. Inlet Gas Temperature (°F) Ambient

6. Minimum Capture Efficiency (%) 100

7. Minimum Overall Control Efficiency (%) 99.97

8. Both the primary and secondary filter systems shall be equipped with continuous pressure drop monitoring equipment.

9. Both the primary and secondary filter systems shall be equipped with bag leak detector systems.

10. The blender shall not continuously process cobalt more than 7.5 hours in any one eight hour period.

11. The control equipment shall be operating whenever the blender is operating.

PART III. ALLOWABLE EMISSION LIMITS

The Permittee shall not cause or allow this equipment to exceed the emission limits stated herein at any time.

A. Criteria Pollutants

Pollutant	lb/hr	tpy
PM, PM_{10}, $PM_{2.5}$	0.008	0.035

B. Hazardous Air Pollutants

This equipment shall not cause an exceedance of the Maximum Allowable Stack Concentration (MASC) for any hazardous air pollutant (HAP) emitted and listed in RCSA Section 22a-174-29. [STATE ONLY REQUIREMENT]

C. Demonstration of compliance with the above emission limits may be met by calculating the emission rates using emission factors from the following sources:

- PM, PM_{10}, $PM_{2.5}$: Stack test results

The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

PART IV. MONITORING AND RECORD KEEPING REQUIREMENTS

A. Monitoring

1. The Permittee shall monitor the number of batches, the total weight (lb) of each batch, and the material composition of each batch processed by the blender.

2. The Permittee shall monitor the processing time of each batch processed by the blender.

3. The Permittee shall operate the control equipment within the parameters specified in Part II of this permit. The Permittee shall maintain these parameters within the ranges recommended by the manufacturer to achieve compliance with the emission limits in this permit.

4. The Permittee shall monitor and record the pressure drop across the UAS pulse type cartridge filter system during each blender operation. If the pressure change across the system deviates from the design operating range specified in Part II.B.3 of this permit, corrective action shall be taken before operations are resumed.

5. The Permittee shall monitor and record the pressure drop across the Airguard HEPA filter system during each blender operation. If the pressure change across the system

deviates from the design operating range specified in Part II.B.4 of this permit, corrective action shall be taken before operations are resumed.

6. The Permittee shall continuously monitor the output from the bag leak detector systems. If an alarm sounds, corrective action shall be taken before operations are resumed.

7. The Permittee shall perform inspections of the control devices as recommended by the manufacturer or, at a minimum, at least once annually.

B. Record Keeping

1. The Permittee shall keep daily, monthly, and annual records of the number of batches processed by the blender.

2. The Permittee shall keep daily records of the time it takes to process each batch in the blender.

3. The Permittee shall keep daily, monthly, and annual records of the total weight (lb) of each batch as well as the weight (lb) of each component material in each batch and its percentage by weight of the total weight (lb) of each batch processed by the blender.

4. The Permittee shall keep records of inspections and maintenance of the control devices.

5. The Permittee shall record the pressure drop of the UAS pulse type cartridge filter system during each blender operation. Each time the pressure drop across the system deviates from the operating range specified in Part II.B.3 of this permit, the Permittee shall record, at a minimum, the following for each occurrence:

   a. The date of the deviation;
   b. The reason for the deviation;
   c. The corrective action taken; and
   d. The person(s) making the entry.

6. The Permittee shall record the pressure drop across the Airguard HEPA filter system during each strip belt grinder operation. Each time the pressure drop across the system deviates from the operating range specified in Part II.B.4 of this permit, the Permittee shall record, at a minimum, the following for each occurrence:

   a. The date of the deviation;
   b. The reason for the deviation;
   c. The corrective action taken; and
   d. The person(s) making the entry.

7. The Permittee shall keep records of each time the bag leak detector alarm for the UAS pulse type cartridge filter system or the Airguard HEPA filter system sounds. These records shall, at a minimum, include the following for each occurrence:

   a. The date of the deviation;

b. The reason for the deviation;
c. The corrective action taken; and
d. The person(s) making the entry.

8. For each distinct batch composition formula, the Permittee shall calculate and keep sample records of the Actual Stack Concentration (ASC) for each HAP in that batch formula. This shall be done in order to verify that the ASC does not exceed the Maximum Allowable Stack Concentration (MASC) for each individual HAP in that formula. These calculations shall be based on an overall control efficiency of 99.97%.

9. The Permittee shall calculate and record the monthly and consecutive 12 month PM, PM_{10}, and $PM_{2.5}$ emissions in units of tons. The consecutive 12 month emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.

10. The Permittee shall keep all records required by this permit for a period of no less than five years and shall submit such records to the commissioner upon request.

PART V. OPERATION AND MAINTENANCE REQUIREMENTS

A. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.

B. The Permittee shall properly operate the control equipment at all times that this equipment is in operation and emitting air pollutants.

PART VI. STACK EMISSION TEST REQUIREMENTS

A. Stack emission testing shall be performed in accordance with the Emission test Guidelines available on the DEEP website at www.ct.gov/deep/stacktesting

B. Initial Stack testing shall be required for the following within 180 days from the issuance of this permit (Application No. 201509229):

☒ PM ☒ PM_{10} ☒ $PM_{2.5}$ ☐ SO_2 ☐ NOx ☐ CO
☐ VOC ☐ Opacity ☒ Other: Overall Control Efficiency

C. Stack testing shall be performed to determine if the overall control efficiency of the combined filter systems is 99.97% or greater as required by Part II.B.7 of this permit.

Overall control efficiency shall be determined using approved EPA Reference Methods.

D. Recurrent stack testing for PM, PM_{10}, $PM_{2.5}$ and Overall Control Efficiency shall be conducted within five years from the date of the previous stack test.

E. The stack test results shall be reported in units of lb/hr for PM, PM_{10}, $PM_{2.5}$ and percent for

Overall Control Efficiency.

F. The Permittee shall submit test results within 30 days after completion of testing.

PART VII. SPECIAL REQUIREMENTS

A. The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor beyond the property boundary of the premises that constitutes a nuisance as set forth in RCSA Section 22a-174-23. [STATE ONLY REQUIREMENT]

B. The Permittee shall operate this facility at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in RCSA Sections 22a-69-1 through 22a-69-7.4. [STATE ONLY REQUIREMENT]

PART VIII. ADDITIONAL TERMS AND CONDITIONS

A. This permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

B. Any representative of the DEEP may enter the Permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.

C. This permit may be revoked, suspended, modified or transferred in accordance with applicable law.

D. This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons of municipalities who are not parties to this permit.

E. Any document, including any notice, which is required to be submitted to the commissioner under this permit shall be signed by a duly authorized representative of the Permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute."

F. Nothing in this permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.

G. Within 15 days of the date the Permittee becomes aware of a change in any information submitted to the commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the correct or omitted information to the commissioner.

H. The date of submission to the commissioner of any document required by this permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

I. Any document required to be submitted to the commissioner under this permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of Director; Engineering & Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.