



**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	Coherent, Inc. - Nufern
Address	7 Airport Park Road, East Granby, CT 06026
Equipment Location	7 Airport Park Road, East Granby, CT 06026
Equipment Description	Accurate Thermal Systems Fluidized Temperature Bath (sand bath).
Town-Permit Numbers	050-0030
Premises Number	26
Stack Number	3
Permit Issue Date	
Expiration Date	None

 Emma Cimino
 Deputy Commissioner

 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

The facility manufactures specialty optical fibers for use in a wide range of applications. The sand bath will utilize aluminum oxide as a heating element and will be used to burn off Tefzel™ Fluoroplastic Resin 207 (ETFE) from noncombustible equipment including metal parts. The sand bath is a batch process with a 5-hour cycle, with all emissions estimated to occur during the first hour. The sand bath will utilize a cyclone to control particulate matter (PM) emissions and reclaim aluminum oxide for reuse in the bath. Air flow through the sand bath's stack is continuous. The sand bath is defined as an incinerator in accordance with RCSA Section 22a-174-1(54).

B. Equipment Design Specifications

1. Incinerator
 - a. Make and Model: Accurate Thermal Systems Fluidized Temperature Bath, Model FTBLL26
 - b. Maximum Working Load Capacity of Material to be Cleaned: 50 lb
 - c. Maximum Capacity of Fluidizing Bath Medium: 160 lb
 - d. Maximum Operating Temperature (°F): 1121
2. Heater System
 - a. Primary Combustion Chamber
 - i. Burner Manufacturer/Model No: Accurate Thermal Systems
 - ii. Fuel Type(s): Electric
 - iii. Number of Heaters: 2
 - iv. Maximum Design Power Capacity: 240V, 3.1 kW
 - v. Combustion Gas Residence/Retention Time (sec): 0.023

C. Control Equipment Design Specifications

1. Cyclone
 - a. Make and Model: Accurate Thermal Systems (ATS1032)
 - b. Pollutants Controlled: PM
 - c. Gas Flow Rate (scfm): 210
 - d. Collection Efficiency (%): 100

D. Stack Parameters

1. Minimum Stack Height (ft): 22.7
2. Minimum Exhaust Gas Flow Rate (acfm): 627
3. Minimum Stack Exit Temperature (°F): 1121
4. Minimum Distance from Stack to Nearest Property Line (ft): 148

PART II. OPERATIONAL CONDITIONS

A. Equipment

1. Incinerator
 - a. Materials Processed: ETFE covered non-combustible metal parts
 - b. Materials Combusted: Tefzel™ Fluoroplastic Resin 207(ETFE)

Material	Type of Waste	Chlorine Content (wt %)	Btu/lb
Tefzel Fluoroplastic Resin 207 (ETFE)	Other	0	6

- c. Maximum Working Load Capacity of Material to be Cleaned per Cycle: 50 lb
 - d. Fluidizing Bath Medium: Aluminum Oxide
 - i. Operating Capacity: 160 lb
 - e. Maximum Throughput over any Consecutive 12 Month Period:
 - i. ETFE: 72.27 lb
 - ii. Aluminum Oxide: 480 lb
 - f. Maximum Charge Rate per Cycle:
 - i. ETFE: 0.198 lb
 - g. Maximum Annual Operating Hours: 1825 hours
 - h. Maximum Cycle Length: 5 hours
 - i. Minimum Operating Temperature of Primary Chamber: 122°F
2. Cyclone
 - a. Control Efficiency (%)
 - i. ETFE: 10%
 - ii. Aluminum Oxide: 70%

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 ¹	gr/scf @ 12% CO ₂ over 2 hour average	TPY
PM/PM ₁₀ /PM _{2.5}	0.22	0.08	0.040
CO	0.15		0.027
VOC	0.24		0.044

¹ All emissions estimated to occur during first hour of 5-hour cycle.

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. Opacity

1. This equipment shall not exceed 10% opacity during any six minute block average as measured by 40 CFR 60, Appendix A, Reference Method 9.
2. The Permittee shall not cause or allow unburned waste or ash particulate emissions that are individually discernible by the human eye measured using 40 CFR Part 60, Appendix A, Reference Method 9 and 40 CFR Part 60, Appendix A, Reference Method 22. [RCSA §22a-174-18(d)(3)]

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

- *PM/PM10/PM2.5, CO, VOC: Approved 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, REPORTING AND RECORD KEEPING REQUIREMENTS**A. Monitoring**

1. The Permittee shall monitor the operating temperature of the fluidized temperature bath. The Permittee shall maintain this parameter within the range recommended by the manufacturer to achieve compliance with the emission limits in this permit.
2. The Permittee shall monitor the weight of the materials processed and combusted in the fluidized temperature bath to ensure compliance with the emission limits of this permit.
3. The Permittee shall perform inspections of the sand bath and cyclone as recommended by the manufacturers.

B. Record Keeping

1. The Permittee shall keep records of the daily, monthly and consecutive 12 month quantity of the materials processed and ETFE combusted. The consecutive 12 month quantity of materials processed and ETFE combusted shall be determined by adding the current month's quantity to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of each month.
2. The Permittee shall calculate and record the monthly and consecutive 12 month PM, PM10, PM2.5, VOC and CO 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.

3. The Permittee shall keep records of aluminum oxide replacements to ensure compliance with the throughput limit in Part II.A.1.a.ii and the emission limits of this permit. The records shall contain at a minimum: date, type (MSDS ID), weight of aluminum oxide added to the bath.
4. For each cycle, the Permittee shall keep records of: operator name, the cycle date, maximum cycle temperature, and the start and end time of cycle.
5. The Permittee shall make and keep records of the monthly and consecutive 12 month hours of operation. The consecutive 12 month hours of operation shall be determined by adding the current month's hours of operation to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of each month.
6. The Permittee shall keep records of any testing completed by the Permittee or requested by the Department for demonstration of compliance with the emissions or opacity limits.
7. The Permittee shall keep Material Safety Data Sheets onsite for the ETFE combusted and sand bath fluidizing media used.
8. The Permittee shall make and keep records of any maintenance and inspections conducted on the fluidizing temperature bath. Such records shall include the date and nature of all services performed and corrective actions taken, if any.
9. The Permittee shall maintain a full, legible copy of the manufacturer's specifications and written operations manual on-site at all times. The permittee shall provide a copy of the manufacturer's specifications and written operations manual upon request of the Commissioner or his agent.
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.

C. Reporting

1. The Permittee shall notify the commissioner, in writing, of the following:
 - a. the date of initial startup of this equipment/process.

Any required written notification(s) above shall be submitted to DEEP.CACU@ct.gov, and DEEP.BAM.AirPermits@ct.gov no later than 30 days after the subject event.

PART V. STACK EMISSION TEST REQUIREMENTS

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

Initial stack testing shall be required for the following pollutant(s):

- PM/PM₁₀/PM_{2.5}
 SO₂
 NO_x
 CO
 VOC
 Opacity
 Other (HAPs):

The Permittee shall conduct initial stack testing within 60 days of achieving the maximum production rate, but not later than 180 days after initial startup. The Permittee shall submit test results within 60 days after completion of testing.

Stack test results shall be reported as follows: all pollutants in units of lb/hr; PM/PM₁₀/PM_{2.5} in gr/scf

PART VI. 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.
- C.** The Permittee shall only allow personnel who have been trained in the proper operation of the incinerator to operate the incinerator.

PART VII. SPECIAL REQUIREMENTS

A. Premises Emissions Summary

- 1. On January 1st of each calendar year, if the potential emissions of NO_x or VOC from the premises are equal to or greater than 25 tons per year per pollutant, then for such pollutant(s), the Permittee shall:
 - a. Monitor NO_x and/or VOC emissions, as applicable, from the premises for such calendar year.
 - b. Calculate and record annual NO_x and/or VOC emissions, as applicable, from the premises for such calendar year, in units of tons. The Permittee shall make these calculations on or before February 1st of the following year with respect to the previous calendar year. Such records shall include a sample calculation(s).
 - c. If actual NO_x and/or VOC emissions, as applicable, from the premises are equal to or greater than 25 tons for such calendar year, the Permittee shall submit to the commissioner, on or before March 1st of the following year, an annual emissions summary with respect to the premises for the previous calendar year. Such summary shall be submitted on forms prescribed or provided by the commissioner.
 - 2. A Permittee is exempt from Part VII.A.1 requirements of this permit if, on January 1st of the subject year, the premises was operating in accordance with any of the following:
 - a. A valid Title V permit issued pursuant to RCSA section 22a-174-33;
 - b. RCSA section 22a-174-33a; or
 - c. RCSA section 22a-174-33b
- B.** 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]

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 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 or 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; Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.