



445 South Street  
Morristown, NJ 07960  
862.345.5000

January 29, 2025

The Honorable Jeff Caggiano  
Mayor, City of Bristol  
111 Main Street, Ste 22  
Bristol, CT 06010

Dear Mayor Caggiano,

At Reworld, we deeply value our relationship with the Bristol community. We have proudly served this town and region for more than 35 years, providing sustainable waste solutions while also employing more than 40 local residents. In that spirit of long-term commitment, we are writing today regarding the noise concerns at our facility, to both share updates on the steps we have taken to date as well as specific plans for additional work in the months ahead.

As you are aware, we have undertaken a significant amount of work to address sound issues. Over the past year, Reworld retained a noise expert, Noise Control Engineering (NCE), to analyze sound emanating from our facility. Acting on their recommendation, we replaced fan motors to synchronize the speeds. Subsequently we partnered with a third-party sound engineering firm, Industrial Noise & Vibration Centre (INVC), to develop and install Quiet Fan Technology (QFT) – a cutting-edge solution designed to further mitigate sound. Following each of these upgrades, we engaged NCE to measure the noise levels, and their findings confirmed that most of the changes resulted in reduced noise levels.

**In that spirit, despite this clear record of work and progress, we understand that noise remains a concern for some members of the community. We are listening to those concerns, and we are committed to taking additional steps to reduce noise from the facility.**

To provide transparency and demonstrate our commitment, we have attached below a detailed summary of all the actions we have taken to date and those that are planned. We hope this document reflects our determination to resolve this matter in partnership with local officials and the community.

Reworld has a long-term commitment to Bristol as both an employer and a neighbor. We care deeply about the well-being of this community and will continue to invest in solutions that enhance the quality of life for all residents. Thank you for your understanding and continued partnership. Should you have any questions or require additional information, please do not hesitate to reach out directly.

Sincerely,

Vincent Langone  
Vice President, East Region Operations

CC:

Sen. Henri Martin

Rep. Cara Pavalock-D'Amato

Rep. Joe Hoxha

Rep. Mary Fortier

Bristol City Council Members

Marco Palmeri, BBHD

Kenneth Vallera, BRRRFOC

### **Reworld Bristol Noise Mitigation Efforts**

In response to community feedback regarding noise emanating from the facility, Reworld Bristol has taken the following actions understand and mitigate noise.

#### **Actions Taken to Date:**

- December 2023: Reworld contracted Noise Control Engineering (NCE) to perform a noise survey.
  - Short term measurements were taken both on site and off site at various times from December 7-8, 2023.
  - Long term measurements were collected on-site for the period between December 11-17, 2023.

From this noise survey, a recommendation was made to standardize the two boilers' induced draft (ID) fan motors to one motor manufacturer to eliminate potential variations associated with a beating phenomenon caused by two fans operating at slightly different speeds. The boilers' induced draft fans are used to pull the air from the boiler and discharge the cleaned air to the stack.

- February 2024: New fan motor was purchased, and Boiler 1 was voluntarily removed from service so that this motor could be changed.

Survey data and sound clips were submitted to the Industrial Noise & Vibration Centre (INVC) to determine if the site was a potential candidate for their Quiet Fan Technology (QFT) inserts noise control solution.

Retained INVC to perform computational fluid dynamic modeling and design of equipment specific QFT Inserts.

- April 2024: Upon receipt and review of INVC engineered QFTs, materials were ordered and QFT inserts were constructed.
- June 2024: QFT inserts were installed in Boiler 1 ID fan and Boiler 2 ID Fan.

NCE conducted a post-retrofit noise survey on June 25, 2024, to evaluate the effectiveness of the modifications. Measurements demonstrated compliance with the applicable standards.

Submitted additional sound clips to INVC for validation of results.

- Provided unobstructed facility access to Acoustical Technologies Inc. (ATI), the BBHD consultant, to conduct their testing.
- Reviewed ATI methodology and findings in ATI draft report during TEAMS Conference calls consisting of Reworld, BBHD, ATI, NCE, and BBHD Legal representation.

- NCE identified technical concerns with respect to draft ATI report. Reworld provided those concerns in writing prior to TEAMS meeting so that ATI could have adequate time to consider.
- The ATI final report, once issued, did not address technical issues raised by NCE.
- August 2024: Realizing that BBHD was not satisfied with results, Reworld again worked with INVC to refine the QFT Insert design using the computational fluid dynamics methodology.
- December 2024: Modification to the QFT inserts were manufactured. Each Boiler was voluntarily removed from service and fitted with the QFT insert modification as follows:
  - Boiler 1 – December 10, 2024
  - Boiler 2 – December 3, 2024

NCE conducted a post-retrofit noise survey to evaluate the effectiveness of the modifications. December retrofits did not show significant reductions.

### **Continued Actions and Plans**

- January 2025: Reworld re-engaged its operations, maintenance and engineering teams, both internal and external, to identify additional mitigation strategies
- Reworld met with BBHD on January 24, 2025 and presented the following action items for additional mitigation efforts:
  - Team is researching additional engineering measures that may be taken to modify the flue gas flows through the boilers to target reductions in noise including flue gas volumes, temperatures and velocities. Expect to finalize engineering test plan in January.
  - Based upon additional recommendation from the noise consultants, investigating change of the flue gas fan's inlet transition pieces between the rectangular fan outlet and the round duct inlet to the stack to target noise reduction.
- February 2025: Reworld planning to retain testing companies and execute research and development testing of flue gas flows to gain better understand of options targeting noise reduction.
- March 2025: Reworld will be conducting an annual planned maintenance outage. In addition to scheduled maintenance, it will be replacing the Spray Dryer Absorber vessel for Unit 2 as well as associated ductwork to target reduction of flue gas managed by the ID fan.

Reworld is planning to change the flue gas fan's inlet transition pieces between the rectangular fan outlet and the round duct inlet to the stack.