CANFIELD COATING
COMPANY
460 W. Main Street • Canfield, Ohio 44406

Phone: (330) 533-3311
Fax: (330) 533-5741
www.coilcoat.com

September 4, 2013

Mr. Matt Campbell
Ohio EPA – DAPC
Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087

via email: matt.campbell@epa.ohio.gov

Subject: Notice of Violation

Dear Mr. Campbell:

This letter is in response to the Notice of Violation (NOV) dated August 15, 2013 and received by Canfield Coating LLC (CCC) on August 16, 2013 concerning CCC compliance stack test report submitted on August 14, 2013. The report was for the determination of volatile organic compound capture efficiency and total gaseous organic destruction efficiency performed at the CCC Paint Line (K001) on July 9, 2013. The report and CCC's response in the form of a white paper entitled: "Review of Air Compliance Stack Test Overall Control Efficiency vs. Permit Limits", were discussed during a teleconference on August 19, 2013 with you, Zorica Dejanovic, and Tim Fisher from your office and myself and James Steudler (THG & Associates).

The December 3, 1998 final Permit to Operate for K001 (renewal applied for in 2003) applicable emissions limits are 90% Destruction Efficiency (DE) and 85.68% Overall Control Efficiency.

The NOV states in part:

- "The test was performed in conformance with the required testing protocols".
- "The results cannot be accepted as presented. The Destruction Efficiency (DE) and Capture efficiency (CE) have to be verified utilizing the same test runs."

Neither the EPA methods for DE testing nor CE testing require the simultaneous performance of the DE and CE methods. During our conference call we were informed the above statement is based on an OEPA policy. We noted in our report transmittal letter there were significant technical concerns with Run #1. The DE testing for Run #4 was for engineering not compliance purposes, i.e. the incinerator was operated at a lower temperature to determine effect on the DE. Therefore, we request only Runs #2 and #3 be used for overall control efficiency calculations:

- Run 2 and 3 Average VOC Capture Efficiency (CE - %) = 86.085
- Run 2 and 3 Carbon Based K001 Destruction Efficiency (DE - %) = 99.50
- K001 Overall Control Efficiency (%) = 85.65

Although the stack test result for overall control efficiency was 0.03% less than the current permit limit, it is in compliance with the permit limit taking into account the Data Quality Objectives of the methods.

The previously submitted white paper showed the July 9, 2013 stack test results were in compliance with current regulations, the current permit limits are based on invalid data, and the source is operating at maximum efficiency.

Applicable Regulations

OAC 3745-21-09(B)(6) states in part:

> "In lieu of complying with the pounds of VOC per gallon of solids limitations contained in paragraphs [...] of this rule, any owner or operator of a coating line that employs a control system may choose to demonstrate that the capture and control equipment provide not less than eighty one percent reduction, by weight, in the overall VOC emission from the coating line and that the control equipment has an efficiency of not less that ninety per cent, by weight, for the VOC emissions vented to the control equipment."

The stack test emission results of 85.65% overall control efficiency and 99.50% destruction efficiency are in compliance with the applicable regulations.

Basis of Permit Requirements

On March 21, 1995, Envisage Environmental conducted three (3) one-hour test runs on the coating line to determine compliance with the applicable destruction, capture and mass emissions limitations. Page 4 of the report states in part:

> "To verify the enclosure met the requirements of USEPA Method 30 and demonstrating 100% capture efficiency, the following requirements were met: All NDO's were determined to be at least 4 equivalent diameters away from the VOC emitting points. All of the exhaust points were measured to be at least 4 equivalent diameters from each NDO. The total area of the NDO's was measured and did not exceed 5% of the surface area. And the facial velocity of air through the NDO's was greater than 200 feet/minute. The average of the three test runs yielded 725, 762, and 840 respectively for each run, thus also satisfying the requirements of Method 30 and demonstrating 100% capture efficiency."

The report is in error stating the enclosure demonstrates 100% capture efficiency when part of the exhaust gas stream is not ducted to the control device, i.e. the floor exhaust and the room exhaust monitored during the test. See EPA Method 204, "Criteria for and Verification of a Permanent or Temporary Total Enclosure".

As part of the 1998 PTI Application for the source, Chester Engineers provided a "Proposed lb/hr VOC Emissions" worksheet. The worksheet proposed a 90% "control" (destruction) efficiency, a 95.2% capture efficiency, and a 1% Quench Tank loss for the emission unit. The application states in part:

> "95.2% capture @ curing oven - based on March 1995 testing".

As noted above, the 1995 test incorrectly indicated 100% capture efficiency. It appears the 95.2% capture efficiency was calculated by using the following test data (see 1995 report, page 11):

> Total pounds carbon entering oven (average of 48.634lb) divided by the Total amount of carbon available to be emitted (average of 50.541lb) multiplied by 100 equals 96.2%. 96.2% minus 1% Quench Tank loss equals 95.2% capture efficiency.

The current permit limitation of 85.68% was then calculated from the 1998 PTI information:

> 90% DE x 95.2% CE x 100 = 85.68% overall control efficiency.

Therefore, the current permit limit for overall control efficiency is based on unsound data.

Current Conditions and TTE Optimization

On June 20, 2013, Air Compliance Testing performed an engineering study on the Temporary Total Enclosure (TTE – applicator room) for comparison to criteria outlined in EPA Method 204. The study was performed to identify and reduce NDO sizes where possible. The study was also used to adjust the applicator room exhaust flow rate relative to the NDO requirement of 200 ft/min facial velocity. Two (2) different fan sheave sizes were used to optimize the system relative to EPA-compliant NDO flows while maintaining a non-explosive atmosphere (paint Lower Explosive Limit [LEL] = 1%) and complying with OSHA-regulated industrial hygiene personal exposures.

Section 7.4 of Method 204 states in part:

> "This (VOC) concentration (in the TTE) should not continue to increase, and must not exceed the safe level according to the Occupational Safety and Health Administration requirements for permissible exposure limits."

Canfield implemented changes based on the engineering study and optimized the TTE for maximum capture efficiency before the July 9, 2013 compliance test.

Conclusion

The above discussion shows the July 9, 2013 stack test results are in compliance with current regulations, the current permit limits are based on invalid data, and the source is operating at maximum efficiency. As shown above, the DE was 99.5% indicating maximum operating efficiency of the incinerator. Although K001 cannot consistently achieve greater than 85% CE due to the inherent physical limitations of the design, it is in compliance with OAC 3745-21-09(B)(6) for greater than 81% overall control efficiency.

Therefore CCC requests the following:

1. The July 9, 2013 stack test results be recognized in compliance for the source.
2. The above engineering study and compliance stack test satisfy any requirement for additional formal studies under the current permit.

In response to #2 of the NOV letter and in lieu of a compliance stack re-test, CCC will perform the following:

1. Investigate eliminating NDOs #8, 9, and 10 – the small gaps around the Paint Cleaning Room fire door.
2. Investigate adding an extension to NDO #1 to bring it into compliance with Method 204, Section 5.1 – 5.2 criteria.
3. Submit a permit modification incorporating a sound overall control efficiency in compliance with the applicable regulations.

Thank you for your assistance in this matter. If you have any questions, please contact me or James Steudler at THG & Associates, 814.337.1300 or jmsteudler@thgassociates.com

Sincerely,

David Jacobson
Engineering and Environmental Manager

cc: Zorica Dejanovic – OEPA/NEDO
Tim Fisher – OEPA/NEDO
Bruce Weinberg - OEPA/CO
James Steudler – THG