

**GROUP AGAINST SMOG AND POLLUTION (GASP) COMMENTS RE: PROPOSED
AIR QUALITY INSTALLATION PERMITS 0275-I011 & 0275-I013, MCCONWAY &
TORLEY LLC**

1. Comments on IP 0275-I011.

1.1 ACHD and the permittee have failed to adequately characterize emissions from the proposed oxy-fuel-fired ladle preheater burners.

IP-11 is for the replacement of two 1.2 MMBtu/hr existing natural-gas-fired ladle preheater burners with two 3.5 MMBtu/hr oxy-fuel-fired ladle preheater burners. Emissions calculations for the replacement burners are based on AP-42 Chapter 1.4 for PM, PM₁₀, PM_{2.5}, SO₂ and VOC and on burner vendor data for CO and No_x.¹ However, neither AP-42, nor the burner vendor data emission factors appear to provide a reliable estimate of emissions from the proposed ladle preheater burners.

Oxyfuel combustion may result in pollutant emission rates substantially different than rates from conventional natural gas combustion, further, emission rates vary depending on fuel O₂ concentration.² The emission factors provided in AP-42 Chapter 1.4 are for combustion of conventional natural gas³ and there for do not provide a reliable basis for estimation emissions from combustion of oxy-fuel.

The emission rates provided by the burner vendor fail to specify O₂ concentration or even indicate whether the burner emission rates provided are for combustion of oxyfuel or conventional natural gas.⁴ Further the vendor-supplied emission data is based on stack tests from a substantially larger 10 MMBtu/hr burner⁵ and thus may not be representative of the permittee's proposed 3.5 MMBtu burners.

While the proposed ladle preheater burners are a relatively small source of emissions from the McConway & Torley facility, it is nevertheless important to ensure these emissions estimates are reliable. Failure to properly characterize emissions may result in violation of applicable air quality requirements, pose a threat to human health and the environment and is contrary to Article XXI §2102.04.b.2-8.

¹ ACHD Air Quality Program, Review of Application, IP No. 0275-I0011 (Nov. 30, 2015) at 2.

² See e.g., Senior *et al.*, Emissions and risks associated with oxyfuel combustion: State of the science and critical data gaps, *Journal of Air & Waste Management*, 63 (2013) 832–843, available at <http://www.tandfonline.com/doi/pdf/10.1080/10962247.2013.791892>, Charles E. Baukal Jr., *Oxygen-Enhanced Combustion* (2nd Ed, CRC Press, 2013) at 455, available at https://books.google.com/books?id=Pxes4hlDmkIC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false.

³ USEPA, AP-42, Chapter 1.4-Natural Gas Combustion (Jul. 1998) available at <http://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf>.

⁴ McConway & Torley, Air Quality Permit Application, IP No. 0275-I0011 (Dec. 19, 2014) attachment 2.

⁵ *Id.*

1.2 ACHD must modify the permit to include oxy-fuel O₂ concentration requirements as well as reporting and recordkeeping requirements sufficient to ascertain compliance with the O₂ concentration requirements.

As stated in the previous section, emission rates may vary depending on fuel O₂ concentration.⁶ However, the proposed installation permit fails to establish oxy-fuel O₂ concentration requirements. Further, while the draft permit establishes recordkeeping and reporting requirements for ladle preheater oxy-fuel consumption,⁷ as presently written, these permit conditions do not explicitly require the permittee to submit oxy-fuel O₂ concentration information.

For example, under the draft recordkeeping and reporting language, the permittee may permissibly provide a single figure representing the total volume of “oxy-fuel” consumed or may provide separate figures for volume of natural gas and oxygen consumed. In either case, it would be impossible for ACHD to determine the typical concentration of O₂ consumed by the ladle preheater burners.

ACHD must incorporate enforceable permit conditions establishing oxy-fuel O₂ concentration requirements, as well as recordkeeping and reporting requirements sufficient to ascertain compliance with the O₂ concentration requirements. Without this information it would be impossible to determine whether the ladle preheater burners are operating in a manner consistent with the operating conditions assumed when developing the burner emission rates.

2. Comments on IP 0275-I013.

2.1 ACHD cannot assume all IP13 source fugitive emissions are directed to a baghouse when calculating PTE because the facility is not subject to the enforceable conditions necessary to effectively limit fugitive PTE.

ACHD's PTE calculations for IP13 assume the sources authorized under IP13 will generate no fugitive emissions because:

“M&T conducted a Method 204 test for total building enclosure on May 12, 2015. The test was performed with all seven (7) baghouses running continuously and was witnessed by several ACHD personnel. The results of the test demonstrate that while all of the baghouses are in operation the building is under negative pressure with airflow being drawn in from all natural draft openings and directed through one of the seven (7) baghouses..”⁸

However, numeric emission limits alone are insufficient to limit potential to emit unless those emission limits “reflect the maximum emissions of the source operating at full design

⁶ Note 2 *supra*.

⁷ ACHD Air Quality Program, Draft IP No. 0275-I0011 (Dec. 2015) Conditions V.a.4.a & 5.a. at 17.

⁸ ACHD Air Quality Program, Review of Application, IP No. 0275-I0013 (Dec. 10, 2015) at 4.

capacity without pollution control equipment.”⁹ Where emission limits do not reflect maximum uncontrolled emissions, some other “physical or operational limit” is required, such as a restriction on facility throughput or hours of operation, or permit conditions requiring pollution control devices operate at all relevant times and achieve and maintain a pollution control efficiency sufficient to meet the numerical emission limits.¹⁰

The McConway and Torley facility does not appear to be subject to the enforceable conditions necessary to ensure the facility consistently achieves negative pressure and operates in accordance with facility operating conditions during the method 204 test. For example, the permittee does not appear to be subject to enforceable conditions requiring the facility to operate all seven facility baghouses continuously or to ensure building openings (e.g. vents, windows, doors) that were sealed during the method 204 test remain sealed under normal plant operations.

2.2 As proposed, IP13 would cause McConway & Torley's facilitywide PM10 PTE to exceed major source thresholds.

The permit records for IP11 and IP13 do not appear to include facilitywide PTE calculations for the McConway & Torley plant. However, ACHD's draft operating permit for the facility, noticed on March 13, 2015, indicated a facilitywide PM₁₀ PTE of 99.45 TPY.¹¹ As proposed, the facility changes authorized under IP13 would cause facilitywide PM₁₀ PTE to exceed the 100 TPY major source threshold because, as ACHD acknowledges, IP13 PTE calculations for PM are higher than those for IP4, which IP13 largely replaces.¹²

ACHD attributes this increase in part to the fact that “emissions from the Pouring and Cooling processes, which were previously considered to be non-captured fugitive emissions, are expected to be captured by Baghouse No. 12 or one of the other five baghouses at the facility.”¹³ However, IP13 contains no new permit conditions, control requirements or PTE calculations to support offsetting PM₁₀ emission reductions from pouring and cooling operations.

Further, as described in section 2.1 above, ACHD has improperly assumed fugitive emissions from IP13 sources will be directed to one of the facility's baghouses when estimating IP13 PTE. Revising PM₁₀ PTE calculations to properly account for these fugitive emissions, would be sufficient in itself to cause facilitywide PM₁₀ PTE to exceed the 100 TPY PM₁₀ major source threshold.

In order for the McConway & Torley facility to continue to be treated as a synthetic minor source for PM₁₀, ACHD must subject the facility enforceable permit conditions sufficient to demonstrate facilitywide PM₁₀ PTE will remain below 100 TPY.

⁹ USEPA, Limiting Potential to Emit (PTE) in New Source Review (NSR) Permitting available at: <http://www.epa.gov/reg3artd/permitting/limitPTEmmo.htm>.

¹⁰ See e.g., *Ogden Projects v. New Morgan Landfill Co.*, 911 F. Supp. 863, 876 (E.D. Pa. Jan. 8, 1996); USEPA, Limiting Potential to Emit (PTE) in New Source Review (NSR) Permitting; *US v. Louisiana-Pacific Corp.*, 682 F. Supp. 1122, 1133 (D. Colo. Oct. 30, 1987).

¹¹ ACHD Air Quality Program, Draft Synthetic Minor OP# 0275 (2015) at 90.

¹² ACHD Air Quality Program, Review of Application, IP No. 0275-I0013 (Dec. 10, 2015) at 5.

¹³ *Id.*