February 13, 2018

VIA EMAIL (aqpermits@alleghenycounty.us)

Allegheny County Health Department
Air Quality Program
301 39th Street – Building 7
Pittsburgh, PA 15201

Re: **Comments of Group Against Smog & Pollution and Allegheny County Clean Air Now Regarding the Title V Operating Permit & Federally Enforceable State Operating Permit for Ashland LLC (Permit # 0037)**

Dear Sir or Madam:

Kindly accept for consideration the following comments of Allegheny County Clean Air Now ("ACCAN") and Group Against Smog & Pollution ("GASP") regarding the Title V Operating Permit & Federally Enforceable State Operating Permit for Ashland LLC (Permit # 0037) (hereinafter "Permit") covering Ashland's operations at 2650 Neville Road, Pittsburgh, PA 15225 (hereinafter "Facility"). According to the notice posted on its website, the Allegheny County Health Department is accepting comments on the Permit through February 13, 2018.

Very truly yours,

_____/s_____

Angelo Taranto, co-founder
Allegheny County Clean Air Now
c/o Community Presbyterian Church Ben Avon
7501 Church Avenue
Ben Avon, PA 15202

_____/s_____

Ned Mulcahy, MPH, Staff Attorney
Group Against Smog & Pollution
1133 South Braddock Avenue
Suite 1A
Pittsburgh, PA 15201

COMMENTS OF GASP AND ACCAN REGARDING THE TITLE V OPERATING PERMIT & FEDERALLY ENFORCEABLE STATE OPERATING PERMIT FOR ASHLAND LLC (PERMIT # 0037)

1. **ACHD must re-examine and revise the emissions calculations for all Storage Tanks and the Polyester Plant Batch, Thin, and Weigh Tanks**

The draft Technical Support Document ("TSD") states, "[e]missions from the batch, blend, and thin tanks were estimated using the USEPA Tanks 4.0.9d program."[1] Similarly, emissions were "estimated using the USEPA Tanks 4.0.9d program for each storage tank."[2] The "Tanks" software was developed to estimate "volatile organic compound ("VOC") and hazardous air pollutant ("HAP") emissions from fixed- and floating-roof storage tanks … based on the emission estimation procedures from Chapter 7 of EPA's Compilation of Air Pollutant Emission Factors (AP-42)."[3] However, the EPA now strongly cautions against using this software:

> The TANKS model was developed using a software that is now outdated. Because of this, the model is not reliably functional on computers using certain operating systems such as Windows Vista or Windows 7. We are anticipating that additional problems will arise as PCs switch to the other operating systems. Therefore, we can no longer provide assistance to users of TANKs 4.09d. The model will remain on the website *to be used at your discretion and at your own risk*.[4]

Further complicating the matter is that the "breakdown of Tanks 4.0.9d inputs and emissions for each tank" that Ashland provided to ACHD indicates that the source of the

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[1]   Lipari, Bernadette, ACHD Air Quality Program, *Technical Support Document for Title V Operating Permit No. 0037*, at 7 (January 11, 2018).

[2]   *Id.,* at 11.

[3]   EPA, Air Emissions Factors and Quantification, TANKS Emissions Estimation Software, https://www3.epa.gov/ttn/chief/software/tanks/index.html (last visited February 12, 2018) (last modified September 27, 2016). *See also* Exhibit "A" attached herewith (showing the full contents of the aforementioned webpage).

[4]   *Id.* (emphasis added).

information was "Tanks 3.0."[5] If version 4.0.9d of the Tanks software is outdated, it stands to reason that version 3.0 is even less current.

ACHD cannot rely on the Tanks software to produce accurate emissions estimates for the Ashland facility. In keeping with the current EPA recommendation, ACHD must use "the equations/algorithms specified in AP-42 Chapter 7 for estimating VOC emissions from storage tanks."[6] In addition, ACHD must confirm with Ashland that the Tanks 3.0 inputs provided in their application will be sufficient for this purpose.

2. ACHD must revise or further-explain the emissions calculations for volatile organic compounds ("VOC") emitted from the thermal oxidizer

For several pollutants listed in Table V-A-1 of the Permit, the hourly emission limits reflect the maximum amount of a substance that could be emitted in one hour assuming that the process in question operates for 8,760 hours, which is the equivalent of 24 hours of operation for 365 days.[7] ACHD must explain why it did not follow this approach to calculating the emission limits for VOC from the thermal oxidizer or revise the emissions limits contained therein.

Specifically, Table V-A-1 lists an hourly emission limit for VOC of 5.72 pounds per hour ("lb/hr") and an annual emission limit of 9.85 tons per year ("tpy"). If the thermal oxidizer runs 8,760 hours per year emitting 5.72 lb/hr VOC, the annual emissions would be 25.05 tpy. On the other hand, if the thermal oxidizer is limited to emitting 9.85 tpy VOC, the corresponding hourly limit on VOC emissions would be 2.25 lb/hr. It would be mathematically possible for the thermal oxidizer to emit 5.72 lb/hr VOC for short periods and still meet an annual standard of 9.85 tpy if the hourly rate was well below 2.25 lb/hr at other times. However, if ACHD is

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[5]   Ashland, LLC, *Renewal Application for ACHD Permit 0037a*, at Appendix A (August 21, 2017).

[6]   *See* Exhibit "A".

[7]   Permit, at 30 (this is the case for all criteria pollutants in Table V-A-1).

relying on this averaging effect to meet the annual limit, there is no discussion of it in the TSD or

Installation Permit No. 0037-I001a, the original basis of the VOC limit as noted in the TSD.[8]

3. **ACHD must revised the emissions limitations contained in the Permit to account for "Weigh Tank Emissions"**

Appendices "A" and "B" to the TSD contain a process-by-process Emissions Summary

and a process-by-process listing of the Main Contributors of HAPs, respectively.[9] Both

Appendices list emissions limits for PR Plant Batch Tanks, PR Plant Blend Tanks, and PR Plant

Thin Tanks under Process ID No. P001a.[10] In fact, the TSD and Permit list four sets of

emissions limits for P001a: for Batch Tank, Blend Tank, Thin Tank, *and Weigh Tank

Emissions*.[11] Although Table V-B-4 appears to address Weigh Tank Emissions, the Annual

Emissions Limits contained in Table VIII-1 do not.[12] ACHD must revise the Annual Emissions

Limits to include the emissions contributions contained in Table V-B-4.

4. **ACHD must revise the styrene HAP annual limit**

The Permit appears to contain an additional calculation error, in this instance with respect

to the Annual Emission Limit for Styrene. Table VIII-1 lists the Annual Emission Limit as 6.96

tpy.[13] Appendix B to the TSD, which delineates the main HAP contributors by process, also lists

the annual "Total" for Styrene as 6.962.[14] Appendix B suggests that 6.962 tpy is the sum of the

various styrene emissions from six different emissions units: P001a (PR Plant Batch Tanks),

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[8]   Permit, at 30, condition V-A-1 (noting several instances of citations to the above-mentioned installation permit).

[9]   TSD, at 21-22.

[10]   *Id.*

[11]   *See* TSD at 7-8, Tables 5-8. *See also* Permit at 44-46, Tables V-B-1 through V-B-4.

[12]   Permit, at 88

[13]   *Id.*

[14]   TSD, at 22. Note that the values in Appendix B do not have unit labels but the values match the tpy values throughout the TSD.

P001a (PR Plant Blend Tanks), P001a (PR Plant Thin Tanks), P001c (PR Plant Loading

Operations), P001e (PR Plant Pumps, Valves, Etc.), and P001g (PR Plant Storage Tanks).[15] The

Permit contains identical values for styrene for these six processes in Tables V-B-1, V-B-2, V-B-

3, V-D-1, V-F-1, and V-H-1.[16] Adding the values for Styrene for these six process as contained

in Appendix B and the six aforementioned Permit Tables results in a sum of 8.922 tpy.

Somehow, both Appendix B and the Annual Emission Limitations in the Permit failed to account

for precisely 1.96 tpy styrene. Coincidentally, the value for styrene emissions from Process ID

No. P001e is 1.960 tpy. ACHD must revise the styrene emissions limit to accurately reflect the

sum of the six sources of styrene listed in the draft Permit or provide an explanation as to why

the P001e emissions should not be counted.

5. **ACHD should consider adding terms to the Permit concerning the use and storage of ammonia at the Facility**

In the heading of Permit Section V.A, ammonia is listed as a raw material for the

Polyester Resins Plant process.[17] In addition, the process diagram contained in the Permit shows

ammonia being added to "Aqueous Waste Tank V-904."[18] Yet, none of the storage tanks listed

in the Ashland's application appear to store ammonia.[19] There is not enough information

provided in the TSD or the various documents referenced therein to determine the amount or the

concentration of ammonia used and stored at the Facility. As a precaution, ACHD should make

additional inquiries to confirm, at a minimum, that the concentration and quantity of ammonia

stored at the Facility do not trigger Clean Air Act § 112(r) requirements.

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[15]   TSD, at 22.

[16]   Permit, at 44-46, 51, 56, and 60.

[17]   Permit, at 29.

[18]   Permit, at 9.

[19]   *See* Renewal Application, *supra*.

Exhibit "A"

Air Emissions Factors and Quantification

TANKS Emissions Estimation Software, Version 4.09D

*****The TANKS model was developed using a software that is now outdated. Because of this, the model is not reliably functional on computers using certain operating systems such as Windows Vista or Windows 7. We are anticipating that additional problems will arise as PCs switch to the other operating systems. Therefore, we can no longer provide assistance to users of TANKs 4.09d. The model will remain on the website to be used at your discretion and at your own risk. We will continue to recommend the use of the equations/algorithms specified in AP-42 Chapter 7 for estimating VOC emissions from storage tanks. The equations specified in AP-42 Chapter 7 (https://www.epa.gov/ttn/chief/ap42/ch07/index.html) can be employed with many current spreadsheet/software programs.**

Released October 5, 2006

- System Requirements
- How to Get *TANKS* 4.09D
- What's new in 4.09D?
- Errors and fixes in 4.09D - **Please see the information regarding monthly emissions results in TANKS. Added August 2012.**
- *TANKS* Frequently Asked Questions

What Is *TANKS*?

TANKS is a Windows-based computer software program that estimates volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from fixed- and floating-roof storage tanks. *TANKS* is based on the emission estimation procedures from Chapter 7 of EPA's *Compilation Of Air Pollutant Emission Factors* (AP-42). The user's manual, available in Adobe Acrobat format and WordPerfect, explains the many features and options of *TANKS*. The program includes on-line help for every screen.

Audience

TANKS is designed for use by local, state, and federal agencies, environmental consultants, and others who need to calculate air pollutant emissions from organic liquid storage tanks.

Program Capabilities

TANKS uses chemical, meteorological, roof fitting, and rim seal data to generate emissions estimates for several types of storage tanks, including:

- vertical and horizontal fixed roof tanks
- internal and external floating roof tanks
- domed external floating roof tanks
- underground tanks

See the *TANKS* FAQ for additional information about *TANKS*.

The *TANKS* program employs a chemical database of over 100 organic liquids, and a meteorological database of over 240 cities in the United States. The program allows the addition of more chemicals and cities, if desired. *TANKS* is capable of calculating individual component emissions from known mixtures and estimating emissions from crude oils and selected refined petroleum products using liquid concentration HAP profiles supplied with the program.

System Requirements

TANKS 4.09 will run on Windows XP desktops. The program requires 8 MB of random access memory (RAM). The installed program requires 8 MB of available hard disk space. *TANKS* is designed for operation from a PC's hard drive. Many users are able to share tank databases via LAN connections to increase the utility of the program.

You must have administrative rights to all folders on your desktop. The installation process installs files to the Windows system directory.

TANKS is not supported on desktops using Windows Vista or Windows 7. Suggestions and fixes for running TANKS on a Vista or Windows 7 platform will be posted whenever possible. Please see the "Errors and fixes" table below.

Installations requiring TANK program files to be resident on a LAN are not advisable and are beyond our support capabilities.

How To Get A Copy Of *TANKS*

Version 4.09D of the *TANKS* software is available here.
You are advised to bookmark this web site and check it from time to time for information about updates to the TANKS program.

TANKS 4.09D - October 3, 2005 TANKS 4.09D supersedes all previous versions of the TANKS software program.
What's new in 4.09D? • The program is now compatible with all versions of MS Access. • The program installation has been streamlined and the program files are smaller. • TANKS displays and prints reports with an Internet browser. The report formats have not changed. • Chemical Data: ◦ The chemical data was updated with missing CAS numbers.

- ◦ New compounds were added to the database.
- ◦ Antoine's coefficients were corrected for several compounds.
- ◦ A new partial speciation profile for gasoline oxygenated with ethanol was added.
- Incorrect meteorological data was corrected.

Installation instructions - PLEASE READ	(TXT 2K)
TANKS 4.09D Installation File Windows Installer file	(MSI 6.5M)
User's Manual for TANKS 4.0 The manual has not been updated	(PDF 646K)
Alternate **TANKS 4.09D Installation File**	(EXE 12M)
If the Windows Installer file does not correctly install, use this file. Please read the installation instructions.	
Explanation of File Formats	

TANKS 4.09D errors and available fixes

PROBLEM	FIX
Determining monthly emissions. One of the errors in TANKS is that it uses annual average liquid bulk temperature when computing monthly emissions rather than calculating a monthly liquid bulk temperature. Since TANKS uses annual average liquid bulk temperature in the monthly calculations, a change in the temperature for one month will affect every month, in that changing one month changes the annual average. As such, the TANKS program will NOT adequately account for the monthly variations. Therefore, TANKS should NOT be used for determining maximum monthly true vapor pressure and users should not rely on the TANKS model for accurately determining monthly emissions in general. Users should rely on the equations specified in AP-42 Chapter 7.1 to perform those calculations.	Use section 7.1 of AP42, Organic Liquid Storage Tanks to correctly calculate monthly emissions.
There are revised deck fitting loss factors in the 2006 update to section 7.1 of AP42, Volatile Organic Liquid Storage Tanks. How can I include those in my TANKS program?	Updating the fitting table in TANKS (PDF 101K) For more detailed information about the deck fittings, see section 7.1 of AP42, Organic Liquid Storage Tanks
When I create a MS Excel or MS Access report from TANKS, I don't know what all the fields mean.	Field descriptions for MS Excel and MS Access reports from TANKS (PDF 50K) For more detailed information about the fields, see section 7.1 of AP42, Organic Liquid Storage Tanks
MS Vista users: TANKS does not run.	Possible solution for Vista users (ZIP 40K)
Internet Explorer version 7 users: The report function won't work and program locks up.	Possible solution for IE 7 users (TXT 2K)
Some of the partial speciation profiles that come with version 4.09D do not work.	Instructions for updating chemical database (PDF 8K)
Chemicals added and Antoine's coefficients corrected in 4.09D.	Additions to TANKS 4.09D (TXT 4K)
Error 1935 during installation.	Use the alternate installation provided above. Follow the installation instructions.
Could not find installable ISAM error message, or 'The wizard is unable to access information in the file.'	In Windows Control Panel open 'Regional and Language Options' and add your language.
TANK reports blocked as pop-up or Active X not allowed.	Best available solution (TXT 1K)

Last updated on Tuesday, September 27, 2016