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ENGINEERING EVALUATION/FACT SHEET

B ACKGROUND INFORMATION

Application No.:	R13-2581B
Plant ID No.:	039-00031
Applicant:	Stockmeier Urethanes U.S.A. Inc.
Facility Name:	Clarksburg Facility
Location:	Clarksburg
NAICS Code:	325211
Application Type:	Modification
Received Date:	May 6, 2016
Engineer Assigned:	Edward S. Andrews, P.E.
Fee Amount:	$2000.00
Date Received:	September 29, 2014
Complete Date:	August 4, 2016
Due Date:	November 2, 2016
Applicant Ad Date:	May 9, 2016
Newspaper:	*The Exponent-Telegram*
UTM's:	Easting: 560.882 km Northing: 4,348.122 km Zone: 17
Description:	This action is for the installation of three additional storage tanks, eight reactors, and two emergency generators.

DESCRIPTION OF PROCESS

Stockmeier Urethanes USA is an automated Chemical Blending Facility that produces CASE (Coatings, Adhesives, Sealants and Elastomers) Urethanes for use in sports surfaces such as running tracks, children's playgrounds and artificial turf; decorative surfaces; weather-resistant elastomers for roofs, parking decks and trucks; structural adhesives for industrial applications; casting resins for cable, electrical and other technical applications; and ancillary products such as cleaners and catalysts.

Stockmeier bulk raw materials are unloaded from tanker trucks (TT) to various bulk storage tanks on site. Bulk isocyanates are unloaded into storage tanks S1-S6 and S12. Bulk polyols are unloaded into storage tanks S7-S10 and S13. Additive AD-144233-PLS is unloaded into storage tank S11.

The bulk isocyanates (Bulk: ISO 01, ISO 02, ISO 03, ISO 04, MI 50 and ISO 06), which includes 4,4-methylene diphenyl diisocyante (MDI), polymeric MDI (PMDI), and toluene diisocyanate (TDI), are used in Reactors R1 - R13 where they are mixed with various Polyols including (Bulk Polyols: Poly 02, 05, 06, ES 02 & Soy), bulk additive AD-144233-PLS and various other small component packaged items to manufacture products. Polyols and powders (dry materials) are blended in dispersion machines D1- DS to manufacture non-reacted dispersions. The processing conditions may include: nitrogen or atmospheric conditions, heating, cooling, pressurization and vacuum. After various mixing and/or reacting processing steps, the final products are transferred to drums, pails, intermediate bulk containers (IBC's), or bulk tanker trucks (TT) for shipment to our customers.

New equipment included in this permit application includes: One 6,000 gallon polyol storage tank (S13), one 6,700 gallon MDI storage tank (S12), and eight reactors (RS-8, R10-13) ranging in size from 275 gallons to 6,250 gallons, and one 4,000 gallon dispersion vessel (DS). Prospective new equipment included in this air permit update includes: A 20,000 gallon polyol storage tank for offloading railcars, and one 6,250 gallon reactor (R9).

Due to the addition of various pieces of equipment and new products, several new emission points and carbon adsorption control devices have been added to the manufacturing area.

The facility installed a 600 kW emergency generator to support the manufacturing operation in the event of interrupted electric power, which will be powered by 909 horsepower diesel fired engine with a 1000 gallon fuel cell. The administration office building currently has a Cummins 176 horsepower natural gas fired emergency generator in use. The engine models for both of these emergency generators were issued engine family numbers by U.S. EPA to be compliant with the applicable emission standards under 40 CFR Part 60.

SITE INSPECTION

On July 14, 2016, this writer conducted an announced site visit of the Clarksburg Facility. Mr. Rocky Romine, Director of Operations & Environmental, Health, and Safety for Stockmeier Urethanes; Ms. Lori Steele, Senior Environmental Scientist for MSES Consultants; and Brian Woods, Senior Environmental Scientist for MSES Consultants, accompanied this writer during the visit.

This visit included a brief introductory meeting in the Administration Building, a walk through the process in the main manufacturing building and a brief closing meeting. The facility is located in an industrial park with other existing businesses nearby. The location of the facility is acceptable for the proposed type of emissions units.

Figure 1 - Stockmeier Urethane USA, Inc. – Clarksburg Facility

ESTIMATE OF EMISSION BY REVIEWING ENGINEER

MDI and TDI are classified as hazardous air pollutants (HAPs) under the Clean Air Act. Also, these two compounds are classified as volatile organic compounds (VOCs). Therefore, these materials are treated as two pollutants under the Clean Air Act.

The applicant used MDI/PMDI and the TDI Calculators that are available from the American Chemistry Council. The calculator provides a fast and convenient method to estimate MDI emissions from typical process activities used in the polyurethane industry. The calculator uses Microsoft Excel as an operating platform. Details and discussion of the equations used in the calculator can be found in "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry", which are made available to the public at www.americanchemistry.com

The MDI/PMDI Calculator was used to predict emissions from the working and breathing losses from the isocyanate tanks, filling-blending operations and fugitives emissions from equipment leaks. The TDI Calculator was used for tank losses, to predict fugitive emissions from equipment leaks, and other fugitive losses.

The methods used in the MDI/PMDI Calculator for tank losses and filling & blending operations does not take into count the use of controls (i.e. activated carbon, blanket gas system) or the actual dimensions of the vessel. This calculator does require the user to input the volume of the vessel and ambient temperature with fluctuation range.

To determine if this calculator is predicting MDI and TDI emissions comparable to the methods outlined in AP-42, the writer used the Tank Losses tool in ProMax™ 4.0 to predict VOC emissions from isocyanate tanks. The Tank Losses tool in this process simulator is based on the equations published in AP-42 Chapter 7.1. This comparison is presented in the following table.

Table #1 – Compression Isocyanates Emissions from the Isocyante Tanks							
Tank No.	MDI/PMDI Calculator			ProMax™ 4.0 Tank Losses			Throughput
	Breathing Losses (lb/yr)	Working Losses (lb/yr)	Total lb/yr	Breathing Losses (lb/yr)	Working Losses (lb/yr)	Total (lb/yr)	Gallons/yr
S1 (MDI)	2.78E-5	1.36E-3	0.001	6.55E-5	2.71E-4	0.0003	963,496
S2 (MDI)	6.31E-6	1.16E-4	0.0001	1.82E-5	1.66E-5	0.00003	82,4482
S3 (MDI)	6.31E-6	4.68E-4	0.0005	1.82E-5	6.55E-5	0.0001	332,818
S4 (MDI)	6.31E-6	8.23E-4	0.0008	1.82E-5	7.48E-5	0.0001	584,825
S5 (TDI)	5.19E-1	1.25E-2	0.5315	6.53E-5	1.93E-4	0.0003	262,440
S6 (S103/TDI)	6.62E-2	5.19E-1	0.527	9.16E-6	6.16E-5	0.0001	262,440
S12 (MDI)	5.28E-6	1.13E-3	0.0011	1.39E-5	1.52E-4	0.0002	804,702
Totals			1.062			0.0011	3,772,763

The writer concluded that the calculation used to determine the breathing and working losses used in the MDI/PMDI Calculator is more conservative that the method outlined in AP-42. For TDI, the writer had to treat TDI as a single oil by entering in the molecular weight and specific gravity. ProMax calculated the vapor pressured of this single oil (TDI) at 3.01E-4 mmHg. The calculated vapor pressure of this simulated TDI should have been around 1.20E-1 mmHg, which is the actual vapor pressure of TDI at 113 degrees Fahrenheit. Because the calculated vapor pressure of the simulated TDI was significantly less that actual, the predicted VOC emissions using the Tank Losses Stencil under predicted the emissions from Tanks S5 and S6.

In the application, the applicant assumed the VOC emissions from the polyol to be negligible. The writer estimated the VOC emissions from all 6 polyols and one (1) soy oil tanks to be 53.5 pounds per year, which includes working and breathing losses. The tank losses calculations were performed using ProMax 4.0 and treating the polyols and soy oil as a single oil with a molecular weight of 2,000 lb/lb-mole and 879.4 lb/lb-mole with a specific gravity of 1.02 and 0.79 respectively.

The writer verified the applicant's emission estimates from the filling-blending operations and fugitive MDI using the MDI/PMDI calculator. The TDI calculator was used to determine the fugitive TDI emissions from equipment leaks. These estimates are presented in the following table.

Table #2 Other MDI and TDI emissions		
Source	Type of Emissions	Annual Emissions (lb/yr)
Blending-Filling Operations	MDI	0.2
Fugitive – Monitoring	MDI	26.4
Fugitive – Equipment Leaks	MDI	0.6
Fugitive – Monitoring	TDI	551.0
Fugitive – Equipment Leaks	TDI	129.0
Total		707.2

The equipment leaks were based on the number of components either in contact with MDI or TDI. The fugitive monitoring emissions were based on measured concentration of MDI and TDI at another facility using the dimensions of the Clarksburg Facility.

These emission estimates are before controls. Stockmeier has proposed to vent all of the reactors and storage tanks except for two of the polyol storage tanks (S13 and S14) to a carbon drum to control organic compounds. In addition, all of the storage tanks are operated using a blanket gas system to control the water content in the vapor space of the storage vessel. The applicant claimed that this type of absorption control system would have a control efficiency of 99% for organic compounds to include MDI and TDI. The writer believes that these emissions are reduced nearly to zero until the carbon drum becomes completely saturated with organics in which breakthrough occurs and at that point the control efficiency of the drum is zero until the saturated carbon is replaced.

The applicant proposed a 1,200 pound per year emission limit for MDI and TDI. This limit is creates a 240% margin of compliance. Normally, this percentage for the margin of compliance would not be acceptable. The facility is a custom order urethane provider with customers requiring different unique urethane mixtures for different industry sectors producing a wide variety of products. Thus, the urethanes prepared today will not be the same mixture as tomorrow. Therefore, the emission rates will be very different.

Second, the applicant proposed a VOC limit of one ton for each of the six (6) emission points that the tanks and reactors are vented. For each of the six emission points, the applicant proposed 1 ton of VOCs per year with 0.1 tons being MDI and TDI.

The writer assumed any VOC, MDI or TDI emissions due to clean-up activities would be accounted for in the fugitive emissions potential using the monitoring data in the MDI and TDI calculators. Stockmeier uses two different solvents for clean-up activities which are acetone, which is not classified as a VOC, and tripropyleneglycol methyl ether, which has low vapor pressure. These two cleaning solvents would not significantly contribute to the fugitive emissions.

The other sources of emissions at the facility are combustion engines for the emergency generators. These emissions are presented in the following table.

Table #3 – Emissions from the Emergency Generators				
Generator Set Name		100 kW Generator	600 kW Generator	
Engine Manufacturer		Cummins	Perkins	
Model		200DGFC	D20P1	
Year Manufactured		2014	2015	
Fuel Consumption Rate		1,355 scf/hr	41.4 gal/hr	
Brake Horsepower (Bhp)		149	909	
Fuel Type		Natural Gas	Diesel	Totals
Particulate Matter (PM)/PM_{10}/$PM_{2.5}$	EF (g/Hp-hour)	0.04	0.05[1]	
	Lb/hr	0.013	0.10	0.113
	TPY[2]	0.01	0.025	0.035
Oxides of Nitrogen (NO_x)	EF (g/Hp-hour)	0.16	3.88	
	lb/hr	0.03	7.78*	7.81
	TPY[2]	0.04	1.95*	1.99
Sulfur Dioxide (SO_2)	EF[4]	0.004	0.004	
	lb/hr	0.07	0.17	0.21
	TPY[2]	0.02	0.04	0.06
Carbon Monoxide (CO)	EF[1] (g/Hp-hour	0.9	0.6	
	lb/hr	0.30	1.20	1.5
	TPY[2]	0.08	0.30	0.38
Volatile Organic Compounds (VOC)	EF[1] (g/Hp-hour)	0.42	*	
	lb/hr	0.14	3.89	4.03
	TPY[2]	0.04	0.97	1.01
Formaldehyde (HAP)	EF[2] (lb/MMBtu)	0.0317	0.0012	
	lb/hr	0.04	0.01	0.05
	TPY[2]	0.01	0.00	0.01
Carbon Dioxide Equivalent (CO_2e)	EF[3] (lb/MMBtu)	117.098	163.22	
	lb/hr	165.01	878.45	1,043.47
	TPY[2]	41.25	219.61	260.86

1 – Manufacturer Emission Data
2 – AP-42 Emission Factors from Chapters 3.2 for natural gas engine and 3.3. for diesel engine
3 – Based on factors in 40 CFR 98 Subpart C
4 – Based on maximum sulfur content in fuel.
* - Manufacturer's data combined NO_x + non methane hydrocarbons (NMHC) as one pollutant.

The following table is a summary of the facility's new potential to emit with the proposed changes.

Table #4 - Summary of the Facility Potential to Emit			
Pollutant	Current Permit Limit (tpy)	Proposed Emission Limits (tpy)	Net Change in Emissions (tpy)
CO	0.00	0.38	0.38
NO_x	0.00	1.99	1.99
$PM/PM_{10}/PM_{2.5}$	0.00	0.04	0.04
SO_2	0.00	0.06	0.06
VOC	1.48	6.03	4.55
MDI	0.20	0.60	0.40
TDI	0.20	0.60	0.40
Formaldehyde	0.00	0.01	0.01
Total HAPs*	0.95	1.21	0.26
CO_2e	0.00	260.86	260.86

* The facility was permitted for 0.45 tons per year of xylene and 0.1 tons per year of ethylbenzene emissions in Permit R13-2581, both of these are HAPs. The facility does not consume materials that contains these compounds. This accounts for the difference in the facility's increase in total HAPs.

REGULATORY APPLICABLILITY

STATE RULES

The Clarksburg Facility is subject one state rule due to activities involved in a manufacturing process, which is 45 CSR 7 (Rule 7). The main source of particulate matter emissions from the process is when solids are added to the vats for the dispersion machines, which should be considered as material handling activities. Under Rule 7, the rule requires the fugitive dust from such support activities to the manufacturing process to be minimized. Stockmeier Urethanes has installed a duct system that connects each of the dispersion machines to a Donaldson four (4) cartridge dust collector with a collection efficiency of 99% for particulate matter. This dust collector vents within the manufacturing building. This level of control of fugitive particulate matter satisfies 45 CSR §7-5.1.

MDI and TDI are not defined as toxic air pollutants in 45 CSR 27 and therefore 45 CSR 27 does not apply to this facility.

FEDERAL REGULATIONS

New Source Performance Standards (NSPS)

The NSPS regulations currently apply to numerous categories of sources. These standards typically impose emission limitations and operating requirements specific to each source category.

A number of the following NSPS rules promulgated in 40 CFR Part 60 have potential applicability to the proposed project. The applicability of each rule is evaluated below.

Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 – This rule applies to storage tanks with capacities of at least 75 cubic meters (19,800 gallons) that contain volatile organic liquids. However, the rule exempts tanks meeting either of the following conditions:

- Tanks greater than 151 cubic meters (39,900 gallons) containing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) (26.3 mm Hg); or

- Tanks between 75 and 151 cubic meters containing a liquid with a maximum true vapor pressure less than 15 kPa (112.5 mm Hg).

Stockmeier proposed to install a vessel that has the capacity to store 20,000 gallons of an organic liquid, which is identified as S14 that will store Polyol 05. This vessel meets the size criteria for applicability. Stockmeier claims that the vapor pressure of the organic liquid is less than 1 mm Hg. The writer conducted a true vapor pressure analysis using a process simulator (ProMax 4.0) of the liquid used to predict the VOC emissions from the Polyol storage tanks, which was 0.12 mm Hg. Thus, the true vapor pressure criteria is not satisfied and Storage Tank S14 is not an affected source under Subpart Kb.

Subpart DDD - Standards of Performance for VOC Emissions from the Polymer Manufacturing Industry – This rule applies to facilities manufacturing one or more of the following polymers: polypropylene, polyethylene, polystyrene, or poly (ethylene terephthalate). Since the facility will not manufacture any of these compounds, this rule does not apply.

Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines – This rule applies to stationary compression (diesel-fired) engines manufactured after April 1, 2006. Stockmeier has installed a stationary, diesel-fired engine that was manufactured in 2015. Therefore, this regulation applies to the 600 kW emergency generator identified as EG52. This 2015 Model Year Perkins engine used in this generator set was evaluated and determine to be a certified model engine by U.S. EPA under Engine Family No. FCPXL18.1NYS.

Thus, the applicant has chosen to comply with the certified engine option in this regulation. Therefore, the applicant is required to maintain the emission related setting of the engine within the manufacturer's specifications and use ultra-low sulfur diesel fuel. This engine was certified under the emergency use standards. Thus, the generator set can only be operated for 50 hours per year for maintenance and readiness checks and additional 50 hours per year for other non-emergency purposes other than peak shaving. There is no limit on operating hours for emergency operations.

Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines – This rule applies to stationary spark ignition (gas-fired engines) constructed after June 12, 2006. Stockmeier Urethanes has installed a stationary gas-fired engine manufactured in 2014. Therefore, this regulation applies to the 100 kW emergency generator identified as EG51. This 2014 Model Year Generac engine used in this generator set was evaluated and determined to be a compliance model engine by U.S. EPA under Engine Family No. EGNXB06.82C1.

Thus, the applicant has chosen to comply with the complaint engine option in this regulation. Therefore, the applicant is required to maintain the emission related setting of the engine within the manufacturer's specifications and use ultra-low sulfur diesel fuel. This engine was certified under the emergency use standards. Thus, the generator set can only be operated for 50 hours per year for maintenance and readiness checks and additional 50 hours per year for other non-emergency purposes other than peak shaving. There is no limit on operating hours for emergency operations.

National Emission Standards for Hazardous Air Pollutants

The NESHAP regulations apply to the following compounds listed as hazardous air pollutants (HAPs) prior to the passage of the Clean Air Act Amendments of 1990 (CAAA): asbestos, benzene, beryllium, coke oven emissions, inorganic arsenic, mercury, radionuclides, and vinyl chloride. The regulations list emission limits, operating parameters, and other requirements that must be followed for specifically listed source types that emit these compounds. NESHAP regulations do not apply to this application because the new operation will not emit any of these air contaminants.

Maximum Achievable Control Technology and Generally Available Control Technology Standards

Historically, MACT standards have been promulgated for numerous categories of major HAP sources (those with potential emissions of 10 or more tons per year of any individual HAP or 25 tons per year of combined HAPs). EPA has recently begun promulgating Generally Available Control Technology (GACT) standards for area (minor) sources of HAPs. MACT and GACT standards typically impose emission limitations; operating practices; and monitoring, recordkeeping, and reporting requirements on affected facilities. Based on a review of HAP emission data, the proposed operation will be a natural minor (area) HAP source.

With the proposed modification, the Clarksburg Facility will have a potential to emit of total HAPs of 1.21 tons per year, which is less that the major source threshold. Thus, the Clarksburg Facility is classified as an area source of HAPs. The following area source GACT standards promulgated in 40 CFR Part 63 have potential applicability to this project for area sources.

Area Source GACT Rules – The following rules are applicable to area (minor) HAP sources:

Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines – This rule applies to major and area sources of HAPs that have stationary reciprocating internal combustion engines (RICE). The Clarksburg Facility has two stationary internal combustion engines and is classified as an area source of HAPs. Under 40 CFR §63.6590(c), RICE that is subject and complies to regulations under 40 CFR Part 60, which includes Subparts IIII and JJJJ, and meets any of the criteria in (c)(1) through (c)(7) of §63.6590 that no further requirements of Subpart ZZZZ apply to the engine. The two emergency generators are subject to Part 60 requirements and were installed after January 18, 2008, which classify these engines as "new" under Subpart ZZZZ. Thus, the two generator sets satisfy that criteria of §63.6590(c)(1) of being new RICEs located at an area source of HAPs. Therefore, no further requirement of Subpart ZZZZ apply to these two RICEs.

Subpart DDDDDD – National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production Area Sources – This rule applies to facilities that manufacture PVC or copolymers. Stockmeier will not manufacture either of these chemicals. Therefore, this rule will not apply.

40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers: Area Sources – This rule applies to new and existing boilers located at area HAP sources. Stockmeier will not be installing any boilers. Therefore, this rule will not apply.

Subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources – This rule applies to chemical manufacturing process units (CMPUs) at area HAP sources that use or produce 1,3-butadiene; 1,3-dichloropropene; acetaldehyde; chloroform; ethylene dichloride; hexachlorobenzene; methylene chloride; quinolone; arsenic compounds; cadmium compounds; chromium compounds; lead compounds; manganese compounds; nickel compounds; and hydrazine. None of these chemicals will be used or produced at the facility. Therefore, this rule does not apply.

Prevention of Significant Deterioration of Air Quality (PSD)

The purpose of the PSD rules is to maintain air quality in areas that are meeting the National Ambient Air Quality Standards. Harrison County is an attainment area for all criteria pollutants. Chemical process plants, which include Stockmeier's operations, are one of the 28 listed source categories for which the major source threshold is 100 ton/yr. Since the emissions of all pollutants from the new project will be well below this threshold, the PSD rules will not apply.

Nonattainment New Source Review (NNSR) (45 CSR 19)

The NNSR regulations apply in nonattainment areas, i.e., areas that are not meeting the National Ambient Air Quality Standards (NAAQS) for one or more air contaminants. The purpose of the NNSR regulations is to allow for industrial and economic growth in nonattainment areas while progressing toward the attainment of NAAQS. Harrison County is in attainment status for all of the criteria pollutants. Therefore, the NNSR rule does not apply for this particular application.

Rule 30, Requirements for Operating Permits – Stockmeier will not be required to obtain an operating permit because it is not a major source, is not subject to Section 111 or 112 of the Clean Air Act, and is not an affected facility subject to Title IV of the Clean Air Act (Acid Deposition Control).

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The proposed changes to the Clarksburg Facility will not change the status of the facility (area source of HAP). Thus, the potential to emit of combined hazardous air pollutants will remain to be less than 25 tons per year for combined HAP with no single hazardous air pollutant (MDI or TDI) being greater than 10 tons per year. Therefore, no further information was provided on the toxicology of the HAPs emitted at the Clarksburg facility.

AIR QUALITY IMPACT ANALYSIS

The writer deemed that an air dispersion modeling study or analysis was not necessary, because the proposed modification does not meet the definition of a major source as defined in 45CSR14.

MONITORING OF OPERATIONS

The writer recommends the following monitoring requirements:

- Record the production rates by product and number of batches from production unit;
- Record the amount of basic feed stock materials delivered;
- Monitor the breakthrough indicators on the carbon drum control devices on a weekly basis except for C6 (Bulk tanker loadout station).
- Monitor the breakthrough indicator on C6 prior to each loading of a tanker trailer.
- Verify the carbon drum indicators using an IsoSence Sampling Unit or other instrument that measures isocyanate compounds (MDI and TDI) vapors or aerosols down to concentration levels of one (1) part per billion (ppb) on a quarterly basis.
- Monitoring the pressure relief devices on the storage tanks and reactors.
- Establish a leak detection and repair program for the process piping and vapor collection systems.

The writer consider requiring the facility to calculate the MDI and TDI emission on a set frequency. The MDI and TDI calculators are predicting emissions before controls. These controls do not control every source of emissions at the facility (S13, S14, and the fill stations). Even before controls, the MDI and TDI emissions rates are fairly low (less that one ton per year).

The writer believes that the permit needs to focus on the work practices and monitoring of the controls instead of throughput rates or emission rates for this particular facility.

CHANGES TO PERMIT R13-2851

Permit R13-2851 relied on individual throughput limits on the storage vessels and filling stations with emission limits on the corresponding emission point. These emission units were vented to dedicated carbon drum control device. However, the permit only required the carbon be replaced once per year.

Even adopting the proposed emission limits, which is beyond what was predicted using the MDI and TDI, and establishing corresponding throughput limits would limit the facility at some future point in time with actual emissions not exceeding the limit. The writer believes that the appropriate course of action for this permitting action would be to restructure the permit to focus on the monitoring of the control device for detecting when breakthrough occurs and replacing the saturated carbon in a timely fashion with practical requirements to minimize fugitive emissions (i.e. LDAR program).

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates the proposed modification of the facility will meet all the requirements of the applicable rules and regulations when operated in accordance with the permit application. Therefore, the writer recommends granting Stockmeier Urethanes U.S.A. Inc. a Rule 13 modification permit for their polyurethane manufacturing facility located at 20 Columbia Boulevard in Clarksburg, WV.

Edward S. Andrews, P.E.
Engineer

September 6, 2016
Date