

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection**

B664332526

FACILITY: Bayer CropScience LP		SRN / ID: B6643
LOCATION: 1740 WHITEHALL RD, MUSKEGON		DISTRICT: Grand Rapids
CITY: MUSKEGON		COUNTY: MUSKEGON
CONTACT: Richard Pospisil , Head of Health, Safety, Environmental, & Security		ACTIVITY DATE: 12/14/2015
STAFF: Kaitlyn DeVries	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: The purpose of this inspection was to determine compliance with Permit to Install No. 304-87B and 84-96C to all other applicable Air Quality Rules and Regulations.		
RESOLVED COMPLAINTS:		

On Monday December 14, 2015 AQD Staff Kaitlyn DeVries (KD) conducted an unannounced, scheduled inspection of Bayer CropScience LP located at 1740 Whitehall Road, North Muskegon, Michigan. The purpose of this inspection was to determine compliance with Permit to Install (PTI) Numbers 84-86C and 304-87B and all other applicable Air Quality Rules and Regulations.

KD arrived at the facility at approximately 9:45 am; no visible emissions or odors were detected prior to entry to the facility. A scheduled 10:00 am meeting was set with Mr. Richard Pospisil, Head of Site, Health, Safety, Environmental and Security, Mr. Richard King, Manager Quality Control/Quality Assurance, and Mr. James Whitaker, HSE&S Representative all from Bayer CropScience LP (Bayer), Mr. Eric Imbault, Environmental Compliance Manager from Muskegon County Wastewater Management System, and Mr. Tom Berdinski, DEQ Water Resource Division. The scheduled meeting was to discuss the release into the Muskegon County wastewater system that occurred on October 5, 2015.

Bayer presented information regarding the root cause of the release and the corrective actions taken to alleviate and prevent a future release of this type. Further explanation and discussions commenced between all parties before a tour of the facility. After the presentation, prior to the tour, KD informed Mr. Pospisil that this would be a Full Compliance Inspection; the Environmental Rights and Responsibilities pamphlet was distributed, and records were requested. The requested records were detailed in an e-mail later that afternoon, and were received on a later date.

Facility Description:

Bayer is a chemical manufacturing facility that has the ability to manufacture several different products, including herbicides and insecticides. Their primary product is an herbicide which goes by the trade name "Liberty". While the facility has capabilities to produce other products, such as Propamocarb and Imidacloprid, the facility has recently decided to halt production of these two products and temporarily shut down all production in Multi-Purpose Building #2 (MP2). Webb Chemical also retains staff on site, which is primarily utilized for offloading raw materials and other packaging operations.

Regulatory Overview:

Bayer was formerly a 208a source, but has since changed over to a Synthetic Minor Opt-Out source for HAPs and VOC's. Bayer voided PTI No. 66-76D in December of 2014, which covered Multi-Purpose Building #1. Multi-Purpose Building #1 now serves as a warehouse for spare parts.

Bayer currently has the two (2) aforementioned permits and is subject to 40 CFR Part 60 Subpart Dc, New Source Performance Standard (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units. An initial notification of compliance was received in 2012. Further discussion of the boilers may be found in the Compliance Evaluation portion of this report.

Compliance Evaluation:

PTI No. 84-96C

This permit encompasses the various emission units and process equipment, including the storage tanks, housed in and around the Liberty building. The Liberty building processes glufosinate ammonia (GA) to form an herbicide called Liberty, which is the main product at the facility. The permit is broken down into two (2) primary flexible groups FG-GA and FG-AmmoniaTks. With the exception of the ammonia tanks, all of the other storage

tanks and equipment are located inside of the Liberty Building. At the time of the inspection, the Liberty Building is still undergoing some of the expansion activities to increase production. The increase in production was incorporated into the permit when PTI No. 84-96C was most recently revised.

FG-GA

This flexible group includes all the process equipment inside the building used to manufacture GA. In addition to the many process tanks (approximately 20), it also includes an ammonia recovery system, a methanol recovery system, and a cryogenic cooling system for further solvent recovery and reuse. Emission controls include a dust collector (I-350), and three (3) scrubbers (D-680, D-640, and D-155). Per Mr. Pospisil, the Malfunction Abatement Plan (MAP) that was most recently updated in February 2015, is the current version.

Upon inspection, the dust collector in the salt packaging area (I-350) appeared to be properly operating and was equipped with a magnehelic to monitor pressure drop. The pressure drop was 0.5 inches at the time of the inspection. Per Mr. Pospisil, it is standard operating procedure to look at the magnehelic each time packaging is occurring. Pressure drop records can be found attached to this report. Per Mr. Pospisil, Webb Chemical Staff are in charge of the packaging operations.

All three (3) of the scrubbers appeared to be properly equipped with liquid flow indicators, and per Mr. Pospisil, are also equipped with audible alarms. The liquid flow rate of all of the scrubbers appears to be properly monitored, both on the scrubbers themselves and in the control room. At the time of the inspection, D-680 was running at a flow rate of 11.8 gallons per minute. It shall be noted that the August 2015 scrubber records reflect the "shake down" process prior to re-starting production in the plant, thus the records indicate a flow rate of zero (0). Additional flow rate records for D-680, D-640, and D-155 can be found attached to this report. A review of the records indicates that all flow rates appear to be within the range specified in the MAP.

VOC emissions are limited to 2.7 lbs. per ton of product (as 100% GA) based on test protocol. Particulate Matter (PM) is limited to 0.08 lbs./hr based on test protocol. GA product is limited to 8,800 tons per year, 12-month rolling. As of October 2015, the 12-month rolling average is 2251 tons per year.

Per Mr. Pospisil, vapor balance and recovery systems appeared to be properly installed and operated for EU-HCLTk150, EU-HCLTk152, and EU-MethnolTk1010, EU-MethnolTk1010 also has a conservation vent in place.

While the stack dimensions were not directly measured, there were no apparent changes to the stacks.

FG-AmmoniaTks

This flexible group is comprised of the two (2) ammonia storage tanks for the GA production process, located outside of the liberty building. The storage tanks are required to comply with Part 78, Storage and Handling of Anhydrous Ammonia (MIOSHA 1910.111 or Rule 7801), unless other more stringent requirements are applicable. Bayer most recently conducted an inspection of the ammonia storage tank (appendix A of the permit) on August 30, 2015 (attached). According to the records provided, on-site inspection, and conversations with Mr. Pospisil, it appears that the ammonia tanks are properly equipped with safety relief valves; shut-off valves; bulkhead, anchorage or equivalent system to ensure predictable break points; back pressure valves, water trap of 55 gallons minimum size (or ammonia recovery system). The tanks are also equipped with temperature and level gauges, which ensure the tanks are not more than 85% full. Additionally, transfer operations from the rail system are done by trained Webb Chemical staff.

According to Mr. Pospisil, there have been no malfunctions or spills associated with the ammonia tanks in the past year (see attached). Bayer has an approved emergency plan in place, in case a malfunction or spill does occur.

FG-Facility

As previously noted Bayer has Opt-Out limits for VOC's, Individual HAP's, and aggregate HAP's. Upon review of the records (attached), it appears that Bayer is properly maintaining all required records. VOC's are limited to 34 tons per year, 12-month rolling. As of October 2015, the 12-Month Rolling average for VOC's is 3.87 tons. Individual HAP's are limited to 9 tons per year, and as of October 2015 the highest individual HAP, Methanol, was 1.29 tons. Aggregate HAP's are limited to 22.5 tons per year, and as of October 2015, the 12-month rolling average was 2.17 tons.

Materials produced in processes that use HAP's that are volatile organics are limited to 3,000 tons per year, 12-month rolling. As of October 2015, the 12-month rolling average was 59 tons. Materials produced in processes that do not use HAP's that are volatile organics are limited to 9,000 tons per year. As of October 2015, the 12 month rolling average was 0 tons per year.

PTI No. 304-87B

All of the operations associated with PTI No. 304-87B are housed in and around Multipurpose Building #2. There are two (2) flexible groups associated with this permit, FG-Multipurpose2 and FGMultipur2Tks. The subsequent emission units are comprised of three (3) storage tanks, and the process equipment used for the Propamocarb (EUMP#2 EAST) and the Imidacloprid (EU-MP#2 WEST) operations.

On August 31, 2015 AQD received a request to temporarily halt and shut down the production of the Imidacloprid process (EU-MP#2 West) until late 2016, including shutting down all of the air pollution control devices associated with the operations. Later, on October 31, 2015, Bayer requested to also shut down the Propamocarb (EU-MP#2 East) side of the facility as well. However, Bayer does not wish to void the permit as they would like to restart operations at some point. AQD is in the process of approving these requests, however, since the permit is still active, it will be evaluated for compliance.

On December 21, 2016 AQD approved Bayer's request for temporary shutdown of all pollution control equipment, and on January 4, 2016 AQD received notification that shutdown will commence in 14 days.

FG-Multipurpose2

FG-Multipurpose2 encompasses all the process equipment in and associated with Multipurpose Building 2 (MP#2), including EU-MP#3 East, EU-MP#2 West, EU-Tk4114, EU-Tk4115, and EU-Tk4116. As stated above, all processes associated in this building have been, or are in the process of being shut-down and moth-balled, pending future restart. KD was able to observe the entire building and none of the equipment was in operation at the time of the inspection, with the exception of the two (2) scrubbers. The two (2) scrubbers associated with FG-Multipurpose2 are scrubbers D-43601 and D-850000. This building also utilizes one (1) dust collector for pollution control.

FG-Multipurpose2 has the emission limits outlined in the tables below. All emission limits are set based on the screening levels and will not be altered unless a stack test is completed that indicates other values. Since the control devices were being properly operated, it is assumed that all limits are met. Additionally, production records indicate that no Propamocarb was produced during the previous 12 months, and Imidacloprid was only produced during April, May, and June of the previous 12 months.

Toxic Air Contaminants (TACs) with a screening level based on an annual averaging time					
Pollutant ^A	Limit ^B	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
TAC emission limits for SV-70090 operations*					
1.a Each Category 1 TAC	4.2×10⁻⁵ pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
1.b Each Category 2 TAC	2.1×10⁻⁴ pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
1.c Each Category 3 TAC	0.0021 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
1.d Each Category 4 TAC	0.021 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
1.e Each Category 5 TAC	0.21 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
1.f Each Category 6	2.1 pph	According to method	SV-70090	GC 13; SC	R 336.1225

TAC			operations*	III.1, IV.2, VI.5	
1.g Each Category 7 TAC	21 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
1.h Each Category 8 TAC	21 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
TAC emission limits for SV-85090 operations*					
1.i Each Category 1 TAC	1.2×10^{-5} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.j Each Category 2 TAC	6.1×10^{-5} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.k Each Category 3 TAC	6.1×10^{-4} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.l Each Category 4 TAC	0.0061 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.m Each Category 5 TAC	0.061 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.n Each Category 6 TAC	0.61 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.o Each Category 7 TAC	6.1 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.p Each Category 8 TAC	21 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
TAC emission limits for SV-4301 operations*					
1.q Each Category 1 TAC	1.4×10^{-5} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.r Each Category 2 TAC	7.1×10^{-5} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.s Each Category 3 TAC	7.1×10^{-4} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.t Each Category 4 TAC	0.0071 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.u Each Category 5 TAC	0.071 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.v Each Category 6 TAC	0.71 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.w Each Category 7 TAC	7.1 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
1.x Each Category 8 TAC	21 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
A. For the purposes of this permit, Category 1 pollutants are all TACs with a screening level+ of 0.0002 to < 0.001, Category 2 pollutants are all TACs with a screening level of 0.001 to < 0.01, Category 3					

pollutants are all TACs with a screening level of 0.01 to < 0.1, Category 4 pollutants are all TACs with a screening level of 0.1 to < 1, Category 5 pollutants are all TACs with a screening level of 1 to < 10, Category 6 pollutants are all TACs with a screening level of 10 to < 100, Category 7 pollutants are all TACs with a screening level of 100 to < 1000, and Category 8 pollutants are all TACs with a screening level of ≥ 1000. Screening levels and category criteria are in micrograms per cubic meter.

B. Each emission limit applies to process vents only and does not include fugitive emissions from the process.

* "SV-70090 operations" means operations in FG-Multipurpose2 that exhaust through SV-70090. "SV-85090 operations" means operations in FG-Multipurpose2 that exhaust through SV-85090. "SV-4301 operations" means operations in FG-Multipurpose2 that exhaust through SV-4301.

+ Screening levels (SLs) shall be determined according to Rules 231 and 232 (R 336.1231 and R 336.1232). For each toxic air contaminant emitted, permittee shall use SLs determined and listed by the AQD, unless none is listed.

Toxic Air Contaminants (TACs) with a screening level based on a 24-hour averaging time					
Pollutant ^A	Limit ^B	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
TAC emission limits for SV-70090 operations*					
2.a Each Category 1 TAC	8.4×10 ⁻⁶ pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
2.b Each Category 2 TAC	4.2×10 ⁻⁵ pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
2.c Each Category 3 TAC	4.2×10 ⁻⁴ pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
2.d Each Category 4 TAC	0.0042 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
2.e Each Category 5 TAC	0.042 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
2.f Each Category 6 TAC	0.42 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
2.g Each Category 7 TAC	4.2 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
2.h Each Category 8 TAC	21 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
TAC emission limits for SV-85090 operations*					
2.i Each Category 1 TAC	2.4×10 ⁻⁶ pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.j Each Category 2 TAC	1.2×10 ⁻⁵ pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.k Each Category 3 TAC	1.2×10 ⁻⁴ pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.l Each Category 4	0.0012 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225

TAC					
2.m Each Category 5 TAC	0.012 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.n Each Category 6 TAC	0.12 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.o Each Category 7 TAC	1.2 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.p Each Category 8 TAC	12 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
TAC emission limits for SV-4301 operations*					
2.q Each Category 1 TAC	2.8×10^{-6} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.r Each Category 2 TAC	1.4×10^{-5} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.s Each Category 3 TAC	1.4×10^{-4} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.t Each Category 4 TAC	0.0014 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.u Each Category 5 TAC	0.014 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.v Each Category 6 TAC	0.14 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.w Each Category 7 TAC	1.4 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
2.x Each Category 8 TAC	14 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225

A. For the purposes of this permit, Category 1 pollutants are all TACs with a screening level+ of 0.0002 to < 0.001, Category 2 pollutants are all TACs with a screening level of 0.001 to < 0.01, Category 3 pollutants are all TACs with a screening level of 0.01 to < 0.1, Category 4 pollutants are all TACs with a screening level of 0.1 to < 1, Category 5 pollutants are all TACs with a screening level of 1 to < 10, Category 6 pollutants are all TACs with a screening level of 10 to < 100, Category 7 pollutants are all TACs with a screening level of 100 to < 1000, and Category 8 pollutants are all TACs with a screening level of ≥ 1000 . Screening levels and category criteria are in micrograms per cubic meter.

B. Each emission limit applies to process vents only and does not include fugitive emissions from the process.

* "SV-70090 operations" means operations in FG-Multipurpose2 that exhaust through SV-70090. "SV-85090 operations" means operations in FG-Multipurpose2 that exhaust through SV-85090. "SV-4301 operations" means operations in FG-Multipurpose2 that exhaust through SV-4301.

+ Screening levels (SLs) shall be determined according to Rules 231 and 232 (R 336.1231 and R 336.1232). For each toxic air contaminant emitted, permittee shall use SLs determined and listed by the AQD, unless none is listed.

Pollutant ^A	Limit ^B	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
Toxic Air Contaminants (TACs) with a screening level based on an 8-hour averaging time					
TAC emission limits for SV-70090 operations*					

3.a Each Category 1 TAC	4.8×10^{-6} pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
3.b Each Category 2 TAC	2.4×10^{-5} pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
3.c Each Category 3 TAC	2.4×10^{-4} pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
3.d Each Category 4 TAC	0.0024 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
3.e Each Category 5 TAC	0.024 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
3.f Each Category 6 TAC	0.24 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
3.g Each Category 7 TAC	2.4 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
3.h Each Category 8 TAC	21 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
TAC emission limits for SV-85090 operations*					
3.i Each Category 1 TAC	1.4×10^{-6} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.j Each Category 2 TAC	7.0×10^{-6} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.k Each Category 3 TAC	7.0×10^{-5} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.l Each Category 4 TAC	7.0×10^{-4} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.m Each Category 5 TAC	0.0070 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.n Each Category 6 TAC	0.070 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.o Each Category 7 TAC	0.70 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.p Each Category 8 TAC	7.0 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
TAC emission limits for SV-4301 operations*					
3.q Each Category 1 TAC	1.6×10^{-6} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.r Each Category 2 TAC	8.1×10^{-6} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.s Each Category 3 TAC	8.1×10^{-5} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225

3.t Each Category 4 TAC	8.1×10 ⁻⁴ pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.u Each Category 5 TAC	0.0081 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.v Each Category 6 TAC	0.081 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.w Each Category 7 TAC	0.81 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
3.x Each Category 8 TAC	8.1 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225

A. For the purposes of this permit, Category 1 pollutants are all TACs with a screening level+ of 0.0002 to < 0.001, Category 2 pollutants are all TACs with a screening level of 0.001 to < 0.01, Category 3 pollutants are all TACs with a screening level of 0.01 to < 0.1, Category 4 pollutants are all TACs with a screening level of 0.1 to < 1, Category 5 pollutants are all TACs with a screening level of 1 to < 10, Category 6 pollutants are all TACs with a screening level of 10 to < 100, Category 7 pollutants are all TACs with a screening level of 100 to < 1000, and Category 8 pollutants are all TACs with a screening level of ≥ 1000. Screening levels and category criteria are in micrograms per cubic meter.

B. Each emission limit applies to process vents only and does not include fugitive emissions from the process.

* "SV-70090 operations" means operations in FG-Multipurpose2 that exhaust through SV-70090. "SV-85090 operations" means operations in FG-Multipurpose2 that exhaust through SV-85090. "SV-4301 operations" means operations in FG-Multipurpose2 that exhaust through SV-4301.

+ Screening levels (SLs) shall be determined according to Rules 231 and 232 (R 336.1231 and R 336.1232). For each toxic air contaminant emitted, permittee shall use SLs determined and listed by the AQD, unless none is listed.

Pollutant ^A	Limit ^B	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
Toxic Air Contaminants (TACs) with a screening level based on a one-hour averaging time					
TAC emission limits for SV-70090 operations*					
4.a Each Category 1 TAC	3.3×10 ⁻⁶ pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
4.b Each Category 2 TAC	1.6×10 ⁻⁵ pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
4.c Each Category 3 TAC	1.6×10 ⁻⁴ pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
4.d Each Category 4 TAC	0.0016 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
4.e Each Category 5 TAC	0.016 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
4.f Each Category 6 TAC	0.16 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
4.g Each Category 7 TAC	1.6 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225

4.h Each Category 8 TAC	16 pph	According to method	SV-70090 operations*	GC 13; SC III.1, IV.2, VI.5	R 336.1225
TAC emission limits for SV-85090 operations*					
4.i Each Category 1 TAC	9.8×10^{-7} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.j Each Category 2 TAC	4.9×10^{-6} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.k Each Category 3 TAC	4.9×10^{-5} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.l Each Category 4 TAC	4.9×10^{-4} pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.m Each Category 5 TAC	0.0049 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.n Each Category 6 TAC	0.049 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.o Each Category 7 TAC	0.49 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.p Each Category 8 TAC	4.9 pph	According to method	SV-85090 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
TAC emission limits for SV-4301 operations*					
4.q Each Category 1 TAC	1.1×10^{-6} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.r Each Category 2 TAC	5.7×10^{-6} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.s Each Category 3 TAC	5.7×10^{-5} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.t Each Category 4 TAC	5.7×10^{-4} pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.u Each Category 5 TAC	0.0057 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.v Each Category 6 TAC	0.057 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.w Each Category 7 TAC	0.57 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225
4.x Each Category 8 TAC	5.7 pph	According to method	SV-4301 operations*	GC 13; SC III.1, IV.1, VI.5	R 336.1225

A. For the purposes of this permit, Category 1 pollutants are all TACs with a screening level+ of 0.0002 to < 0.001, Category 2 pollutants are all TACs with a screening level of 0.001 to < 0.01, Category 3 pollutants are all TACs with a screening level of 0.01 to < 0.1, Category 4 pollutants are all TACs with a screening level of 0.1 to < 1, Category 5 pollutants are all TACs with a screening level of 1 to < 10, Category 6 pollutants are all TACs with a screening level of 10 to < 100, Category 7 pollutants are all TACs with a screening level of 100 to < 1000, and Category 8 pollutants are all TACs with a screening

level of ≥ 1000 . Screening levels and category criteria are in micrograms per cubic meter.
 B. Each emission limit applies to process vents only and does not include fugitive emissions from the process.
 * "SV-70090 operations" means operations in FG-Multipurpose2 that exhaust through SV-70090. "SV-85090 operations" means operations in FG-Multipurpose2 that exhaust through SV-85090. "SV-4301 operations" means operations in FG-Multipurpose2 that exhaust through SV-4301.
 + Screening levels (SLs) shall be determined according to Rules 231 and 232 (R 336.1231 and R 336.1232). For each toxic air contaminant emitted, permittee shall use SLs determined and listed by the AQD, unless none is listed.

Pollutant	Limit	Emissions as of October 2015	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
5.a Volatile organic compounds (VOCs)+	10.0 tons	0.05 tons	12-month rolling ++	FG-Multipurpose2	SC III.1, IV.1, VI.7	R 336.1702(a)
5.b Organic compounds that are "volatile" but are not "VOCs"+	10.0 tons ¹	0.00 tons	12-month rolling ++	FG-Multipurpose2	SC III.1, IV.1, VI.7	R 336.1224
5.c Particulate matter	0.90 lb/hr	0.02 lbs./hr	According to method	FG-Multipurpose2	GC 13; SC III.1, IV.2	R 336.1224, R 336.1225, R 336.1331

Bayer maintains a malfunction abatement plan (MAP), for which no changes have been made since the previous submittal in February 2015. As previously mentioned, Bayer is in the process of requesting shutdown the control equipment associated with these processes. At the time of the inspection, KD was able to observe the control devices still in operation.

Upon inspection, each scrubber was properly equipped with a liquid flow rate monitor, and records indicate proper documentation of the flow rate at least once per shift (see attached records). A previously mentioned, no production was underway in this building during the time of the inspection. The available records indicate that Bayer is still properly recording the production in the building, even though it is zero (0). Satisfactory records were also available for the dust collector (I-70000) located in the building. While the stacks were not directly measured, there appeared to be no changes in the stack dimensions.

FG-Multipur2Tks

There are three (3) chemical storage tanks associated with this flexible group, identified as EUTk4114, EUTk4115, and EU-Tk4116, each of which is controlled by a conservation vent and vapor balance, and vented to one (1) of the two (2) scrubbers. EU-Tk4116 is also required to have a nitrogen blanket for control. This building and all operations contained therein, are either completely shut-down, or in the final stages of shutdown. As per verification with Mr. Pospisil, the tanks have been rinsed, cleaned, and are empty; the scrubbers are remaining operational, pending AQD approval for shutdown.

Miscellaneous

Boilers

Bayer has five (5) natural gas only boilers located in a separate building on the premises. The five (5) boilers range in capacity from 4.5 MMBtu/hr to 42.1 MMBtu/hr. All of these units are exempt from Rule 201 permitting

under Rule 282 (b)(i). Two (2) of these boilers are subject to 40 CFR Part 60 Subpart Dc, New Source Performance Standard (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units. AQD received initial notification for these boilers in 2012. Additionally, these boilers are not subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart JJJJJ (6J) for Industrial, Commercial, and Institutional Boilers Area Sources at this time.

Emergency Generator

Bayer has one (1) emergency generator that uses diesel fuel. At a capacity of 60 Hz, this unit is small enough to qualify for the Rule 285 (g) exemption. However, it does appear as if this generator is subject to New Source Performance Standard (NSPS) 40 CFR Part 60 Subpart IIII for Reciprocating Internal Combustion Engines (RICE). No initial notification is required. Additionally, this unit is not subject to 40 CFR Part 63 Subpart ZZZZ since the generator is subject to NSPS IIII as detailed in 40 CFR Part 63 Subpart ZZZZ 63.6590 . Bayer appears to be properly doing regular maintenance, and is compliance with these requirements

Cold Cleaner

Bayer has one (1) cold cleaner located in the maintenance area of the facility. This unit is exempt from Rule 201 permitting under Rule 281(h), and is maintained by Safety Klean.

Compliance Determination:

Based on the observations made during the inspection and a subsequent review of the required records, Bayer appears to be in compliance with PTI No. 84-86C, PTI No. 304-87B, and all other applicable Air Quality Rules and Regulations.

NAME Kaitlyn DeWitt DATE 1/8/2016 SUPERVISOR PMB