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

N556132063

FACILITY: AXSON NORTH AMERICA INC		**SRN / ID:** N5561
LOCATION: 1611 HULTS DR, EATON RAPIDS		**DISTRICT:** Lansing
CITY: EATON RAPIDS		**COUNTY:** EATON
CONTACT: Aldona Wilczek , Director Quality Operations/EH&S		**ACTIVITY DATE:** 11/04/2015
STAFF: Michelle Luplow	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Unannounced, scheduled compliance inspection.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow
Personnel Present: Aldona Wilczek, Director Quality Operations/EH&S (aldona.wilczek@axson.com)
Joe Goodrich

Purpose: Conduct an unannounced, scheduled compliance inspection by determining compliance with Axson's Permit to Install (PTI) No. 86-95 and to determine which equipment from Ad-Tech in Charlotte was transferred to this site, as well as retrieving Rule 290 exemption demonstrations for all equipment processing styrene that is not associated with PTI 86-95.

Facility Background/Regulatory Overview: Axson Technologies is a minor source that was previously named Akemi. Aldona Wilczek said that sometime in the near future Axson will likely be renamed Sika Corporation, a Swedish company who bought Axson in April 2015. She said that in January 2014 Cass Polymers (Ad-Tech) closed and all of the equipment was removed, including the equipment that was transferred over to Axson (see list of equipment below). Axson will still be involved in the aerospace, renewable energies, transportation and machine tools industries, but the automotive industry portion of Axson has been "sold" to PPG. PPG is in the process of purchasing some of Axson's equipment for this reason.

Inspection: This was an unannounced, scheduled compliance inspection. At approximately 10:30 a.m. I arrived at Axson (entrance is off of Kinneville Road) on November 4, 2015 and met with Aldona Wilczek, Director of Quality Operations and EH&S. I provided her with a DEQ "Environmental Inspections: Rights and Responsibilities" brochure to illustrate a typical inspection procedure, as well as a July 2014 Permit to Install Exemption handbook.

PTI No. 86-95 Process equipment to formulate polyester resin products and epoxy resin products and hardeners (storage tanks, pumps, mixers and blenders)

A. Wilczek provided me a list of all the equipment installed at Axson and J. Goodrich verified from this list which equipment were brought to Axon from Ad-Tech.

EU	Description	PTI/ exemption	Control equipment	Installation Date	From Ad-Tech?
350 gal Myers Mixer #1	Epoxy, polyester, urethane mixer	R 290	Torit dust collector	2013	Yes
350 gal myers Mixer #2	Epoxy, polyester, urethane mixer	86-95	Torit dust collector	1996	Yes
150 gal Hockmeyer mixer		86-95	Torit dust collector	1996	No
16 gal J-Go Mixer		86-95	Torit dust collector	1996	No

Green 300 gal Ribbon Mixer		86-95	Torit dust collector	1996	No
25 HP Cowels Dissolver		86-95	Torit dust collector	1996	Yes
30 HP Myers Cowels Dissolver		86-95	Torit dust collector	1996	No
2 Reactors, 120 gal	Reaction vessels used to create isocyanates and hardeners; fumes from process are collected in a closed system of condensers and the condensed waste is disposed as hazardous waste	86-95	Torit dust collector	1996	No
2 Marion mixers, 160 gal	Used for hardeners and resins	R 290	Torit dust collector	2014	Yes
2 Myers Mixers, 100 gal	Epoxy, polyester, urethane mixers	R 290	Torit dust collector	2014	Yes
2 Tumblers, 50 gal each	Agitate sealed drums containing mixtures	R 290	NA	#1: 1998 #2: 2002	No
White APEC Ribbon mixer, 650 gal	Large polyester mixer	R 290	Torit dust collector	2014	Yes
Hockmeyer press	Dispenses finished material	R 290	NA	1997	No
Pre-Mix (PM-103) 80 gal		R 290	Torit dust collector	2013	No
EM-103, 350 gal		R 290	Torit dust collector	2013	No
EM-106		R 290	Torit dust collector	2013	No
EM-105		R 290	Torit dust collector	2013	No
EM-102		R 290	Torit dust collector	2014	
EM-101		R 290	Torit dust collector	2013	
Scott Ribbon Mixer 40 gal		R 290	NA	2014	No
Euromix Emulsifier 50 – 400 gal		86-95	NA	1996	No

Large APEC Ribbon Mixer, 800	Large polyester mixer	R 290	NA	2014	Yes
Small Myers Ram Press		86-95	NA	1996	Yes
Large Myers Ram Press		86-95	NA	1996	Yes
Hobart Mixer 28 gal		86-95	NA	1996	Yes
General Ribbon Mixer, 80 gal	Chemical compounding	R 290	NA	1997	Yes
Torit Downflo Dust Collector		R 285(f)	NA	2014	No
Torit Dust Collector (small)		96-95	NA	1996	No
HeatPro Small Blue Oven	Electric – heats raw material	R 290	NA	1998	No
Lewco Double Blue Oven	Electric – heats raw material	R 290	NA	2012	No
Quincy 40 HP Air compressor	Electric - Vacuum pump used on EM-103, 106, 105, 102	TBD	NA	2012	No

Axson processes are limited to 0.129 lb/hr styrene, 0.0714 lb/hr vinyl toluene and 2.77 lb/hr VOC, in addition to a ton per year (tpy) VOC limit of 12.1. The permit, however, does not make these limits enforceable as a practical matter. This makes it difficult to determine the proper method for determining compliance with lb/hr emission rates. Additionally, AQD, as well as Axson, has had difficulty determining how much styrene, vinyl toluene, and VOC's are being fugitively emitted from Axson's processes (which are enclosed for a majority of the time). Per AQD request during the 2014 inspection, A. Wilczek obtained a consultant to determine more accurate emission factors for all VOCs losses (including styrene and vinyl toluene) for determining emissions from Axson processes (rather than using the suggested 2% per AQD staff). The consultants provided a report a week prior to the 11/4/2015 inspection (attached), but it did not quantify how much VOC, styrene, and vinyl toluene is lost from each type of process (reactions, mixing, tumbling, transferring, etc). Rather, it assumed that 100% of the styrene used was being emitted and attempted to demonstrate that all emission units exempt under Rule 290 collectively would meet the exemption Rule 290(a)(ii)(A). Styrene, however, is a carcinogen (IRSL = 2 $\mu g/m^3$) and therefore Rule 290(a)(ii)(C) is more appropriate, limiting emissions from styrene to 20 lbs/month. Showing compliance with Rule 290(a)(ii)(C) for emission units using styrene is something that has yet to be determined.

A. Wiczek provided me with recordkeeping (attached) of all styrene, VOC, and vinyl toluene use and emissions from usage based on a 2% loss emission factor. Currently Axson would be out of compliance with both the styrene and vinyl toluene lb/hr limits for all the months reported between June 2014 and October 2015. The emissions were averaged over a calendar month containing 240 hours of work, according to A. Wilczek (240 hrs/mo = 11.5 operating hours per day, 5 days per week, plus the hours worked on 2 Saturdays per month).

The VOC lb/hr and tpy limits are 2.77 and 12.1, respectively. Axson meets the lb/hr emission limit, based on 240 hr/month operation. As of November there is not a full calendar cycle's worth of data emission data. A 12-month rolling VOC emission calculation was conducted instead: 12-month rolling VOC emissions from November 2014 – October 2015 is 2.38 tons per year, assuming 2% loss. It would appear that Axson is in compliance with both VOC lb/hr and yearly emissions limits at this time.

I have spoken with A. Wilczek, who has decided to pursue obtaining a new permit to install, for both previously permitted equipment as well as all the Rule 290 exempt units. The new permit will likely contain recordkeeping and emission limits from all processes with conditions that are enforceable as a practical matter. Current compliance with the emission limits at this time cannot be concluded with certainty. Once the new PTI is issued compliance with the emissions limits will be determined.

Visible emissions from the process and control equipment should not exceed 10% opacity. J. Goodrich and I viewed the 2 dust collectors and I did not see any signs of opacity from either stack or from the collection drum below either collector. I did, however, detect sporadic level 1-2 odors from the new dust collector that has its exhaust stack pointed horizontal to the ground. The older, permitted dust collector is required to have a vertical stack at least 35' above ground level (J. Goodrich said the roof of the building is 23' high) and a maximum of 12 inches stack diameter. J. Goodrich and I approximated that the stack was at least 36' high and the diameter at the narrower top of the stack was approximately 12 inches, as the ground-level part of the stack had a diameter of approximately 18 inches.

The permit also limits the amount of cleaning solvent Axson can use to 10,000 gallons per 12-month rolling period and that a record must be kept of this usage. A. Wilczek said that they no longer use cleaners containing solvent. She provided me with an SDS of the cleaning solution that was designed specifically for Axson: "Blend Axson 9010" (attached). I verified that none of the components of the cleaning solution were VOCs and therefore the cleaning solvent material limit is not applicable at this time.

NAME [signature] DATE 11/13/15 SUPERVISOR [signature]