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

H278150349

FACILITY: Allied Motion (was Motor Products Division)		**SRN / ID:** H2781
LOCATION: 201 S Delaney Rd, OWOSSO		**DISTRICT:** Lansing
CITY: OWOSSO		**COUNTY:** SHIAWASSEE
CONTACT: Lisa Fisher , Material Coordinator		**ACTIVITY DATE:** 09/12/2019
STAFF: Daniel McGeen	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Unannounced, scheduled inspection of opt-out source, conducted as a Partial Compliance Evaluation (PCE) activity, part of a Full Compliance Evaluation (FCE).		
RESOLVED COMPLAINTS:		

On 9/19/2019, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD) conducted an unannounced, scheduled inspection of Allied Motion, formerly known as the Motor Products Division of Allied Motion Tech. I subsequently conducted a review of facility recordkeeping. These were Partial Compliance Evaluation (PCE) activities, conducted as part of a Full Compliance Evaluation (FCE).

Environmental contact:

Lisa Fisher, Materials Coordinator; 989-725-4803; lisa.fisher@alliedmotion.com

Facility description:

This facility designs and manufactures custom electric motors.

Emission units:

Emission unit	Description	Flexible group	Permit no. or rule	Federal regulation	Compliance status
EU-DEGREASER	Detrex VS2000 model batch vapor degreaser, with an electric chiller coil and a no exhaust system; uses trichlororethylene	FG-FACILITY	552-81C	40 CFR Part 63, Subpart T	Non-compliance
EU-COLDCLEANER	Detrex custom-built cold cleaner using a solvent containing methylene chloride	FG-FACILITY	552-81C	40 CFR Part 63, Subpart T	Compliance
EU-ZINC FURNACE	A furnace once used for melting zinc; removed from site	FG-FACILITY	552-81C	NA	Removed from site
EU-VARNISHDIP	Varnish dip system used to coat motor shells prior to assembly	FG-COATING SYSTEMS, FG-FACILITY	552-81C	NA	Not operating, at time
EU-SHWFRAMEPAINT	Spray paint booth with filters and natural gas-fired oven; removed from site	FG-COATING SYSTEMS, FG-FACILITY	552-81C	NA	Removed from site
EU-TRICKELVARNISH	Trickle varnish and epoxy resin varnish system used to apply varnish to armatures of motors	FG-COATING SYSTEMS, FG-FACILITY	552-81C	NA	Not operating, at time
Hot melt gluing process	Hot melt adhesive application	FG-FACILITY	287(a) and/or (i)	NA	Compliance
Water-based parts washer	Water-based parts washer, exhausting to in-plant environment	FG-FACILITY	Rule 284 (r)(iv)	NA	Did not observe

Regulatory overview:

This facility has a synthetic minor or opt-out permit, Permit to Install (PTI) No. 552-81C, which restricts the facility's potential to emit (PTE) for Hazardous Air Pollutants (HAPs), to keep it from becoming a major source of air emissions. The major source threshold for HAPs is a PTE of 10 tons per year (TPY) or more of a single HAP, or 25 TPY or more of total HAPs. A source that is not major for HAPs is called an *area source*.

This facility is considered a minor source for *criteria pollutants*, that is, those pollutants for which a National Ambient Air Quality Standard (NAAQS) exists. They include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns (PM-10) in diameter, and particulate matter smaller than 2.5 microns in diameter (PM2.5). A major source for criteria pollutants has a PTE of 100 TPY or more for any one of the criteria pollutants.

Additionally, Allied Motion is subject to 40 CFR Part 63, Subpart T, *National Emissions Standards for Halogenated Solvent Cleaning*, because of their vapor degreaser, and cold cleaner, which use the chlorinated solvents trichloroethylene (TCE), and methylene chloride, respectively.

The federal regulation 40 CFR Part 63, Subpart JJJJJJ—*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* was written for area sources of HAPs. To determine if it applies to Allied Motion, I inquired after the inspection as to the presence of any boilers onsite. There are no boilers, I have been advised, although there are 2 hot water heaters, which provide hot water for restrooms. One is described as a 40 gallon electric heater, and the second as a natural gas-fired 60 gallon heater. I was informed that the second unit will be replaced, when it wears out, with another 40 gallon electric heater. To meet the definition of a hot water heater in this area source Generally Achievable Control Technology (GACT) standard, the unit must be no more than 120 gallons in capacity. Pursuant to Section 63.11195(f), because the existing units and future unit are below 120 gallons each, they are, and will be, exempt from Subpart JJJJJJ. Additionally, because electric heaters do not combust fuel, electric heaters are exempt from that JJJJJJ, as well.

Fee status:

This facility is considered a category III fee source, because it has processes which are subject to the NESHAP for halogenated solvent cleaning. It reports annually to the Michigan Air Emissions Reporting System (MAERS).

Location:

The facility is located in the north end of an industrial park, on the west side of Owosso. The nearest residences are about 1,200 feet to the northeast. The closest nearby structure appears to be a storage building, roughly 75 feet to the south, followed by a number of industries further south. A factory is about 700 feet to the west, and to the east is undeveloped land, for 500 feet.

Recent history:

This facility was apparently built in the early 1950s. It is my understanding that it has moved away from mass production of motors, as they have found it is not feasible to compete with operations overseas, where mass production costs are much cheaper. They have found a niche in manufacturing custom motors in smaller quantities; a typical order for them might be a few hundred units.

Complaint history:

There are no records of AQD having received air pollution complaints of this facility, as far back as August of 1995. Older files were sent to the State of Michigan Records Center for storage, in years past.

Required safety attire:

I did not inquire at the time of the inspection, but I would recommend safety glasses with side shields, at a minimum.

Arrival:

I drove west on M-21 to Delaney Road, and turned south. I drove south, past Allied Motion, and then turned around and drove north. No odors could be detected. Weather conditions were overcast, humid, and 63 degrees F, with winds 0-5 miles per hour out of the northeast.

I arrived at the site at approximately 10:20 AM. No visible emissions could be seen from the plant, and no odors could be detected in the parking lot. Upon approaching the front office of the building, I saw that it was locked. I drove to the back or east end of the plant, where visitor parking has been relocated. The 2-story office building at the back of the plant is in use.

Inspection:

Opt-out facilities are required by the AQD to undergo a FCE once every 4 years, in accordance with AQD's Compliance Monitoring Strategy, pursuant to U.S. Environmental Protection Agency requirements.. This was an unannounced inspection.

I first met with Mr. Chet Marlow, Controller. He directed me to Mr. Frank Fisher, who handles maintenance and industrial operations for Allied Motion. He introduced me to his wife, Mrs. Lisa Fisher, Materials Coordinator, who handles their environmental reporting. I provided my identification/credentials, per AQD procedure, although Mr. Fisher recognized me, from my 2015 inspection here.

We discussed any changes at the plant. It was explained that since I was here last, the plant has been downsizing, because more of the work once done here is being sent to Allied Motion facilities in Mexico and China. Allied Motion continues to work on highly customized motors at this site, I was informed, given their years of experience in this field.

EU-DEGREASER, PTI No. 552-81C, 40 CFR Part 63, Subpart T:

The Detrex VS2000 model batch vapor degreaser was operating, in idle mold, at the time of the inspection. It will probably be gone in about one year, I was advised. They are getting away from cleaning and coating motor shells, I was told, as half their motor shells have already been e-coated, prior to arriving onsite. Plus, I was informed that it is getting harder to find TCE to purchase in the U.S.

Note: Detrex is currently doing business as PCT, or Parts Cleaning Technologies, with offices in Detroit and Kentucky, I was told. Allied Motion contacts them for any issues involving the degreaser, I was told.

This trichloroethylene (TCE) degreaser is electrically heated, and uses an electric chiller coil, as well an air conditioned cooling system, I was told. It exhausts to the general, in-plant environment. Because it uses a halogenated solvent, it is subject to Subpart T. The chiller coil contains a lockout to prevent use of the unit if the coil temperature is not maintained. They have a distiller which cleans the solvents, and is run every couple of weeks.

It is my understanding that an acid is added to the TCE as needed, to stabilize it, and it is checked weekly. If acid levels get too high, the solvent would not be as effective. Freeboard temperature and water temperature are also checked weekly. If the water temperature gets too high, a monitor alerts them. It is my understanding that the degreaser's capacity is about 240 gallons of TCE.

A room was built around the degreaser, with walls most of the way to the ceiling. Creating a partial or complete enclosure around a degreaser is one of the techniques that may be used under the NESHAP to reduce room draft, or air flow, across the top of the freeboard area.

From atop an elevated access platform, it was possible to look down into the degreaser. There was initially no TCE solvent odor present, when looking down over the unit. Mr. Fisher explained in detail the operations of the degreaser, and the control equipment or practices being done for the unit. He covered the purpose of the free board, then the upper coils, which are refrigerated, and next the lower coils, which are chilled with glycol. The temperature of the refrigerated coils which are filled with water are tracked daily, I was told, and these values recorded on a form on the large recordkeeping board.

Vapors from the heated TCE solvent were visible further down inside the degreaser, but no visible emissions could be seen leaving the degreaser. I was told that the heated vapors condense onto the cold metal parts that are being treated in the degreaser. The condensed solvent drips back into the

solvent bath. After a short while, I eventually smelled the odor of TCE, but it was at a barely detectable level. I did not see any leaks of liquid from the degreaser. Mr. Fisher advised me that if there was a leak of TCE, it would form a white, chalk-like powdery residue, upon evaporating. I saw no indications of this residue anywhere.

Because the rolling cover to the degreaser was open, I explained that Subpart T requires that the cover be closed when parts are not being removed from or lowered into the degreaser. Mr. Fisher explained that a load of parts had just been removed from the degreaser. He closed the rolling cover, which has a left and a right half. There was a gap at the front of the unit, when the left and the right halves of the cover were moved into the closed position, as shown in photos 001 and 002. Rubber or vinyl flashing or trim on the edges of the moving panels was seen to be crumbling, but even if the trim had been intact, the gap at the front edge of the degreaser cover was too large to have been sealed. This is a violation of 40 CFR Part 63, Subpart T, which requires that cover be maintained free of defects. I explained that a Violation Notice (VN) would be sent. Mr. Fisher indicated that they will correct the issue.

40 CFR Part 63, Subpart T contains the following requirements related to covers for open top vapor degreasers. It should be noted that the cover for the Allied Motion degreaser can qualify as both a working mode cover and an idling mode cover.

Section 63.463(e)(2)(iii)(A):
(iii) If a working-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(iii)(A) and (e)(2)(iii)(B) of this section.
(A) Ensure that the cover opens only for part entrance and removal and completely covers the cleaning machine openings when closed.

Because the cover does not completely cover the opening of the degreaser, the above sub-rule has not been met.

Section 63.463(e)(2)(iii)(B):
(B) Ensure that the working-mode cover is maintained free of cracks, holes, and other defects.

Because the cover does not close completely, and the rubber or vinyl trim which would help seal the opening is falling off, that can be considered a defect. The above sub-rule has therefore not been met.

Section 63.463(e)(2)(iv)(A):
(iv) If an idling-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(iv)(A) and (e)(2)(iv)(B) of this section.
(A) Ensure that the cover is in place whenever parts are not in the solvent cleaning machine and completely covers the cleaning machine openings when in place.

Because the cover does not completely cover the opening of the degreaser, the above sub-rule has not been met.

Section 63.463(e)(2)(iv)(B):
(B) Ensure that the idling-mode cover is maintained free of cracks, holes, and other defects.

Because the cover does not close completely, and the rubber or vinyl trim which would help seal the opening is falling off, that can be considered a defect. The above sub-rule has therefore not been met.

Additionally, PTI No. 552-81C, Special Condition (SC) EU-DEGREASER 1.4 requires the following:

The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and T, as they apply to EU-DEGREASER. **[40 CFR Part 63 Subpart T]**

The Subpart T violations for the cover not completely covering the opening, and not being free of defects therefore constitute a violation of PTI No. 552-81C, SC EU-DEGREASER 1.4.

Mr. Fisher explained that the hoist which lowers parts into and raises them out of the degreaser was built so that it could never exceed the Subpart T speed limit. This allows time for parts to drain and dry, so that solvent does not get tracked out of the degreaser, and to avoid stirring up vapors from within the degreaser. The NESHAP requires parts being removed from a degreaser to move at a rate of no more than 11 feet per minute.

Under the NESHAP, they have a maximum allowable temperature of 54 degrees F, as the NESHAP requires that the chilled air blanket temperature for a freeboard device can be no greater than 30% of the solvent's boiling point. I was told that they use 50 degrees F as their reference point, to give them an additional buffer zone. He showed me their recordkeeping form for the freeboard temperature, and the large recordkeeping board it is posted on, near the degreaser. The temperature for the most recent dates of operation (early August through the present) ranged from 40 to 47.5 degrees F, below the maximum allowed temperature.

I received a copy of freeboard temperature recordkeeping from the end of May 2019 into early August; please see attached. The values shown there are also are in compliance with Subpart T.

They also track the water temperature in the chiller coils, themselves, I was told. On the record board alongside the degreaser, I saw that the highest temperature was 60 degrees F, on 8/7/2019, while the normal value was around 57.5 degrees F. I also received a copy of water temperature checks from earlier in the year, please see attached. PTI No. 552-81C does not require this parameter to be monitored, nor does Subpart T, to the best of my knowledge, but it appears to be a voluntary action, done to ensure that the degreaser is operating properly.

I observed the acid acceptance chart on the recordkeeping board. An additive, which is itself an acid, is added to the TCE to stabilize it, I was told. For vapor degreasing, it is my understanding that the TCE must be very stable, so it is checked every 2 weeks. I received a copy of the acid acceptance level tracking, that they carry out, attached for reference. This example was from March through June, 2019. PTI No. 552-81C does not require this parameter to be monitored either, nor does Subpart T, to the best of my knowledge, but it appears to be a voluntary action, done to ensure that the degreaser is operating properly.

I was told that when they turn off the degreaser at the end of a day, they shut off the heat in the solvent sump, and allow the solvent vapors to "collapse" back into liquid form, prior to turning off the chiller and refrigerated coils. This appears to be compliant with the Subpart T requirement Section 63.463(d)(7):

Section 63.463(d)(7):

(7) During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

The TCE distiller is located to the left of the degreaser itself. TCE. It was not running, at the moment. I

checked around the distiller for TCE odors. The only TCE odor I detected was a faint odor near the upper left corner of the front of the unit, where metal piping exited the distiller. I requested that they look into this minor source of vapors, to see if there was a way to mitigate it. I did not see any leaks of liquid from the distiller.

I observed a 55 gallon drum of waste solvent/sludge from the distiller, stored close by. The lid appeared to be sealed, and there was no TCE odor detectable.

Mr. Fisher added that the concrete floor around the degreaser and distiller is actually a containment area, in the event of loss of solvent. I was also informed that the concrete floor in this room was sealed with a 2-part epoxy coating. He explained that because TCE is heavier than air, emissions of TCE vapors would naturally sink down towards the floor, and the vapors could penetrate porous, untreated concrete.

EU-COLDCLEANER: PTI No. 552-81C, 40 CFR Part 63, Subpart T:

I was told that this is a Detrex custom built cold cleaner, which uses a RAP (brand name) solvent that includes methylene chloride, to strip hardened varnish from metal part hooks. The hardened varnish crystallizes after exposure to the solvent, and can then be brushed off the metal hooks. The unit is a built like a tall metal cabinet, with front doors which swing open to reveal a horizontal tank with a closed lid. As soon as the front doors are swung open, an automated exhaust fan kicks on, drawing air away from any employee standing there. The lid to the horizontal tank can be lifted open, and a hook is used to keep it open. A rack for metal part hooks is suspended just above the RAP solvent, and the hooks themselves are immersed in the solvent. The RAP solvent is covered with a layer of water.

I was told that the cold cleaner will be leaving in about a year, along with the TCE batch vapor degreaser. It is my understanding that they do not do as much coating here in recent years, because many shells come arrive pre-coated, so there is less need to clean metal parts onsite.

For batch cold solvent cleaning machines (immersion cold solvent cleaning machines) the NESHAP requires:

1. Tight fitting cover that must always be closed except for entry and removal of parts [63.462(a)]
2. Water layer at least 2.5 centimeters (1.0 inch) on the surface of the solvent within the machine or a freeboard ratio of at least 0.75 [63.462(a)].

The cover for the solvent cleaning tank which I saw during the inspection appears to have met the requirement to be tight fitting. The water layer was the chosen control option. I asked how the depth is measured, and was told that they can visually gauge this when removing parts hooks from the tank. I could see what appeared to be a water layer, but could not judge the depth. I could not smell any odor from the cold cleaner.

It is my understanding that metal part hooks removed from the degreaser are allowed to drain and dry over the tank, before they are removed from the area. I saw no signs of solvent being tracked out on the floor. I was told that waste paint (varnish) chips are removed from the cold cleaner and placed in a 55 gallon drum for disposal as hazardous waste. The 55 gallon drum I saw next to the cold cleaner appeared to be tightly sealed, and was sitting on a cart which offered containment, within the containment room or area shared with the TCE batch vapor degreaser.

EU-ZINCFURNACE; PTI No. 552-81C:

This zinc furnace was removed from the facility, prior to the 9/22/2011 inspection by AQD's Brad Myott.

EU-VARNISHDIP; PTI No. 552-81C:

The varnish dip process was not running, at the time of the inspection. My understanding is that the coating work it did is no longer needed, because now many of their shells arrive at the plant, having

already been e-coated. The varnish dip had been used to coat bare metal for corrosion protection, and to help adhere clips in place. Now, they use a hot melt adhesive to hold these clips in place on pre-painted shells, which is discussed later in this report.

The EU-VARNISHDIP tank and the shell oven each exhaust through the ceiling. I was told that the shell oven is to be "obsoleted."

EU-SHWFRAMEPAINT; PTI No. 552-81C:

This spray paint booth, with particulate filters and a natural gas-fired curing oven, was removed from the facility, as of 1/24/2012. The PTI will not be voided, however, as other emission units covered by the permit are still in use.

EU-TRICKELVARNISH; PTI No. 552-81C:

The trickle varnish process was not running, as it was broken down, I was told, and parts were expected to arrive ton he following Monday. I saw four drip lines on the unit, The varnish secures wire armatures in place on the motors, and provides protection against corrosion. The cleaning medium for the trickle varnish process is soapy water. Coated parts are cured in a pre-heat oven and a curing oven, both electrically powered. The curing process exhausts through the roof, as does a hood for a work table.

Employees would use the nearby work table, I was told, if they were applying coatings by hand. This coating is an epoxy that is applied similar to how a caulk gun is used. I was told that about 2-3 gallons per month are applied, so that is far less than the 200 gallons of coatings per month minus water allowed for a coating line under Rule 287(2)(c). I asked if they have records of coating use for the manual application of this material, and was told that they use less than 200 gallons per year. This process should be able to comply with the Rule 287(2)(c) exemption for coating lines.

Rule 287(2)(c) exempts the following from needing a permit to install:

(c) A surface coating line if all of the following conditions are met:
(i) The coating use rate is not more than 200 gallons, as applied, minus water, per month.
(ii) Any exhaust system that serves only coating spray equipment is supplied with a dry filter control or water wash control which is installed, maintained, and operated in accordance with the manufacturer's specifications, or the owner or operator develops a plan which provides to the extent practicable for the maintenance and operation of the equipment in a manner consistent with good air pollution control practices for minimizing emissions.
(iii) Monthly coating use records are maintained on file for the most recent 2-year period and are made available to the department upon request.

Note: the manual application table described above has a hood which exhausts to the same exhaust duct used by EU-TRICKELVARNISH. Because the manual station does not apply a spray coating, it is not required by the exemption to have a dry or water wash particulate control system.

Water-based parts cleaner, Rule 285(r)(iv):

I did not see a water-based parts cleaner which I had previously observed in 2015. it is not clear to me if it is still in the plant or not. In 2015, I noted that it appeared to meet the exemption criteria of Rule 285(r)(iv), for equipment used for cleaning metal, where the process emissions are only released into the general in-plant environment. It was possible that the unit might also satisfy the criteria for additional exemptions for cleaning processes, such as Rules 281(e) or 285(l)(iii).

Hot melt adhesive process; Rules 287(a) and/or 287(i) adhesive process:

They have a small induction bonding process, which applies an epoxy adhesive to a shell, and applies heat, curing the adhesive instantly. This appears to be the same gluing process which I saw in 2015. This process/activity was not running, at the time of the inspection. I was informed that the glue is heated before application, and therefore should be able to qualify as a hot-melt glue. It uses less than 2 gallons per day of adhesive, I was told, as a 5 gallon pail of the adhesive will last them for 2 months. This emission unit, which was installed prior to the 12/20/2016 exemption rule revisions, could potentially use either of the Rule 287(a) or (i) exemptions.

The pre-12/20/2016 Rule 287(a) and the post-12/20/2016 Rule 287(2)(a) have the same exemption criteria. They both exempt:

(a) An adhesive coating line which has an application rate of less than 2 gallons per day and which has emissions that are released only into the general in-plant environment.

The pre-12/20/2016 Rule 287(ii) and the post-12/20/2016 Rule 287(2)(ii) have the same exemption criteria. They both exempt:

(i) Equipment that is used for the application of a hot melt adhesive.

Miscellaneous:

A water-based, ultrasonic cleaner which they purchased from China did not work out, I was told. I had seen this unit onsite, during the 8/27/2015 inspection. The ultrasonic cleaner appears to have been removed from the site.

I was shown their tool room, where there are a number of metal working machines, such as 2 Bridgeport vertical milling machines. These are used on a non-production basis, and exhaust to the indoor air. Therefore, these would qualify as exempt under either the Rule 285(I)(vi)((A) or(B) exemptions, for pre-12/20/2016 equipment. These exemptions apply to the following:

(I) The following equipment and any exhaust system or collector exclusively serving the equipment:
(vi) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals, graphite, plastics, concrete, rubber, paper board, wood, wood products, stone, glass, fiberglass, or fabric which meets any of the following:
(A) Equipment used on a nonproduction basis.
(B) Equipment that has emissions that are released only into the general in-plant environment.

Review of records and operational logs:

I was provided spreadsheets, please see attached, for 2019 recordkeeping of emissions. The TCE emissions from EU-DEGRESER complied with the 3-month rolling average limit of 800 lbs/month. The month in 2019 with the highest 3-month rolling average value for TCE was August, with a 3-month value of 388.31 lbs.

For the EU-DEGREASER spreadsheet, the code MSDS 64 represents TCE, and MSDS 104 is the stabilizer (acid). Virgin TCE rarely needs the stabilizer, as I understand it, and new TCE is added as needed, to replace what's evaporated.

Each year, the facility submits an annual report required by 40 CFR Part 63, Subpart T, for their halogenated solvent cleaning processes (see district files). Their annual report for the 2018 calendar year was received before the due date, and demonstrates compliance. Their semi-annual report for July 2019 shows compliance.

For EU-COLDCLEANER, the spreadsheet demonstrates compliance with the permitted emission limit of 2.6 TPY VOC, based on a 12 month rolling average. For 2019 the highest 12-monthrolling value was 0.36 TPY VOC, during the months of March, April, May, June, and July.

Michigan Air Emissions Reporting System (MAERS) status:

This facility reports each year to MAERS. It is classified as a Category III facility, because of the halogenated solvent vapor degreaser and cold cleaner. The MAERS report for the 2018 operating year was audited in 2019. The audit found the report to be aceptable, and found them to be in compliance with their PTI, as detailed below.

The vapor degreaser had a 2018 throughput of 208.89 gallons of TCE. The permit limits throughput to 65.5 gallons per month of solvent containing TCE, based on a 3-month rolling average. VOC emissions from the vapor degreaser were 2529.66 lbs for 2014. The permit limits VOC emissions from this process to 800 lbs/month, based on a 3-month rolling average. Because the MAERS report is based on a calendar year, it was necessary to determine compliance with the 3-month rolling average VOC limit by checking the company's spreadsheets, discussed above.

The MAERS report for the 2018 operating year showed that the cold cleaner, with a 2018 throughput of 59.31 gallons of methylene chloride, was below the permitted limit of 550 gallons per year of solvent containing methylene chloride. VOC emissions from the cold cleaner during 2018 were 651.22 lbs, or 0.33 tons, well below the permitted 2.6 tons per year VOC limit for that process.

The varnish dip system (EUFIELDVARNISH in MAERS) used 275 gallons of prime with 0.71 tons of another coating varnish/shellac, in 2018, according to MAERS. T0.71 tons, or 1,420 lbs, appears to equate to 182.7 gallons of varnish/shellac, at a weight of 7.77 lbs/gallon, by my calculation. This appears to be well below the permitted1,540 gallons of varnish including reducer which is allowed by the PTI. The trickle varnish system used 67.75 gallons of polyester resin coating in 2018, far below the permitted 230 gallons per year.

After discussing recordkeeping, I left the plant at 12:52 PM.

Conclusion:

Overall housekeeping at Allied Motion was very good. A violation of 40 CFR Part 63, Subpart T was identified, though, because the cover atop the batch vapor degreaser would not completely cover the degreaser opening, and was not free of defects, such as crumbling flashing. This also violates opt-out PTI No. 552-81C, SC EU-DEGREASER 1.4, which requires compliance with Subpart T. A VN will be sent. Allied Motion appeared to be in compliance with the remaining conditions of PTI No. 552-81C, however.

Image 1(001) : Rolling cover atop degreaser.

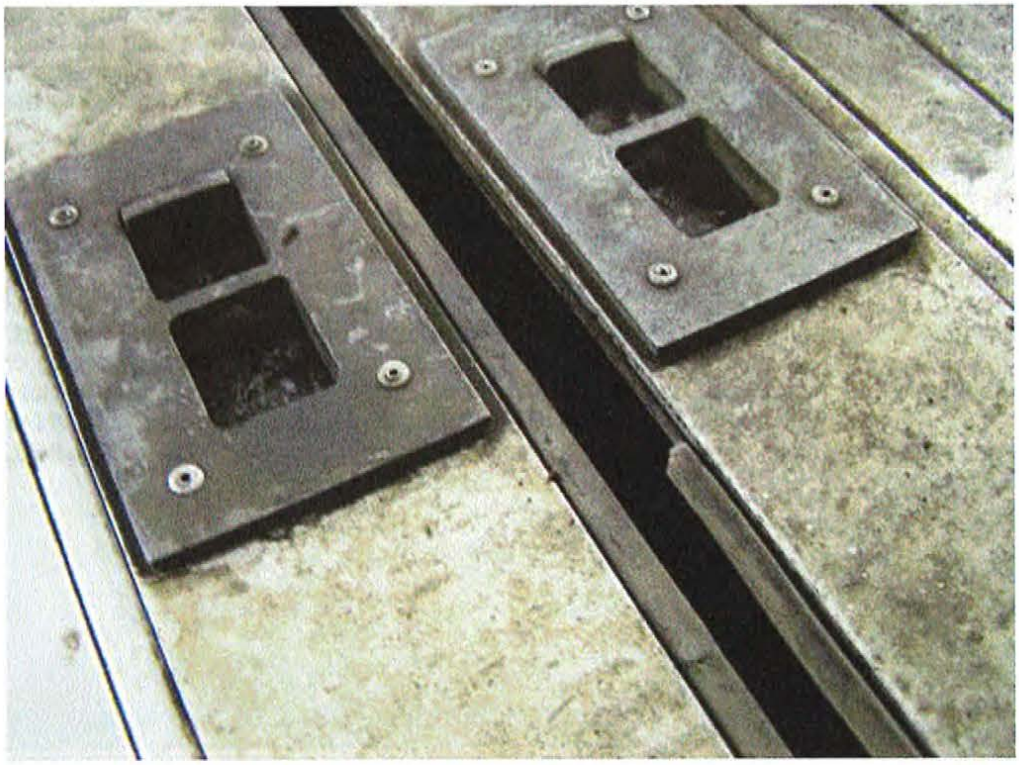

Image 2(002) : Gap in rolling cover.

NAME _____ DATE 9/26/2019 SUPERVISOR B.M.