A2931
manila
Livingston

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

A293141324

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|---|---|---|
| FACILITY: DIAMOND CHROME PLATING INC | | SRN / ID: A2931 |
| LOCATION: 604 S MICHIGAN, HOWELL | | DISTRICT: Lansing |
| CITY: HOWELL | | COUNTY: LIVINGSTON |
| CONTACT: John Wagner , Director - Health, Safety & Environmental Affairs | | ACTIVITY DATE: 08/30/2017 |
| STAFF: Daniel McGeen | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MINOR |
| SUBJECT: Unannounced, scheduled inspection. | | |
| RESOLVED COMPLAINTS: | | |

**On 8/30/2017, the Michigan Department of Environmental Quality (DEQ), Air Quality Division (AQD) conducted an unannounced, scheduled inspection of Diamond Chrome Plating, Inc. (DCP).**

| PTI, rule, or requirement | Emission unit description | Control device | Scrubber location | Operating status |
|---|---|---|---|---|
| PTI No. 367-83B; 40 CFR Part 63 Subparts A & N; First Amended Consent Decree (FACD) | Open surface chrome plating tank nos. 9, 11, and 12 (10 and 13 have been removed), aka Dept. 2 | Scrubber system #3; a Ceilcote vertical composite mesh pad (CMP) scrubber; *Tank 8 now exhausts to scrubber #3 | South scrubber on east roof | Compliance |
| PTI No. 367-83B; 40 CFR Part 63 Subparts A & N; FACD | Open surface chrome plating tank nos. 1-4, 6, and 8*, aka Dept. 1<br><br>*Tank 8 now exhausts to scrubber #3 | Scrubber system #4; a Ceilcote vertical composite mesh pad (CMP) scrubber | North scrubber on east roof | Compliance |
| PTI No. 386-85A; 40 CFR Part 63 Subparts A and N; FACD | Open surface chrome plating tank nos. 5, 7, 15, 17; west side of plant, aka Dept. 3 | Scrubber system #5; a Ceilcote vertical wet scrubber with kimre mesh pad, fume suppressant | SW portion of bldg., inside plant, exhausts outdoors | Compliance |
| PTI No. 386-85A; 40 CFR Part 63 Subparts A and N; FACD | Not in use; open surface chrome plating tanks 19-21 | Not in use; scrubber #6, a Ceilcote packed bed/CMP scrubber with kimre mesh pad | NW of building, on outside ground | Has not been used in recent years |
| 40 CFR Part 63 Subpart T | Batch vapor degreaser, uses TCE | Freeboard refrigeration, dwell, reduced draft | | Compliance |
| PTI No. 672-88; Rule 285 (2)(m) | Chrome redox tank | MAPCO mist eliminator | West plant, indoor exhaust | Void PTI, as exempt |
| PTI No. 673-88; 40 CFR Part 63, Subpart WWWWWW | Metal cleaning and electroless nickel plating operation | Scrubber | South of plant, on ground | Compliance |
| PTI No. 675-88A; 40 CFR Part 63, Subpart WWWWWW | Cadmium plating line (two tanks) | Wet scrubber | Inside plant, some ductwork on plant exterior | Compliance |
| PTI No. 676-88 | Two alkaline chrome strip tanks | In-line mesh pad in stack, exhausts to outside air | | Compliance |
| Rule 285(r) | Two alkaline strip tanks which exhaust indoors | | | Compliance |
| PTI No. 677-88 | Cooling tower | | | Compliance |
| Rule 285(r) | Pickling tanks | | | Not observed |
| Rule 285(r) | Phosphate wash tanks | | | Not observed |
| Rule 285(l)(vi)(B) | Small sandblasters | Exhaust to wet scrubber | SW portion of bldg. | Not operating |
| Rule 282 | 6 electric ovens | | | Compliance |
| Rule 285(g); 40 CFR Part 60 Subpart JJJJ, and 40 CFR Part 63 Subpart ZZZZ | Emergency generator; natural gas-fired;150 kW | | | Not operating |

**Environmental contact:**

**John D. Wagner, PE, REM, CSP, Director of Health, Safety & Environmental Affairs; 517-546-0150; env@diamondchromeplating.com**

Facility description:

DCP is a hard chromium electroplater, which also conducts cadmium and nickel plating. They are a job shop, and plate aircraft landing gear, commercial hydraulics, industrial dies, and miscellaneous parts.

Purpose:

The purpose of this unannounced, scheduled inspection was to check compliance with the facility's various air use permits, with the First Amended Consent Decree (FACD), Case No. 03-1862-CE, and with applicable state and federal air pollution regulations, including 40 CFR Part 63, *National Emissions Standards for Halogenated Solvent Cleaning,*

Regulatory overview:

The 2006 multi-media Joint Consent Decree (JCD) for this facility has been replaced, as of 8/5/2015, by a First Amended Consent Decree (FACD). The purpose of the JCD was to address not only air issues, but also contamination of soil, storm water, and ground water. The FACD is an updated document, reflecting changes in circumstances and regulations, since the JCD was written.

This facility is considered to be a true minor source, rather than a major source, of air emissions. A *major source* has the potential to emit (PTE) of 100 tons per year (TPY) or more, of one of the criteria pollutants. *Criteria pollutants* are those for which a National Ambient Air Quality Standard exists, and include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns.

It is also considered a minor, or *area source*, for Hazardous Air Pollutants (HAPs), because it is not known to have a PTE of 10 TPY or more for a single HAP, nor to have a PTE of 25 TPY or more for combined HAPs.

In addition, DCP has several air use permits, and state and federal air regulations apply to various emission units. The chrome plating processes are subject to 40 CFR Part 63 Subpart A, *General Provisions*, and Subpart N, the *National Emissions Standards for Hazardous Air Pollutants for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks* (Chrome NESHAP). DCP considers their facility to be a *large hard chromium electroplating facility*, under the NESHAP, and they plate in open surface chrome tanks.

They also have a large batch vapor degreaser, which is subject to 40 CFR Part 63 Subpart T, the *National Emissions Standards for Halogenated Solvent Cleaning*.

Additionally, 40 CFR Part 63 Subpart WWWWWW, the NESHAP for *Area Source Standards for Plating and Polishing Operations* applies to both their nickel plating and cadmium plating processes, but AQD does not have delegated authority from the Environmental Protection Agency to regulate this Area Source MACT.

They have a small emergency generator onsite, which is exempt from the requirement of Rule 201 to obtain a permit to install (PTI). The generator is subject to 40 CFR Part 60, Subpart JJJJ, *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*. In addition, it is subject to 40 CFR Part 63, Subpart ZZZZ, the *National Emissions Standards for Stationary Reciprocating Internal Combustion Engines*, also known as the RICE MACT. AQD did not initially, but now has delegation of authority for this Area Source MACT standard.

Fee status:

Because it is subject to a MACT standard (the chromium NESHAP), DCP is classified as a Category III fee source, and pays $250.00 annually to the AQD. The facility reports each year to the Michigan Air Emission Reporting System, though the company expressed interest, in May 2014, in being removed from MAERS. AQD's Emissions Reporting & Assessment (ERA) Unit has indicated that statewide, about

2/3 of chrome platers report to MAERS, and the decision is typically left to the AQD district offices. Facilities with past compliance issues are usually required to report to MAERS.

Location:

The facility is located on the south side of the City of Howell. It was established in 1954. Immediately north of the plant are a DCP parking lot, and some residences. To the immediate east are additional residences. To the west is a community park, and a residential area. To the south is the CSX railroad line, with industrial and commercial facilities to the south and southeast.

Most recent stack testing:

On 9/10 and 9/11/2014, DCP stack tested scrubbers #3 and 4 (the south and north scrubbers, respectively, on the east roof). Total chromium emissions from each scrubber, were 0.001 mg/dscm, less than 10% of the limit under the NESHAP. DCP is now considering itself a large rather than small hard chromium electroplating facility with open tanks, subject to NESHAP limit of 0.011 mg/dscm, whereas they have previously considered themselves to be a small hard chromium electroplating facility with open tanks, subject to a post 9/19/2014 NESHAP limit of 0.015 mg/dscm. In addition, chromic acid emissions complied with the permitted limit in PTI 367-83B.

Recent history:

A mid-year inspection was conducted on 4/12/2017, and found the facility to be in compliance with the FACD for the chrome plating operations in the east plant, and for the NESHAP operational practice requirements for the batch vapor degreaser.

In June of 2017, Water Resources Division (WRD) and AQD staff provided compliance assistance to DCP. This included a spreadsheet which had been created to help the company track cumulative leaks on the east roof ductwork as accurately as possible. WRD and AQD staff triple checked the data which they entered into the spreadsheet, before sharing it with DCP. DCP provided clarifications and corrections , as needed. Staff also e-mailed to DCP color-coded versions of the company's east roof ductwork diagram, to help identify, at a glance, which duct sections were closest to the milestone of 10 leaks under the FACD.

Arrival:

This was an unannounced inspection. Before arrival, I drove around the block on which DCP is located. I did not detect any odors. Weather conditions were partly sunny with fog, and a faint breeze out of the south at 0-5 miles per hour. At 9:30 AM, I arrived in the parking lot north of the west half of the plant. I noticed a barely detectable odor, which I was unable to identify. There were no visible emissions from scrubbers # 3, 4, 6, or the plant's roofline, or the cooling tower.

Upon entering the office lobby, I provided my identification/credentials, per AQD procedures, and signed in. I met with Mr. John Wagner, PE, REM, CSP, Director - Health, Safety & Environmental Affairs. I was informed that Mr. Tom Poplawski, Lab Manager, is retiring by the end of September.

Inspection:

<u>Chrome plating Departments 1 and 2; PTI No. 367-83B; FACD; 40 CFR Part 63, Subpart N:</u>

Under the chrome NESHAP, there are two options which regulated facilities may choose from, for compliance. These are the use of surfactants, or the use of a control device. DCP is using surfactants as the option for the chrome plating in the west half of the plant (known as Department 3), with scrubber #5 removing fumes from the workplace environment, while using control devices (scrubber #3 and 4) as the option for the chrome plating in the east half of the plant (Departments 1 and 2).

It is my understanding that no surfactants are being utilized in the east plant. The east half of the plant

is where aviation parts are plated. DCP's aviation customers are very exacting in their standards for the quality of the part finish, AQD has been informed, and so DCP does not want to use surfactant in the east plant, as it could cause bubbles or pitting in the chrome finish. The FACD does not require the use of surfactants, unless the DEQ identifies on 3 separate dates within any 3 year period that releases from ductwork were not identified, documented, or repaired as required under FACD paragraph 5.3(b). Then, under 5.3(c), DCP would be required to submit evidence that it has done one of a number of optional corrective actions.

We walked out onto the plant's east roof. Scrubber #3 is the south unit, and #4 is the north unit. Neither had any visible emissions. The scrubbers showed no indications of any chromic acid leaks. At 12:04 PM, scrubber #3 pressure drop was 2.4 inches water column (w.c.), and scrubber #4 pressure drop was 2.7 inches, w.c.

The east ductwork on the east roof was replaced in October 2015, with twin parallel 24 inch extruded PVC ductwork replacing a single 54 inch diameter duct of sectioned PVC plastic. The new ductwork, which is gray in color, was free of any leaks or "weeps". Please see attached photo 001. The east ductwork leads to the north scrubber, #4. The ductwork has had identification numbers spray painted on for each section. These correspond to the current diagram of east roof ductwork, which was submitted to AQD in early 2016.

The west ductwork on the east roof is sectioned 54 inch diameter white plastic. This ductwork leads to the south scrubber, #3, and is of the same vintage as the scrubber itself. I examined this ductwork for leaks. Please see attached photos 002 through 004. This ductwork has also had the identification numbers spray painted on.

I checked on the status of the V9 "drop", a vertical section of ductwork with an elbow that connects to the horizontal west ductwork on the east roof. I verified that a dried leak which had been identified on 4/12/2017, during the mid-year inspection, had been repaired. This appeared to be the case, as shown in photo 005. The fixed area also looked to have been repainted. It is my understanding that even after cleaning, traces of chromic acid stains may remain visible on a duct's surface, so it is not uncommon for plant personnel to apply a new coat of paint.

Some of the existing white PVC ductwork has catch trays underneath it, to catch any potential drips of chromic acid. I observed a very small puddle of water in one tray, which was clear. The catch trays have hoses which would route collected liquids into the plant and into the pits underneath the chrome plating tanks. Side shields or wind baffles along the ducts and catch trays were intended to offer shelter from wind and/or rain, to prevent re-entrainment of any collected chromic acid liquids that might be in the catch trays. I could not see any chromic acid stains visible on the asphalt-covered roof.

The only leak I could find today was a small, dried leak on the underside of duct section SH15 (please see attached photo 006). It is not a violation in itself for a leak to be found. The FACD gives DCP 24 hours to clean the leak, and 48 hours to repair it. To AQD's most recent knowledge, SH15 had 9 documented instances of leaks since the 7/28/2015 start date of the FACD. Upon reaching 10 leaks, an individual duct section is to be replaced within 60 days, under Paragraph 5.(e) of the FACD.

When I brought the above leak to Mr. Wagner's attention, he advised me that yesterday, 8/29, they had actually found the 10th leak for SH15, in a different location. He explained that they are putting a letter together to inform AQD of reaching the 10-leak milestone, and of their proposed actions. I was advised that in mid-October 2017, all of the east roof ductwork leading to scrubber #3 will be replaced. It is my understanding that it would be more economical to replace all the ductwork at once, than to replace individual duct sections, one at a time. They will clean and repair today's leak, he informed me, as the FACD requires.

I was informed that because of the expense of replacing the scrubber #3 ductwork, they will not be able to replace the plant's batch vapor degreaser at this time. I was advised that the cost of the ductwork is a hardship for the company, as production is down in their chrome plating departments.

Mr. Wagner informed me that their production is down right now, due to lack of customer demand. I saw

**that a number of tanks inside the east plant were not plating any parts, and where parts were being plated, the numbers could be as low 1-2 parts.**

**On the inside of the east plant, I observed the interior ductwork for chrome plating tanks, discussed in detail below, to check for visible emissions. The interior ductwork for chrome tanks in the east plant is almost completely painted brown, though a distinctly lighter shade than chromic acid, so any leaks or weeps would be visible. It should be noted that it is not a violation to have a leak on interior ductwork, and is more of a plant maintenance or house keeping issue.**

- Chrome tank no. 1 was plating. There were no fugitive air emissions visible from the ductwork. The appearance of the ductwork matched that in 2016. There were small splash patterns of dried chromic acid on the lower ductwork, adjacent to the tank. This splash out of chromic acid was from removing parts from the plating solution.
- Chrome tank no.2 was plating. There were no fugitive air emissions visible from the ductwork. The appearance of the ductwork resembled that in 2016. There were minor splash out patterns on the ductwork near the edge of the tank.
- Chrome tank no. 3: Tank 3 was being readied for plating, and the rectifier was being turned on. There were no fugitive air emissions visible from the ductwork. The appearance of the ductwork was identical to 2015. There were minor splash out patterns.
- Chrome tank no. 4 was not plating There were no fugitive air emissions visible from the ductwork. The ductwork appeared clean, other than minor splash out patterns.
- Chrome tank no. 6 was plating . This is a titanium tank, which is more resistant to corrosion from chromic acid than ordinary steel. Gray PVC ductwork was installed in either 2013 or 2014, where the exhaust is ducted through the roof. The older PVC ductwork, for this tank is painted brown. There were no fugitive air emissions visible from the ductwork. The ductwork had 2 small drip marks, and splash patterns. It could not be determined whether the drips were from splash out, or leaks.
- Chrome tank no. 8 was plating. There were no fugitive air emissions visible from the ductwork. There was an intermittent drip mark on the lower ductwork, which could have been from splash out, or from a leak.
- Chrome tank no. 9 was plating. There were no fugitive air emissions visible from the ductwork. The ductwork was entirely consistent in appearance with its 2016 appearance.
- Chrome plating tank no. 11 was not plating. It is a long, narrow titanium steel tank in the southeast corner of the east plant. There were no fugitive air emissions visible from the ductwork. There were dried traces of leaks on the vertical ductwork, and minor splash out patterns.
- Chrome tank no. 12: Tank 12 was plating, at this time. There were no fugitive air emissions visible from the ductwork. This tank had been used in the past as a trial tank for surfactants, but none of the tanks in the east half of the plant are using surfactants now. The ductwork looked to be clean, other than a splash out pattern on the lower portion of the duct.

**Recordkeeping for east plant (which includes Depts. 1 and 2):**

**EQP 5709 form, *Monitoring Data Record*:**

**The EQP 5709 form was developed by the DEQ, so facilities could use it to document pressure drop for scrubbers used as control devices for chrome plating tanks.**

**Scrubber No. 3, south scrubber: examples were provided by e-mail on 9/5/2017, for the time period 2/21 to 7/26/2017. The Chrome NESHAP requires daily recordkeeping of pressure drop on days of operation, in Section 63.343(c)(ii). The pressure drop readings on days of operation were 2.0 to 2.1 inches, w.c. DCP's *Chrome MACT Standard Operation and Maintenance Plan (SOP) Revision I* sets a site-specific operating parameter for this scrubber of 3.20 + or – 2.0 inches, and DCP appeared to be within this range. The site-specific operating parameter for pressure drop in the *SOP Revision I* for scrubber No. 3 appears to be in keeping with Sections 63.343(c)(ii) and (iii) of the Chrome NESHAP, which require:**

***(ii) On and after the date on which the initial performance test is required to be completed under §63.7, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the composite mesh-pad system once each day that any affected source is operating. To be in compliance with the standards, the composite mesh-pad system shall be operated within ±2 inches of water column of the pressure drop value established during the***

*initial performance test, or shall be operated within the range of compliant values for pressure drop established during multiple performance tests.*

*(iii) The owner or operator of an affected source complying with the emission limitations in §63.343 through the use of a composite mesh-pad system may repeat the performance test and establish as a new site-specific operating parameter the pressure drop across the composite mesh-pad system according to the requirements in paragraphs (c)(1)(i) or (ii) of this section. To establish a new site-specific operating parameter for pressure drop, the owner or operator shall satisfy the requirements specified in paragraphs (c)(1)(iii)(A) through (D) of this section.*
*(A) Determine the outlet chromium concentration using the test methods and procedures in §63.344(c);*
*(B) Establish the site-specific operating parameter value using the procedures §63.344(d)(5);*
*(C) Satisfy the recordkeeping requirements in §63.346(b)(6) through (8); and*
*(D) Satisfy the reporting requirements in §63.347(d) and (f).*

**Scrubber No. 4 (north scrubber): examples were provided by e-mail on 9/5/2017, for the time period 12/14/2016 to 8/31/2017. The pressure drop readings on days of operation were 2.1 to 2.5 inches, w.c. The SOP Revision I sets a site-specific operating parameter for this scrubber of 3.50 + or – 2.0 inches, and they appeared to be within this range. The range identified in the SOP Revision I appears to be in keeping with Sections 63.343(c)(ii) and (iii) of the NESHAP.**

Chrome plating Department 3; PTI No. 386-85A; 40 CFR Part 63, Subpart N:

**The chrome NESHAP prohibits the use of PFOS-containing surfactants after 9/21/2015. DCP reportedly ceased using surfactants with PFOS in the west plant during the course of 2015. It is my understanding that DCP is now using a PFOS-free surfactant, Mist Suppressant PF NF, in the west plant.**

**The west side of the plant is served by scrubber #5, which is located indoors, and exhausts outdoors. Scrubber pressure drop was fluctuating from 3.5-3.6 inches, w.c., at 2:30 PM, within the set point range of marked as either 1.9 or 2 inches, to 4 inches, w.c. There were no visible emissions from the exhaust outlet for scrubber #5, I later saw, from outside the plant.**

- Tank no. 5 was plating, at this time. There were no fugitive air emissions visible from the ductwork. The vertical ductwork for this tank appeared to be clean, consistent with its 2016 appearance. There was minor splash out.
- Tank 7 was plating. There were no fugitive air emissions visible from the ductwork. The vertical ductwork appeared free of leaks, and there was minor splash out.
- Tank no. 15 was not plating. It is a titanium tank. There were no fugitive air emissions visible from the ductwork. The vertical ductwork, painted brown, showed traces of three dried drip marks, which looked as if they were left following cleaning. Overhead, a large, metal horizontal duct appeared to have been painted brown, since the 2016 inspection. There were no signs of leaks.
- Tank no. 17 was not plating. There were no fugitive air emissions visible from the ductwork. There were no leaks visible on the ductwork.

**It is my understanding that there is a shared containment pit for all four of the tanks in this department.**

Recordkeeping for chrome plating tanks of Dept. 3 and scrubber #5:

**It has previously been explained to me by Mr. Wagner that under the chrome NESHAP, DCP chose the compliance option of using surfactant rather than the compliance option of using a scrubber, for the west side of the plant, also known as Dept. 3, and the use of their scrubber #5 provides an additional level of control.**

EQP 5789 form, *Chrome NESHAP - Fume Suppressant - Tensiometer Daily Process Operations Record*:

**Surfactant is only used in the west side of the plant. It is my understanding that the surfactant currently used is free of PFOS, as required by the chrome NESHAP. The company previously advised AQD that they ceased using PFOS-containing surfactants during the course of 2015.**

The EQP 5789 form was developed by the DEQ, for use by chrome platers to record surface tension readings, where a tensiomemter is the instrument used to measure. Readings must be taken each day on which a chrome plating tank using a surfactant is operated. The attached examples provided were e-mailed on 9/8/2017, for Tanks 5, 7, 15, and 17, for the month of August, 2017.

The current version of 40 CFR Part 63, Subpart N, on the e-CFR website, specifies a surface tension limit of 33 dynes/cm for open surface hard chromium electroplating tanks, under section 63.342(c)(1)(iii). The limit was previously 35 dynes/cm, but was changed to 33 on 9/19/2014, the implementation date set by the revised chrome NESHAP as published in the Federal Register on 9/19/2012.

The EQP 5789 form on the DEQ, AQD website has not been updated. It is still the 3/05 version, which lists the pre-9/19/2014 limit of 35 dynes/cm as the surface tension maximum limit for facilities which use a tensiometer, instead of the current limit of 33 dynes/cm. AQD is now looking into updating this form on our website.

On each day of operation, surface tension readings appear to have been taken, and the recorded values were all below both the old and the new, stricter limit. Please see summary table below:

Surface tension records for chrome plating tanks of Dept. 3 for August, 2017:

| Chrome plating tank using surfactant | Range of surface tension readings with tensiometer reading, dynes/cm | Is reported value under old (pre-9/19/2014) limit of 35 dynes/cm? | Is reported value under new (9/9/2014) limit of 33 dynes/cm? | Hours of operation reported? | Fume suppressant added? |
|---|---|---|---|---|---|
| 5 | 23-32 | Yes | Yes | Yes | Yes; MARTEC PF NF |
| 7 | 29-32 | Yes | Yes | Yes | Yes; MARTEC PF NF |
| 15 | 29-32 | Yes | Yes | Yes | Yes; MARTEC PF NF |
| 17 | 29-32 | Yes | Yes | Yes | Yes; MARTEC PF NF |

Note: there is a separate form for facilities which use a stalagmometer as the instrument to take measurements, the EQP 5788 form, *Chrome NESHAP - Fume Suppressant - Stalagmometer Daily Process Operations Record.* This form also needs to be updated, to reflect the current limit for facilities which use a stalagmometer, 40 dynes/cm. This replaced the previous limit of 45 dynes/cm, on 9/19/2014.

Chrome plating tanks 19-21 and scrubber system 6; PTI No. 386-85A:

The PBS/CMP scrubber system 6 is not in use, nor were the chrome plating tanks (numbers 19-21) associated with it.

Batch vapor degreaser; Rule 285(2)(r)(iv), and 40 CFR Part 63 Subpart T:

DCP solvent degreaser #1 is an Autosonics Model VS 6030E batch open-top vapor degreaser. It may be considered a large unit, because under the NESHAP it is classified as a unit which has a Solvent Air Interface of over 1.21 square meters. The actual SAI size is 1.67 square meters.

This degreaser exhausts into the general, in-plant environment, rather than directly outside. The parts basket has a built-in cover or lid, the working mode cover, which fits over the entire degreaser, when parts are being cleaned, to prevent emissions. There is a drip pan, installed under the parts basket, in the event of drippage. There is a rolling door, the idling mode cover, which covers the top of the degreaser, when parts are not being cleaned. A curtain is behind the degreaser, to block wind from blowing over the degreaser.

**The table below shows DCP's batch vapor degreaser VOC emissions as reported to MAERS for the 2014-2016 operating years, with the VOC emissions being comprised of TCE. The reported values were based upon the annual *Halogenated Solvent Cleaner NESHAP: Annual Report* or *Solvent Use Report* which DCP prepared each year, pursuant to 40 CFR Part 63, Subpart T. As can be seen, the 2016 VOC emissions were 1.64 tons less than the 2015 emissions, and 3.88 tons less than the 2014 emissions.**

**Summary of TCE use and VOC emissions from DCP batch vapor degreaser, from 2014-2016:**

| Operating year | TCE solvent use in lbs, from annual Subpart T report | VOC (TCE) emissions in lbs, as reported to MAERS | VOC (TCE) emissions in tons, as reported to MAERS |
|---|---|---|---|
| 2014 | 17,627 | 17,627.00 | 8.81 |
| 2015 | 13,148 | 13,148.00 | 6.57 |
| 2016 | 9,865 | 9,865.00 | 4.93 |

**Note: I was informed that for 2016, DCP did not meet the 10,000 lb threshold for triggering reporting of TCE to the TRI reporting system.**

**Michigan Air Pollution Control Rule 285(2)(r)(iv) exempts metal cleaning processes which exhaust only into the general, in-plant environment from the requirement of Rule 201 to obtain a permit to install. This exemption was originally known as Rule 285(r)(iv), but was revised on 12/20/2016. Based on examination of the batch vapor degreaser today and in the past, it appears to exhaust into the general, in-plant environment. Because DCP is not classified as a major source of Hazardous Air Pollutants (HAPs), it is eligible to use this exemption, rather than obtain a permit to install. A major source of HAPs has the Potential to Emit (PTE) of 10 tons per year (TPY) or more of a single HAP, or 25 TPY or more of all HAPs combined. AQD received an updated PTE demonstration for the batch vapor degreaser in March of 2015, showing that PTE was below the major source threshold.**

**Review of degreaser compliance with Section 63.463 of 40 CFR Part 63, Subpart T:**

**Please see requirements copied and pasted from Section 63.463 of the Halogenated Solvent Cleaner NESHAP, and the AQD comments following each relevant requirement, below.**

*§63.463 Batch vapor and in-line cleaning machine standards.*
*(a) Except as provided in §63.464 for all cleaning machines, each owner or operator of a solvent cleaning machine subject to the provisions of this subpart shall ensure that each existing or new batch vapor or in-line solvent cleaning machine subject to the provisions of this subpart conforms to the design requirements specified in paragraphs (a)(1) through (7) of this section. The owner or operator of a continuous web cleaning machine shall comply with the requirements of paragraph (g) or (h) of this section, as appropriate, in lieu of complying with this paragraph.*

**AQD comment #1: Please see Section 63.463(a)(1) through (7), below. This batch vapor degreaser is not a continuous web cleaning machine.**

*(1) Each cleaning machine shall be designed or operated to meet the control equipment or technique requirements in paragraph (a)(1)(i) or (a)(1)(ii) of this section.*
*(i) An idling and downtime mode cover, as described in §63.463(d)(1)(i), that may be readily opened or closed, that completely covers the cleaning machine openings when in place, and is free of cracks, holes, and other defects.*

**AQD comment #2: The idling and downtime mode cover was observed while covering the degreaser, today. It appeared to be free of cracks, holes, and other defects, therefore complying with Section 63.463(a)(1)(i), above. The attached DCP recordkeeping shows weekly checks done on the cover during the time period 5/8/2017 through 8/28/2017. The report showed that the cover was opening and closing properly, completely covering the opening, and was free of cracks, holes, and other defects.**

*(ii) A reduced room draft as described in §63.463(e)(2)(ii).*

**AQD comment #3: Please refer to the attached representative example of recordkeeping provided by Mr. Wagner. It shows weekly wind speed measurements for the time period 2/20/2017 through 8/28/2017, ranging from 10 to 20 feet per minute. This is below the limit of 15.2 meters per minute (50 feet per minute) specified in Section 63.463(e)(2)(ii)(A) and (B), complying with Section 63.463(a)(1)(ii), above.**

*(2) Each cleaning machine shall have a freeboard ratio of 0.75 or greater.*

**AQD comment #4: The freeboard ratio of DCP's batch vapor degreaser is rated at 1.0, therefore complying with Section 63.463(a)(2), above.**

*(3) Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts.*

**AQD comment #5: Please see the attached recordkeeping on hoist speed, provided by DCP. The hoist speed was reported weekly, during the time period 5/1/2017 through 8/7/2017. Measurements ranged from 4.3 to 6.45 feet per minute. These speeds are below the maximum allowed speed of 11 feet per minute under Section 63.463(a)(3), above.**

*(4) Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils. This requirement does not apply to a vapor cleaning machine that uses steam to heat the solvent.*

**AQD comment #6: It is my understanding that the batch vapor degreaser has a device to shut off the sump heat if the sump liquid level drops to the coils, and that the unit is heated with electricity, complying with Section 63.463(a)(4), above.**

*(5) Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.*

**AQD comment #7: It is my understanding that the batch vapor degreaser is equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser, as required by Section 63.463(a)(5), above.**

*(6) Each vapor cleaning machine shall have a primary condenser.*

**AQD comment #8: DCP's batch vapor degreaser has a condenser, therefore complying with Section 63.463(a)(6), above.**

*(7) Each cleaning machine that uses a lip exhaust shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of paragraph (e)(2)(vii) of this section.*

**AQD comment #9: DCP's batch vapor degreaser does not have a lip exhaust. Therefore, a carbon adsorber is not required under Section 63.643(a)(7), above.**

*(b) Except as provided in §63.464, each owner or operator of an existing or new batch vapor cleaning machine shall comply with either paragraph (b)(1) or (b)(2) of this section.*
*(1) Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area of 1.21 square meters (13 square feet) or less shall comply with the requirements specified in either paragraph (b)(1)(i) or (b)(1)(ii) of this section.*
*(i) Employ one of the control combinations listed in table 1 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control.*

*Table 1—Control Combinations for Batch Vapor Solvent Cleaning Machines With a Solvent/Air Interface Area of 1.21 Square Meters (13 Square Feet) or Less*

*Option*
*Control combinations*
*1 Working-mode cover, freeboard ratio of 1.0, superheated vapor.*
*2 Freeboard refrigeration device, superheated vapor.*
*3 Working-mode cover, freeboard refrigeration device.*
*4 Reduced room draft, freeboard ratio of 1.0, superheated vapor.*
*5 Freeboard refrigeration device, reduced room draft.*
*6 Freeboard refrigeration device, freeboard ratio of 1.0.*
*7 Freeboard refrigeration device, dwell.*
*8 Reduced room draft, dwell, freeboard ratio of 1.0.*
*9 Freeboard refrigeration device, carbon adsorber.*
*10 Freeboard ratio of 1.0, superheated vapor, carbon adsorber.*

*Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.*

**AQD comment #10: The requirements of Section 63.463(b)(1)(i) Table 1, above, do not apply to DCP's batch vapor degreaser, as the Solvent/Air Interface of their unit is greater than 1.21 square meters.**

*(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A to this part.*

**AQD comment #11: The requirements of Section 63.463(b)(1)(ii), above, do not apply to DCP's batch vapor degreaser, as the Solvent/Air Interface of their unit is greater than 1.21 square meters.**

*(2) Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area greater than 1.21 square meters (13 square feet) shall comply with the requirements specified in either paragraph (b)(2)(i) or (b)(2)(ii) of this section.*
*(i) Employ one of the control combinations listed in table 2 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control.*

*Table 2—Control Combinations for Batch Vapor Solvent Cleaning Machines With a Solvent/Air Interface Area Greater than 1.21 Square Meters (13 Square Feet)*

*Option*
*Control combinations*

*1 Freeboard refrigeration device, freeboard ratio of 1.0, superheated vapor.*
*2 Dwell, freeboard refrigeration device, reduced room draft.*
*3 Working-mode cover, freeboard refrigeration device, superheated vapor.*
*4 Freeboard ratio of 1.0, reduced room draft, superheated vapor.*
*5 Freeboard refrigeration device, reduced room draft, superheated vapor.*
*6 Freeboard refrigeration device, reduced room draft, freeboard ratio of 1.0.*
*7 Freeboard refrigeration device, superheated vapor, carbon adsorber.*

*Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.*

**AQD comment #12: With a Solvent/Air Interface of 1.67 square meters, this applies to DCP's batch vapor degreaser. Note in Table 2, above, DCP's actual chosen control option is option 2. Option 1 was mistakenly identified as their option in the annual Solvent Use Report which was submitted in January 2017, for the 2016 operating year.**

*(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A of this part.*

**AQD comment #13: The requirements of Section 63.463(b)(2)(ii), above, do not apply, as DCP chose the option of complying with Section 63.463(b)(2)(i) Table 2, instead.**

**AQD comment #14: Section 63.463(c) requirements are not listed in this report, as they only apply to in-line cleaning machines. The DCP unit is not an in-line cleaning machine.**

(d) Except as provided in §63.464 for all cleaning machines, each owner or operator of an existing or new batch vapor or in-line solvent cleaning machine shall meet all of the following required work and operational practices specified in paragraphs (d)(1) through (12) of this section as applicable. The owner or operator of a continuous web cleaning machine shall comply with the requirements of paragraph (g) or (h) of this section, as appropriate, in lieu of complying with this paragraph.
(1) Control air disturbances across the cleaning machine opening(s) by incorporating the control equipment or techniques in paragraph (d)(1)(i) or (d)(1)(ii) of this section.
(i) Cover(s) to each solvent cleaning machine shall be in place during the idling mode, and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) to not be in place.

**AQD comment #15: A cover to the batch vapor degreaser is in place, during the idling mode or downtime mode, complying with Section 63.463(d)(1)(i), above. This is a rolling cover.**

(ii) A reduced room draft as described in §63.463(e)(2)(ii).

**AQD comment #16: Based on review of recordkeeping (attached), a reduced room draft, as described in Section 63.463(e)(2)(ii), is being maintained at levels below the allowed maximum wind speed of 15.2 meters per second or 50 feet per minute, complying with Section 63.463(d)(1)(ii), above. The *Halogenated Solvent Cleaner NESHAP: Reduced Room Draft Windspeed Measurements Recordkeeping Form* indicates that measured wind speeds during the time period of 2/20/2017 through 8/28/2017 ranged**

**from 10 to 20 feet per minute, well below the 50 feet per minute limit.**

(2) The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (3 feet per minute) or less.

**AQD comment #17: Following the 4/12/2017 mid-year inspection (documented in a separate activity report), I was advised that parts occupy no more than 50% of the interface area, and that 63% of the interface remains open, with visual checks to confirm. I was also informed that following my inquiry, the hoist speed has been slowed to 0.9 meters per minute. DCP is therefore voluntarily doing more than the minimum required by Section 63.463(d)(2), above.**

(3) Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine).

**AQD comment #18: The vapor degreaser is equipped with a wand, for manually spraying parts with TCE. There are no baffles within the degreaser, based on observation and discussion with the company. It is my understanding that the use of the wand ensures that spraying is done within the vapor zone. This appears to be in keeping with the requirements of Section 63.463(d)(3), above.**

(4) Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any solvent cleaning machine unless an equally effective approach has been approved by the Administrator.

**AQD comment #19: From discussions with DCP, it is my understanding that parts being cleaned are oriented so that the solvent drains from them freely, complying with Section 63.463(d)(4), above.**

(5) Parts baskets or parts shall not be removed from any solvent cleaning machine until dripping has stopped.

**AQD comment #20: From past observation and discussion, it is my understanding that the dwell time on the degreaser is set so that dripping from parts is ceased, prior to parts and/or the parts basket being removed from the degreaser. I have not observed any drips of solvent from the parts or parts basket, in person. This appears to be in compliance with Section 63.463(d)(5), above.**

**DCP records dwell time on their *Halogenated Solvent Cleaner NESHAP: Dwell Measurement Test Recordkeeping Form*, which is attached for reference. The example provided documents weekly readings during the time period 12/5/2016 through 7/17/2017. Recorded dwell time ranged from 91 to 98 seconds. The required dwell time is specified as 85.6 seconds, minimum, and they appear to be meeting this.**

(6) During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

**AQD comment #21: It is my understanding that DCP staff turn on the primary condenser before the sump heater, as required by Section 63.463(d)(6).**

(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.

**AQD comment #22: It is my understanding that the condenser is turned off after the sump heater is turned off and solvents have cooled down appropriately.**

(8) When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

**AQD comment #23: I have been informed that this is being done, consistent with the requirement of Section 63.463(d)(8).**

(9) Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.

**AQD comment #24: it is my understanding that the manufacturer, Autosonics, is no longer in business, but that all of DCP's service and maintenance practices are to repair or replace in kind such the unit remains operating as intended by the manufacturer.**

(10) Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning procedures in appendix A to this part if requested during an inspection by the Administrator.

**AQD comment #25: The definition of Administrator, from Section 63.461, Definitions, is as follows: *Administrator* means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g. State that has been delegated the authority to implement the provisions of this part).**

**AQD comment #26: To the best of my knowledge, AQD staff have not required DCP operators of the batch vapor degreaser to undergo this test, in the past. AQD reserves the right to require this test. Because AQD has been delegated authority to enforce 40 CFR Part 63, Subpart T, AQD may be considered the Administrator, for this subpart.**

(11) Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

**AQD comment #27: I have been advised that waste solvent and sump bottoms are collected, stored, and sent offsite in closed containers, which is consistent with the requirement of Section 63.463(d)(11), above.**

(12) Sponges, fabric, wood, and paper products shall not be cleaned.

**AQD comment #28: It is my understanding that metal parts are the only items cleaned in the batch vapor degreaser, consistent with the requirement of Section 63.463(d)(12), above.**

(e) Each owner or operator of a solvent cleaning machine complying with paragraph (b), (c), (g), or (h) of this section shall comply with the requirements specified in paragraphs (e)(1) through (4) of this section.
(1) Conduct monitoring of each control device used to comply with §63.463 of this subpart as provided in §63.466.
(2) Determine during each monitoring period whether each control device used to comply with these standards meets the requirements specified in paragraphs (e)(2)(i) through (xi) of this section.
(i) If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall ensure that the chilled air blanket temperature (in °F), measured at the center of the air blanket, is no greater than 30 percent of the solvent's boiling point.

**AQD comment #29: the attached DCP *FRD Recordkeeping Form*, for the freeboard refrigeration device, documents weekly measurements between 1/30/2017 and 8/7/2017. It shows that temperatures were below the 30% of sump temperature (190 degrees F) maximum allowed by Section 63.463(e)(2)(i), above, which equates to 57.0 degrees F. The highest reported temperature for this time period was 54.5 degrees F. Measurement of temperature is discussed later in this activity report.**

(ii) If a reduced room draft is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.
(A) Ensure that the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time as measured using the procedures in §63.466(d).
(B) Establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less as described in §63.466(d).

**AQD comment #30: Recordkeeping on reduced room draft is discussed earlier in this report, under AQD comment #16. The reduced room draft recorded on the photocopied example of their records ranged from 10 to 20 feet per minute, below the maximum allowed wind speed of 15.2 meters per minute or 50 feet per minute, complying with Section 63.463(e)(2)(ii).**

(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.

**AQD comment #31: The working-mode cover appears to be an integral part of the parts basket, so that whenever the parts basket is lowered into place within the degreaser, the working-mode cover is lowered into place at the open top of the degreaser, resembling a roof with a slight peak. When the parts basket is lifted and removed from within the degreaser, the working mode cover is likewise lifted and removed from the open top of the degreaser. From observation during the 4/12/2017 mid-year inspection, the cover appeared to cover the cleaning machine openings when in place. I did not see the parts basket placed in the degreaser today. As mentioned earlier in this report, I inquired about the possibility of putting weather stripping or flashing materials in place around the edge of the seal, as a possible way to reduce fugitive emissions of TCE. I was informed that DCP will look into this, to see if such materials would possibly be deteriorated by TCE.**

(B) Ensure that the working-mode cover is maintained free of cracks, holes, and other defects.

**AQD comment #32: I was not able to see the working mode cover in place today, because the parts basket, which it is an integral part of, was not in the degreaser today. Instead, the parts basket was stationed next to the degreaser, with a load of parts that were awaiting cleaning. Mr. Wagner informed me that as one methods of reducing fugitive emissions of TCE, they are waiting until they have a number**

**of parts in the parts basket before they use the degreaser, versus doing a number of cleaning cycles per day, for a very few parts at a time. It is my understanding that multiple uses per day resulted in more fugitive emissions.**

(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.

**AQD comment #33: It is my understanding that the rolling cover atop the batch vapor degreaser is the idling-mode cover. It was in place today, when there were no parts in the degreaser. It appeared to visibly cover the opening of the vapor degreaser.**

(B) Ensure that the idling-mode cover is maintained free of cracks, holes, and other defects.

**AQD comment #34: No visible defects were noted. There was no fugitive smell of TCE odors along the seam of the rolling idling-mode cover, until the extreme left end of the unit. The far left end of the catwalk has a step down of about 12 inches, so AQD staff should remain aware of their footing, while on the catwalk.**

(v) If a dwell is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(v)(A) and (e)(2)(v)(B) of this section.
(A) Determine the appropriate dwell time for each type of part or parts basket, or determine the maximum dwell time using the most complex part type or parts basket, as described in §63.465(d).

**AQD comment #35: I have been informed that there is only one parts basket for the batch vapor degreaser, and that DCP has determined the appropriate dwell time for it, in keeping with the requirements of Section 63.463(e)(2)(v)(A), above.**

(B) Ensure that, after cleaning, each part is held in the solvent cleaning machine freeboard area above the vapor zone for the dwell time determined for that particular part or parts basket, or for the maximum dwell time determined using the most complex part type or parts basket.

**AQD comment #36: It is my understanding that the parts basket is held in the freeboard area above the vapor zone for the dwell time that DCP determined is appropriate for the parts basket.**

**AQD comment #37: Section 463(e)(2)(vi) is nonapplicable and has not been included in this report, because it addresses superheated vapor systems, which the DCP batch vapor degreaser does not have.**

**AQD comment #38: Section 63.463(e)(2)(vii) is nonapplicable and has not been included in this report, because it references a carbon adsorber, which DCP's batch vapor degreaser does not have.**

**AQD comment #39: Section 463(e)(2)(viii) is nonapplicable and has not been included in this report, because it addresses continuous web cleaning units with a superheated part system. The DCP batch vapor degreaser is not a web cleaning unit, nor does it have a superheated part system.**

**AQD comment #40: Section 463(e)(2)(ix) is nonapplicable and has not been included in this report, because it addresses continuous web cleaning units with a squeegee system. The DCP batch vapor degreaser is not a web cleaning unit, nor does it have a squeegee system.**

**AQD comment #41: Section 463(e)(2)(x) is nonapplicable and has not been included in this report, because it addresses continuous web cleaning units with an air knife system. The DCP batch vapor degreaser is not a web cleaning unit, nor does it have an air knife system.**

**AQD comment #42: Section 463(e)(2)(xi) is nonapplicable and has not been included in this report, because it addresses continuous web cleaning units using a combination squeegee and air knife system. The DCP batch vapor degreaser is not a web cleaning unit, nor does it have a combination squeegee and air knife system.**

(3) If any of the requirements of paragraph (e)(2) of this section are not met, determine whether an exceedance has occurred using the criteria in paragraphs (e)(3)(i) and (e)(3)(ii) of this section.
(i) An exceedance has occurred if the requirements of paragraphs (e)(2)(ii)(B), (e)(2)(iii)(A), (e)(2)(iv)(A), (e)(2)(v), (e)(2)(vi)(B), (e)(2)(vi)(C), (e)(2)(vii)(B), or (e)(2)(vii)(C) of this section have not been met.
(ii) An exceedance has occurred if the requirements of paragraphs (e)(2)(i), (e)(2)(ii)(A), (e)(2)(iii)(B), (e)(2)(iv)(B), (e)(2)(vi)(A), or (e)(2)(vii)(A) of this section have not been met and are not corrected within 15 days of detection. Adjustments or repairs shall be made to the solvent cleaning system or control device to reestablish required levels. The parameter must be remeasured immediately upon adjustment or repair and demonstrated to be within required limits.
(4) The owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in §63.468(h).

**AQD comment #43 : DCP reported no exceedances in the annual solvent consumption report required by the NESHAP.**

**AQD comment #44: Section 63.463(f) is not applicable, and has not been included in this report, because it relates to batch vapor or in-line solvent cleaning machines which are using the compliance option of complying with the idling emission limit emission standards specified in Section 63.463(b)(1)(ii) and b(2)(ii), (c)(1)(ii), or (c)(2)(ii). DCP did not select the compliance option of complying with the idling emission standards.**

**AQD comment #45: Section 63.463(g) is not applicable, and has not been included in this report, because it relates to continuous web cleaning machines. DCP's degreaser is not a continuous web cleaning machine.**

**AQD comment #46: Section 63.463(h) is not applicable, and has not been included in this report, because it relates to a remote reservoir continuous web cleaning machines. DCP's degreaser is not a remote reservoir continuous web cleaning machine.**

(End of Section 63.463.)

<u>Observation of vapor degreaser:</u>

**We walked through the plant, and observed the batch vapor degreaser #1. There were no visible emissions of TCE from the unit, nor were there any leaks of liquid. The unit was idling at this time, as parts were not being cleaned in it. The parts basket was stationed to the right of the unit, and there were a number of parts awaiting cleaning.**

**At floor level, 2 or 3 feet from the degreaser, was a distinct and definite odor of TCE. From the catwalk adjacent to the unit, I checked for odors around the edge of the rolling cover, or idling mode cover, atop the degreaser. I could not detect any TCE odors, until the extreme left end of the rolling cover. Caution should be taken on the catwalk, as the far left end of the catwalk has a step down of about one foot. TCE emissions from the unit are fugitive in nature, as there is not an exhaust outlet.**

**A placard on the side of the degreaser identifies the operating temperature as 187-194 degrees F. It is**

my understanding that the sump, which contains the liquid TCE, is electrically heated. Temperature of the degreaser is monitored automatically by thermocouples, I have been informed, but temperature is periodically checked manually, with a lab thermometer, to verify the accuracy of the thermocouples.

There were no visible emissions nor any visible leaks of solvent from the TCE distiller unit. It is my understanding that reclaimed solvent is put back into the degreaser, while the collected oil is sent offsite as still bottoms. The containment area underneath the distiller has 1.5 times the volume of the distiller unit itself, I have been told, during past inspections.

Chrome redox tank, PTI No. 672-88:

The chrome redox tank converts hexavalent chromium in process wastewater to less toxic trivalent chromium. Mr. Wagner initially believed the MAPCO mist eliminator, originally installed for odor control, had been removed, but it still operates onsite. He showed me its location on a catwalk, from where it exhausts into the general, in-plant environment. There were no visible emissions from the exhaust, and I detected no odors.

Mr. Wagner explained that the process has undergone some changes over the years, such as when the company stopped using sulfur dioxide (SO2) in the process. It is not being operated in the same way as when the permit was first issued, decades ago. It does, however, clearly meet the exemption criteria for Rule 285(2)(m), for process wastewater treatment tanks. The PTI can be voided, upon receiving a written request from the company.

Metal cleaning and electroless nickel plating operation with scrubber, PTI No. 673-88:

The nickel plating operation was in use, at the time of the inspection. The nickel scrubber is physically located outside of the plant, on the south side, and has a conical exhaust outlet. Neither at roof level nor at ground level could I see any visible emissions.

40 CFR Part 63 Subpart WWWWWW, the NESHAP for Area Source Standards for Plating and Polishing Operations applies to their nickel plating processes, but AQD does not have delegated authority from the Environmental Protection Agency to regulate this Area Source MACT.

Cadmium plating line (two tanks) with wet scrubber, PTI No. 675-88A:

From atop the east roof of the plant, Mr. Wagner showed me the vertical exhaust stack, which is labeled 64. It appears to be gray PVC plastic., and was free of stains. Please see attached photo, taken from atop the east roof. There were no visible emissions from the stack. The permit requires the exhaust be discharged unobstructed vertically upwards from an exit point not less than 11 feet above ground level, and this requirement appears to be met.

The PVC stack appears to be new since the September 2016 inspection by AQD. Please see the attached photo 007 of an earlier metal stack at this location, which was taken by Water resource Division's Carla Davidson on 11/1/2012. This was an extremely short vertical exhaust stack. This vintage stack, when it was in use, nonetheless appeared to have satisfied the permit requirement to exhaust unobstructed vertically upwards from an exit point not less than 11 feet above ground level.

The cadmium scrubber is located inside the plant, but some of the ductwork extends outside of the plant, for a short, horizontal run. At ground level, it could be seen that an exterior horizontal stretch of ductwork looked to be in good condition, and was also free of any leaks or stains.

Inside the plant, we did not approach the cadmium plating tanks themselves, as additional personal protective gear (respirators) would be needed. We went to the scrubber itself, however. The scrubber, located inside the east plant, has a spray head, and a recirculating pump. The unit was running. The metal ductwork which had led from the scrubber to the exhaust outlet has been replaced since September 2016 inspection PVC plastic, Mr. Wagner showed me. The new ductwork appeared to be in good condition, and I did not see leaks. It was evident that the PVC ductwork was going upwards vertically through the roof.

There are two mushroom shaped vents atop the east roof which are used to bring makeup air into the plant, I was informed. It had been my previous understanding that these once served the cad bench. These vents are numbered 37 and 38, in the DCP rooftop diagram and numbered key. Please see attached photo with cadmium exhaust stack in the background.

40 CFR Part 63 Subpart WWWWWW, the NESHAP for Area Source Standards for Plating and Polishing Operations applies to their cadmium plating processes, but AQD does not have delegated authority from the Environmental Protection Agency to regulate this Area Source MACT.

Two alkaline chrome strip tanks; PTI 676-88:

The exhaust from these two strip tanks passes through an in-line mesh pad, before being released to the atmosphere. While up on the roof, no visible emissions could be seen.

Strip tanks which exhaust indoors; Rule 285(r):

These exhaust into the general, in-plant environment, rather than to the outside air. I observed one, and noted that there were no visible emissions.

Cooling tower, PTI No. 677-88:

There were no visible emissions from the cooling tower, during the course of the inspection.

Pickling tanks; Rule 285(r):

The pickling tanks, which exhaust into the interior plant environment, were not observed during this inspection. These are exempt from the requirement of Rule 201 to obtain a PTI.

Phosphate wash tanks; Rule 285(r):

The phosphate wash tanks, which exhaust into the interior plant environment, were not observed during this inspection. These are exempt from the requirement of Rule 201 to obtain a PTI.

Sandblasting; Rule 285(l)(vi)(B):

No sand blasting was taking place in the small sand blast booths, which are located near scrubber #5. These are exempt from the requirement of Rule 201 to obtain a PTI.

6 electric ovens; Rule 282(a):

These are used to heat parts, to remove hydrogen, as that could cause hydrogen embrittlement. I could not see any visible emissions from the ovens. These are exempt from the requirement of Rule 201 to obtain a PTI.

Emergency generator; Rule 285(g), 40 CFR Part 60, Subpart JJJJ, and 40 CFR Part 63, Subpart ZZZZ:

The natural gas-fired generator is emergency backup for the storm water pumps onsite. It is exempt from the requirement to obtain a PTI. The generator was not running, at this moment. It is my understanding that the generator is "exercised" or operated, weekly, for purposes of operational readiness. It is my understanding that their recordkeeping requirements for the generator are under 40 CFR Part 60, Subpart JJJJ, Section 60.4243. I was e-mailed a spreadsheet (hard copy attached for reference) on 9/22/2017, which showed the hours run, since the end of 2014, when this spreadsheet was evidently started. To determine hours run in 2017, I began with the cumulative hours which had been run from 2014 to 1/1/2017, which were 41.8, total. On 9/19/2017, the cumulative hours run since 2014 totaled 57.8.

**57.8 hours - 41.8 hours = 16.0 hours**

**Therefore, a total of 16 hours were run in 2017, well below the maximum limit of 100 hours per year for maintenance checks and readiness testing.**

**Conclusion:**

**There were no instances of noncompliance, at the time of the inspection: I left the facility at 3:05 PM.**

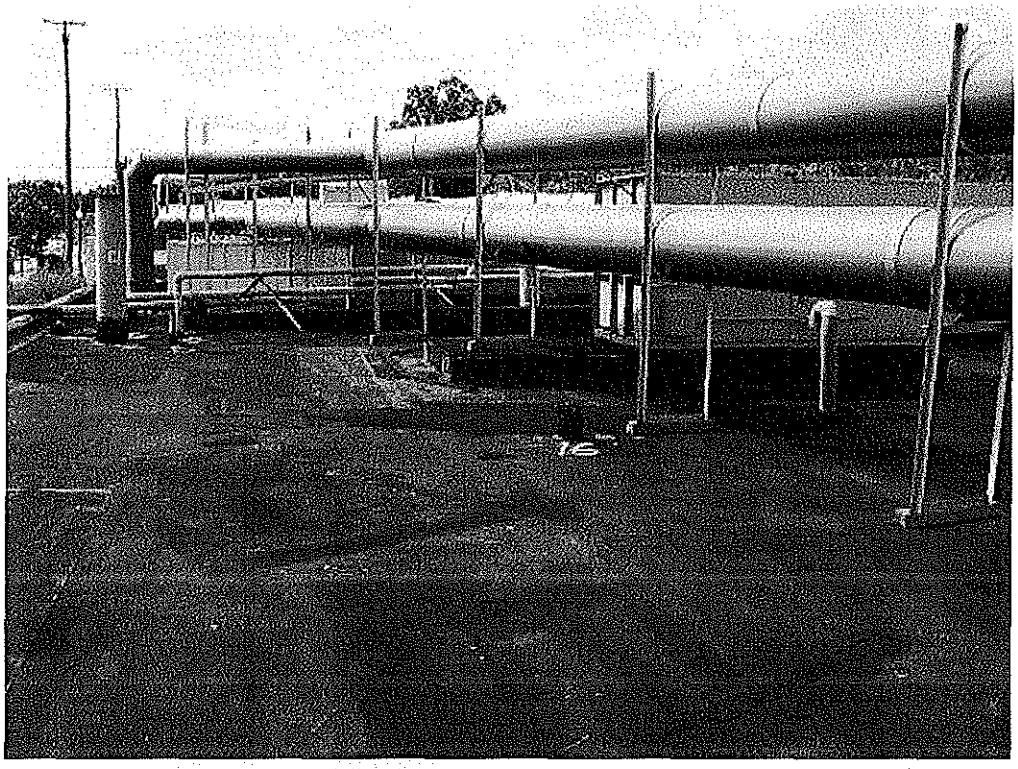

**Image 1(001) :** East ductwork atop east roof.

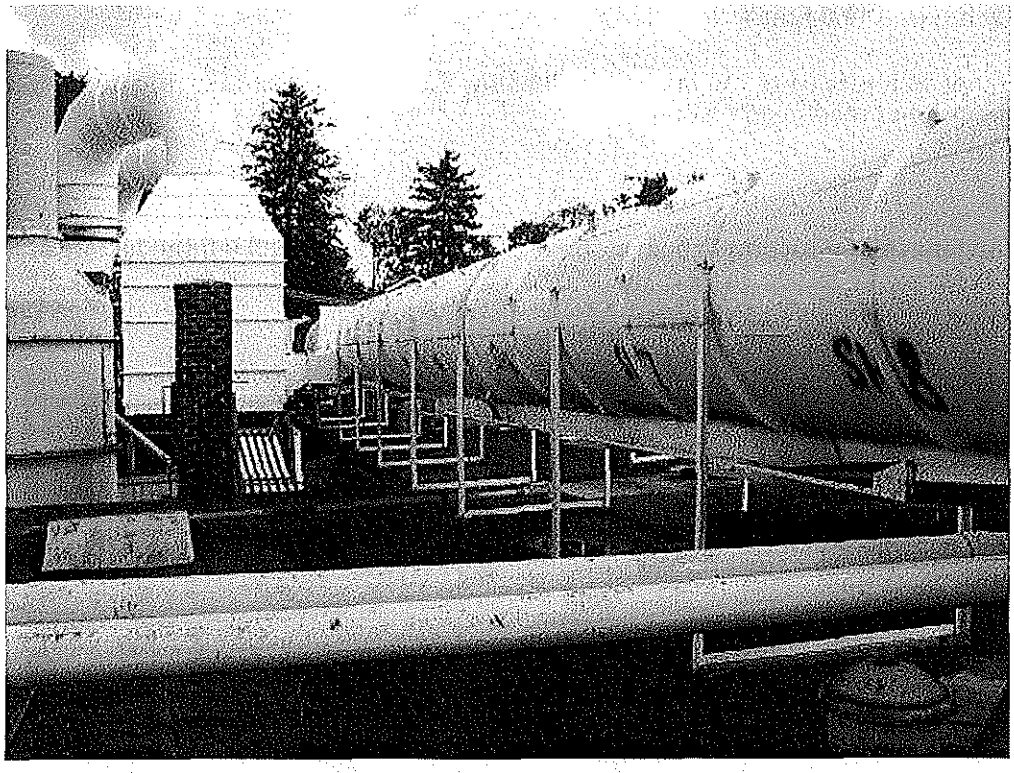

**Image 2(002) :** West ductwork on east roof, and scrubber #3.

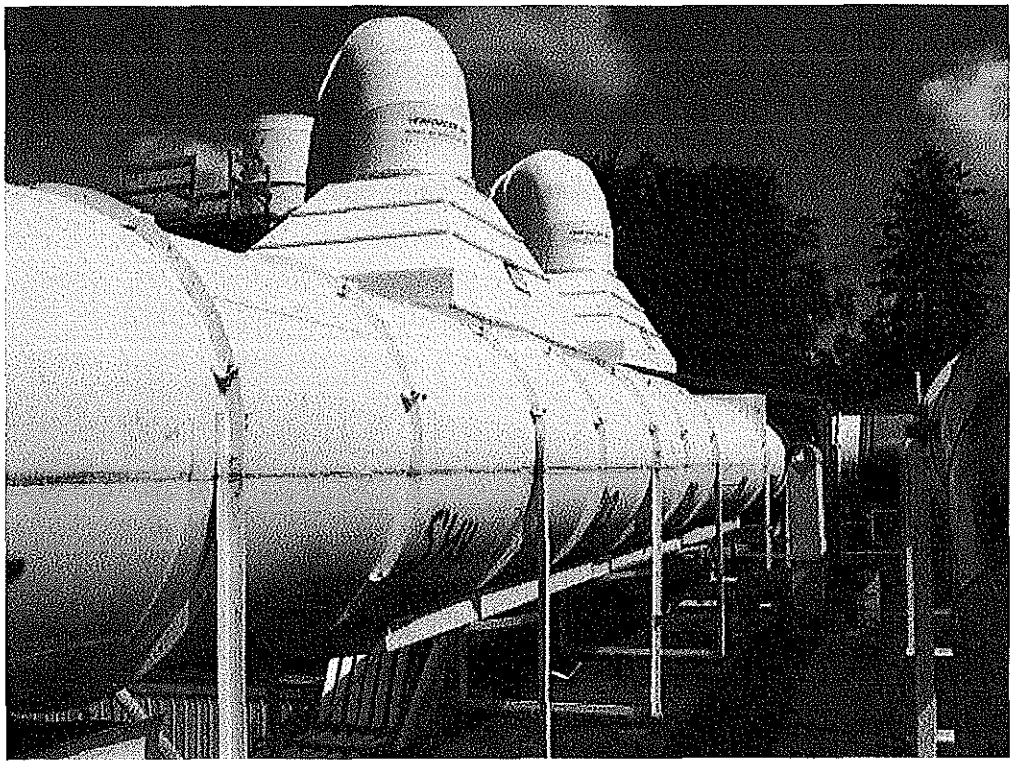

**Image 3(003) :** West ductwork on east roof, scrubbers #3 and 4.


**Image 4(004) :** West ductwork on east roof, looking south.

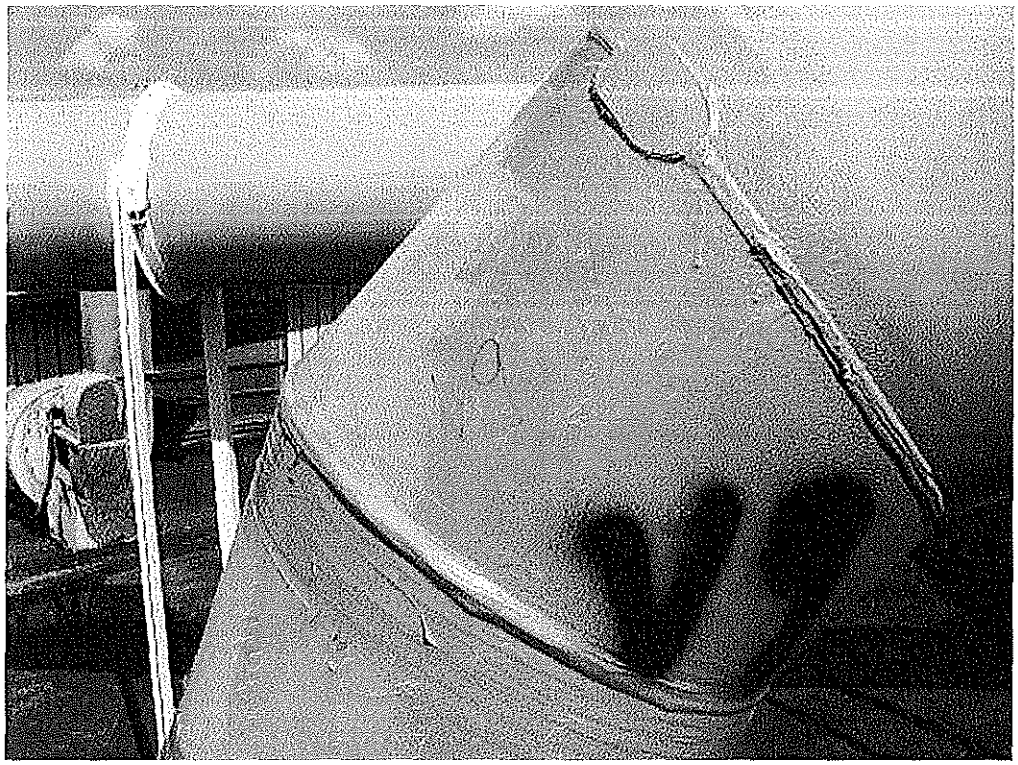

**Image 5(005) :** V-9 drop, where dried leak was found on 4/12, and was repaired.

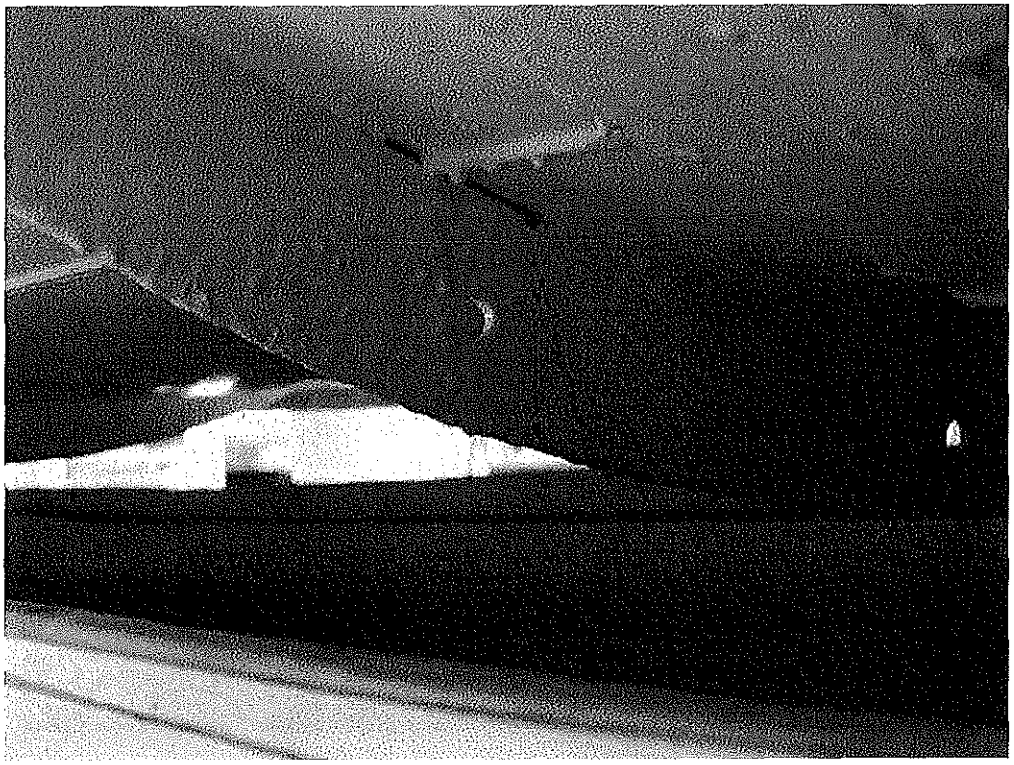

**Image 6(006) :** Underside of SH15, with small, dried leak.

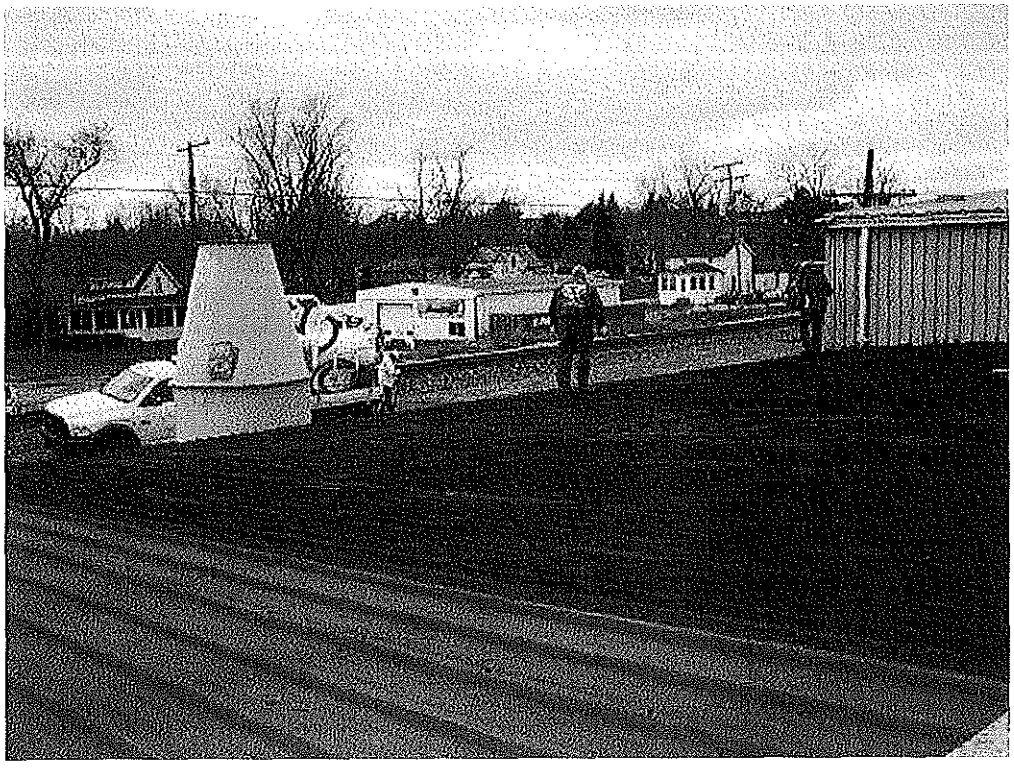

**Image 7(007) :** 2012 photo w/cadmium scrubber stack at upper right.

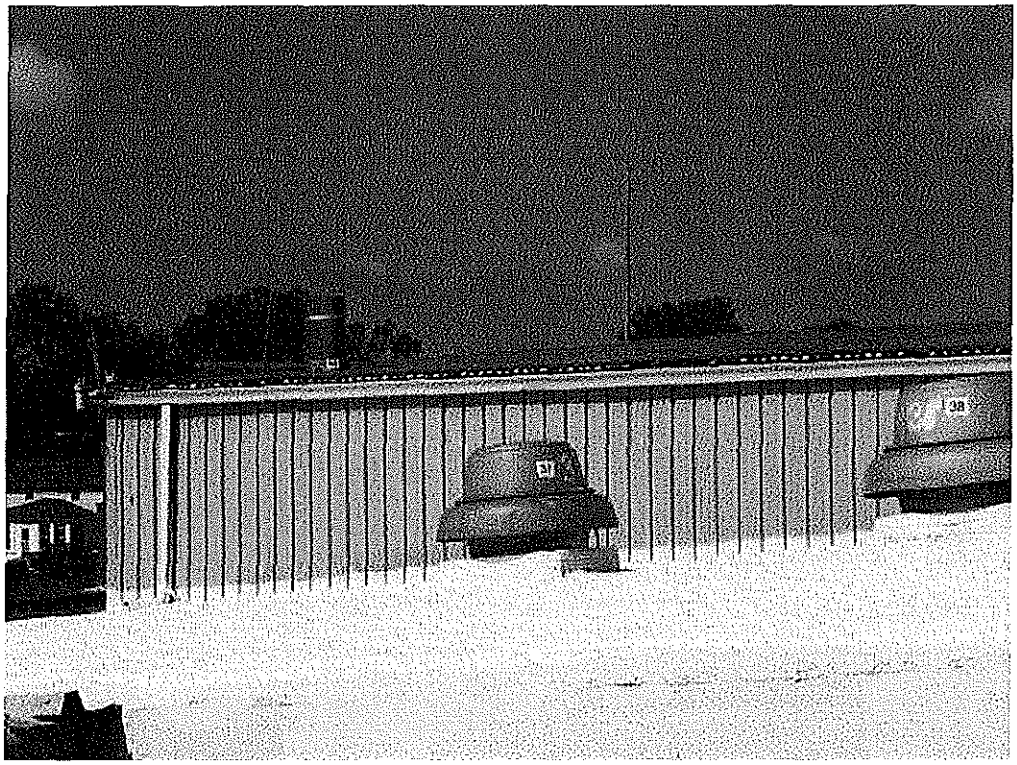

**Image 8(008) :** 8/30/2017 photo of taller cadmium scrubber stack, at left.

NAME _____ DATE 9/25/2017 SUPERVISOR B. M.