

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

N657845424

FACILITY: Almond Products Inc		SRN / ID: N6578
LOCATION: 17150 148th Ave, SPRING LAKE		DISTRICT: Grand Rapids
CITY: SPRING LAKE		COUNTY: OTTAWA
CONTACT: Kim Cooper , Environmental/Lab Supervisor		ACTIVITY DATE: 07/27/2018
STAFF: Kaitlyn DeVries	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: The purpose of this inspection was to determine compliance with Permit to Install (PTI) Numbers 361-06F and 340-08C as well as other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

On Tuesday July 24, 2018 Air Quality Division (AQD) Staff Kaitlyn DeVries (KD) and Tyler Salamasick (TS) conducted an unannounced, scheduled inspection of Almond Products Inc., located at 17150 148<sup>th</sup> Avenue, Spring Lake Michigan. The purpose of this inspection was to determine compliance with Permit to Install (PTI) Numbers 361-06F and 340-08C as well as other applicable air quality rules and regulations.

### Facility Description

Almond Products Inc., (Almond) provides finishing services for the automotive, appliance, military and office furniture industries. Primary operations include: coating of products (powder and solvent based), and pre-treatment (anodize and alodine).

### Regulatory Analysis

Almond currently holds two (2) permits, Opt-Out PTI No 361-06F and PTI No. 340-08C for a fluidized bed sand stripper. Almond has Opt-Out limits for Volatile Organic Compounds (VOC's) and Hazardous Air Pollutants (HAP's). Almond is also subject to the National Emission Standards for Hazardous Air Pollutants, Area Source Standards for Plating and Polishing Operations promulgated under 40 CFR Part 63 Subpart W. AQD does not currently have delegation for this area source MACT, therefore it will not be further evaluated. Almond was previously under an administrative Consent Order with AQD, but this Consent Order was terminated in 2016.

### Compliance Evaluation

KD and TS first arrived on site at approximately 9:00 am. Prior to entry to the facility, the perimeter was observed for any excess odors or opacity. Only water vapor was observed emanating from one (1) of the stacks, which in turn, was the drying tunnel. Upon arrival, KD noted that another group had just signed in for Ms. Kim Cooper, Environmental/Lab Supervisor. After a quick discussion with Ms. Cooper, staff agreed to come back in an hour or so. Staff arrived back at the facility for the inspection at approximately 10:30 am. Throughout the tour of the facility, no open containers were noted.

#### PTI No. 340-08C

This permit is for a fluidized bed sand stripper used to clean accumulated coatings from metal parts, racks, hooks, and/or hangers. The system includes a heated fluidizer and bed, a flame combustion zone maintained at the surface of the sand, a secondary afterburner, and a ceramic element filter particulate control system equipped with upstream exhaust air cooling. The unit was not operating at the time of the inspection, but per Ms. Cooper, the unit is normally operated during first shift, but wasn't that day due to the operator being out.

Particulate matter (PM) is limited to 0.006 pounds per 1000 pounds of exhaust gas, while PM10 and PM2.5 are limited to 2.2 pounds per hour (pph) each. The unit also has limits of 9.6 pounds per batch for hydrogen chloride (HCl) and 11.5 pounds per batch for hydrogen fluoride (HF). All of these limits are based upon testing. Testing for the unit was done in January 2014 and indicated compliance with the emission limits. The unit has an interlock system that shuts down the furnace when the secondary afterburner is not operating properly.

Certain material types are also limited to particular batches per 12-month rolling time period. Coatings containing chromium or chromium compounds are limited to 1,095 batches per 12-month rolling time period. Per the attached records, Almond processed 342 batches containing chromium as of June 2018. In addition to the batch limit for parts containing chromium compounds, the elemental chromium content must not exceed 9.05

percent by weight, for which records indicate the chromium content for the coatings is less 9.05 percent by weight. Coatings containing manganese or manganese compounds are limited to 1,095 batches per 12-month rolling time period. Per the attached records no parts were processed that had manganese containing coatings in the previous 12 months. The records also state that parts coated with paint containing manganese are single-hooked and are not burned off in the stand stripper. Coatings that contain epoxy resins are limited 1,870 batches per 12-month rolling time period. Records indicate a total of 1,077 batches were processed containing epoxy during the last 12-month rolling time period. Coatings containing polytetrafluoroethylene (PTFE) resins are limited to 1,560 batches per 12-month rolling time period. As of June 2018, the 12-month rolling batch records indicate a total of 943 batches processed. No excess ash was reported on any of the parts.

Almond has implemented and maintains a malfunction abatement plan (MAP) for the unit, conducting the most recent calibration and maintenance on May 3, 2018. The secondary afterburner is required to be at a minimum temperature of 1560°F (± 50°F) with a minimum retention time of 0.5 seconds. Per the attached records, the unit is consistently ran above the 1560°F minimum requirement.

While the stack dimensions were not explicitly measured, the dimensions appeared to be correct.

#### PTI No. 361-06F

This permit covers all of the facility wide emission limits. VOC emissions from the facility are limited to less than 90.0 tons per year (tpy) per 12-month rolling time period. As of June 2018, the 12-month rolling VOC emissions were 56.238 tons. HAP's are limited to less than 22.5 tpy, aggregately, and 9.0 tpy, individually; both are per 12-month rolling time periods. The 12-month rolling HAP emissions, as of June 2018, was 5.983 tons, with the highest monthly HAP emissions being 0.857 tons, in November 2017.

Almond is properly tracking all material usage, VOC and HAP content of the materials used in the facility.

#### *EULINE1*

This emission unit is comprised of two (2) alkaline cleaning tanks, two (2) rinse tanks, and a polymer-based surface pre-treatment tank, followed by a dryer and cool down section. There is also two (2) dry filter spray primer stations, an e-coat process with associated curing ovens and cool down sections. The dip line tanks and ovens are controlled by a thermal oxidizer. The line also relies on the non-fugitive enclosure (NFE) to ensure capture.

VOC's from the line are limited to 75.0 tpy, based upon a 12-month rolling time period and 410.8 lbs/day. The primer spray stations have a VOC limit of 14.6 tpy, and the e-coat portion has a VOC limit of 4.5 tpy, both based upon a 12-month rolling time period. As of June 2018, the 12-month rolling VOC emissions from this line were 22.37 tons, with the highest month being December 2017 at 2.97 tons. Records also indicate the VOC emissions from the e-coat portion of the to be 0.38 tpy, and the VOC emissions from the prime spray stations to be 0.45 tpy. The daily records show the highest daily VOC emissions at 377.66 lbs in August 2017.

The coatings from this line also have VOC limitations. The VOC content from the primer spray and e-coat coatings are limited to 3.2 lb./gallon, minus water as applied, while the VOC content from the dip coating is limited to 6.7 lbs/gallon minus water, as applied, prior to control. Per the manufacturers formulation data, for which Almond requested and AQD approved the use of, the VOC content is of the primer is 2.88 lbs/gallon, while the VOC content of the e-coat coatings is 0.50 lbs/gallon.

The primer spray stations in EULINE1 had fabric filters and were using HVLP applicators. Per Ms. Cooper, the filters are changed out after each shift, and disposed of via a landfill.

The oxidizer that is used on this line to control VOC emissions is required to have a minimum destruction efficiency of 85%, with a minimum temperature of 1400°F. At the time of the inspection, the oxidizer was running at a temperature of 1452°F. Temperature records indicate that the oxidizer has been operating between 1440°F and 1540°F. Destruction efficiency (DE) testing was most recently conducted on this unit in February of 2018 indicating a DE of 99.88%. Almond was previously issued a Violation Notice (VN) for failure to conduct this testing in October 2017, due to a broken heat exchanger in the oxidizer. This part was subsequently replaced, and testing was conducted, resolving this violation. Since this line relies on the NFE for capture, testing of all natural draft openings is required semi-annual NDO testing. Testing of the natural draft openings was also done on the same day that the destruction efficiency testing was conducted. While looking at the oxidizer, KD noted some gapping in the outer shell, KD asked if this was just in the outer-shell of the ductwork, or if the gap

extended into the inner ductwork. Ms. Cooper was unsure but indicated that she would find out. KD stated that either way, this should be fixed. Ms. Cooper confirmed later, via e-mail, that the facilities manager confirmed the gapping is only on the external shell, and it is sealed internally. The facility maintains a MAP for this line, with most recent PM for the unit having been conducted in June 2018; records are attached.

While the stack dimensions were not explicitly measured, they appeared to be correct.

#### *EUDIPLINE2*

This paint dip line includes metal surface cleaning/pretreatment operations consisting of tanks containing aqueous cleaning and conditioning solutions followed by two (2) dip coating tanks, which consists of one (1) water-based e-coat tank, one (1) solvent-based paint dip tank, and six (6) cure ovens. A NFE is also used as a form of control. The most recent testing of this was conducted in May 2018. The use of a RTO is required whenever the solvent-based paint dip tank is utilizing coatings which exceed the VOC content limits identified in PTI No. 361-06F. At this time, Almond is using coatings that are compliant with the limits mentioned below, therefore no RTO is used.

VOC's from this line are limited to 161.3 lbs/day and 21.8 tpy based upon a 12-month rolling time period. The attached records indicate a 12-month rolling VOC emission rate of 4.72 tons. The daily VOC emission records show less than 5 lbs of VOC are emitted each day. Cumene emissions from the line are limited to 1,476.6 lb./yr, based upon a 12-month rolling time period. Records indicate a 12-month rolling Cumene emission rate of 11.43 lbs. As mentioned in the preceding paragraph, Almond is currently using a VOC content limit rather than relying on a RTO for control of VOC emissions. The VOC content for coatings is limited to 3.0 lbs/gallon, minus water as applied. The highest coating used has a VOC content of 0.12 lbs/gallon. Almond has requested, and AQD approved the use of manufacturers formulation data for VOC and HAP content for their coatings.

#### *EUCOATING*

This emission unit is comprised of four (4) dry filter spray booths and a curing oven. All four (4) booths are manual spray with HVLP applicators. KD inquired about the filters, which looked fairly spent, and Ms. Cooper ensured KD that these filters are changed out at the end of each shift and disposed of via a landfill.

VOC and exempt solvents combined, have an emission limitation of 50.0 tpy, and 1044 lbs/day. Per the attached records, the 12-month rolling average VOC emission from this coating line is 33.69 tons, while the daily VOC emissions are below 400 lbs/day. Clear Coats used on this line have a daily volume-weighted VOC content limit of 4.3 lbs/day and extreme performance coatings have a daily volume-weighted VOC content limit of 3.5 lbs/day. Records indicate the daily volume weighted averages for both the clear coats and the extreme performance coatings are below 4.3 lbs and 3.5 lbs, respectively. Almond has requested, and AQD approved the use of manufacturers formulation data to show compliance with the VOC limitations. Additionally, Almond has a combined Diabasic Esters emission limit of 2.37 tpy, based upon a 12-month rolling average. Records indicate a 12-month rolling average of 0.03029 tons. Almond also has a limit of 27,000 gallons of tan topcoat per year, for which Almond has used a total of 814.0 gallons.

There is also a condition in the permit, requiring Almond to notify AQD if a change in land use occurs for property classified as industrial or as a public roadway, where compliance with Rule 225(1) must be demonstrated. As of the date of this report, no changes in land use or public roadways has occurred, triggering this notification.

The stack parameters for this emission unit, while not explicitly measured, appeared to be of correct dimension.

#### *EUANOLD/ALOD*

Almond has a surface treatment process line consisting of multiple tanks in which metal parts are either anodized or alodined. The tanks range in composition from water to acids. Emissions from this line are controlled by a 25,000 CFM horizontal cross-flow fume scrubber.

Almond has implemented and maintains a MAP for this line, and per Ms. Cooper, the packing from the scrubber was just replaced. KD and TS were able to see the new packing for the scrubber. The most recent PM record is attached to this report. KD did ask Ms. Cooper about the apparent accumulation around the hood of one portion of the scrubber draw system. Ms. Cooper said that that would be cleaned up right away. The accumulation was only noted on one (1) section of the draw of hood.

### Exempt Processes

There is a large powder coating line, which is exempt from Rule 201 permitting under Rule 287(2)(d). Almond has one (1) water wash line, that is exempt from Rule 201 permitting under Rule 281(2)(e). There is also one (1) additional metal surface treatment line, which is internally vented, that is exempt from Rule 201 permitting under Rule 285(2)(r)(i).

Almond also has one (1) small paint booth located near EU-COATING, which is internally vented and only used for small hand coated jobs, and is exempt under Rule 287(2)(c), since approximately six (6) gallons are used per month. Hand-held aerosol spray cans are also used for touch-up and are exempt from Rule 201 permitting under Rule 287(2)(b).

Finally, Almond has two (2) diesel fuel emergency generators with capacities of 80kW and 275 kW, installed in 2008 and 2001, which are exempt from Rule 201 permitting under Rule 282(2)(b)(ii). These generators appear to be subject to the provisions of 40 CFR Part 63 Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines, however, since AQD is not delegated for this area source MACT. The 275 kW generator does not appear to be subject to the provisions of the New Source Performance Standards (NSPS) promulgated by 40 CFR Part 60 Subpart IIII for Stationary Reciprocating Compression Ignition Internal Combustion Engines based upon the date of installation; however, it is a certified engine and is compliant with the emission limitations of the NSPS.

### **Compliance Determination**

Based upon the observations made during the inspection and a subsequent review of the records, it appears as if Almond Products, Incl. is in compliance with PTI No's 361-06F and 340-08C.

NAME Kaitlyn B. Liu

DATE 8/3/2018

SUPERVISOR 