

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

M358233328

FACILITY: IAC Group ,ALMA,LLC ( Formally Lear Corporation)		SRN / ID: M3582
LOCATION: 1965 WILLIAMS RD, ALMA		DISTRICT: Lansing
CITY: ALMA		COUNTY: GRATIOT
CONTACT: John McConkie , Plant Technical Manager		ACTIVITY DATE: 02/04/2016
STAFF: Michelle Luplow	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Unannounced, scheduled partial compliance evaluation as part of a full compliance evaluation.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow

Personnel Present: John McConkie (jmconkie@iacna.com), Plant Technical Manager  
Jeremy Haller (jhaller@iacgroup.com), Quality Manager

Other Relevant Personnel: Jim Colmer (jcolmer@bbande.com), Consultant

**Purpose:** Conduct an unannounced, scheduled, partial compliance evaluation (PCE) inspection by determining compliance with International Automotive Components' (IACs) Opt-Out Permit No. 170-79H, including verification that IAC stayed within the permit's emission limits to remain an opt-out source and not enter into Title V status. The last inspection's investigation of recordkeeping revealed that the records were not accurate in various aspects; therefore, this inspection was also conducted to ensure that recordkeeping was kept up-to-date with the most accurate information, as well as sample some of IAC's coatings to determine VOC lb/gallon content. This inspection was done as part of a full compliance evaluation (FCE). The last time this facility was inspected was July 2015.

**Facility Background/Regulatory Overview:** IAC is involved with making interior automotive parts, using mold-injection, hand-spray painting of interior automotive products (such as consoles, for Ford, Toyota, Chrysler, and GM), applying "fabric" to the interior automotive parts, and assembling the interior automobile parts (for example, installing light tubes and wiring in overhead consoles). The newly permitted FGCOATING2 (the "Camaro line") handles components for IAC's new project for the Camaro. Permit 170-79H was issued because IAC wanted to transfer all production from EUBOOTH1-4 to EUMANUAL and EUROBOTIC. EUBOOTH1-4, per PTI 170-79H, were required to be removed from service by May 1, 2015, and IAC was required to notify AQD that this equipment was removed within 7 days of removal. On May 19, 2015 AQD received a letter from IAC dated May 5, 2015 notifying AQD that the EUBOOTH1-4 and its associated IR oven have been removed from service. Flexible group FGCOATING has been removed in PTI version 170-79H and replaced with FGCOATING2. IAC no longer uses propylene carbonate and therefore it was removed from permit recordkeeping.

J. McConkie said that Camaro line production increased operating hours to 24 hours per day, 7 days a week, which started October 2015.

IAC is an opt-out facility. VOCs are limited to 0.75 tpy from EUADHESIVELN; VOC, cumene, 2-propanol-1-(2-butoxy-1-methylethoxy), and tripropylene glycol methyl are limited to 64.2 tpy, 152.4 lb/year, 16,965 lb/year, and 16,675 lb/year, respectively, for FGCOATING2; and each individual HAP and aggregate HAPS are limited to less than 9.0 tpy and less than 22.5 tpy, respectively, for FGFACILITY.

**Inspection:** At approximately 8:30 a.m. on February 4, 2016 I arrived at IAC. I met John McConkie in the lobby. I gave J. McConkie a DEQ "Environmental Inspections: Rights and Responsibilities" brochure and the Boiler MACT outreach brochure.

J. McConkie said that since the July 2015 inspection mold injectors/presses have been added and removed for a total of 41 mold injectors/presses currently onsite that can press from 90 to 2200 tons. All mold injectors/presses located on the site are exempt from obtaining a PTI per Rule 285 (l)(i).

#### *Process/Operational Restrictions*

The Process/Operational Restrictions for all permitted emission units are the same. They require that all waste material be captured and stored in closed containers and to dispose of waste material in an acceptable manner and in compliance with all state rules and federal regulations. Additionally, all VOC/HAP-containing materials should be handled in such a manner to minimize fugitive emissions. J. McConkie said that IAC ships out both hazardous waste and waterborne/non-hazardous waste containers. All hazardous and non-hazardous waste containers are located in one room. All containers were closed during the inspection. There is one 55-gallon drum that collects the waste from purging lines that contain catalyst or solvent. These are considered hazardous waste. The purge lines are connected directly to the waste drums present in the waste containment room. J. McConkie said that n-butyl acetate is used to purge the Camaro paint lines (shipped as hazardous waste) and a water/soap solution is used to clean out lines that use the 396 series paints used in EUMANUAL (shipped as non-hazardous waste to Stoddard for treatment).

IAC is currently in compliance with all Process/Operational Restrictions for all emission units at this time.

**EUADHESIVELN**

EUADHESIVELN has a natural gas-fired oven to cure the parts.

All filters are required to be installed, maintained and operated in a satisfactory manner. I verified that the EUADHESIVELN filters in the booth were all in proper place. The filters themselves are not visible because there is an overlay that protects the filters underneath, which was also installed properly (the overlay completely covered all vent openings).

I asked J. McConkie to use the test caps, which the permit requires to have on-hand, and test the pressure coming out of the EUADHESIVELN HVLP gun to verify that the pressure does not exceed 10 psig. The reading through the test cap was 1.5 psig, indicating proper operation of the gun as an HVLP applicator.

The adhesive line uses PPG T8085. Previously PPG T7944 was also used but had ceased being used in production as of February 2014. PPG T8085 has been used the entire rolling calendar year (Jan – Dec 2015). I obtained the SDS and AQDS (Air Quality Data Sheets) for PPG T8085 only. IAC is limited to 0.3 lb VOC/gal (minus water) in their coatings for EUADHESIVELN. According to the data sheet, T8085 has a VOC content (minus water) of 0.03 lb/gallon. I asked J. McConkie for a sample of T8085 in order to test for the VOC lb/gallon content to confirm that the data sheets are correct. Trace Analytical in Muskegon conducted a Method 24 analysis on this sample. Results were electronically received February 22, 2016 from Trace. While the results indicate that the VOC content (minus water) of T8085 is 1.6 lb/gal, due to Method 24's limitations with VOC coating contents less than 1 lb/gallon, they are not considered accurate. IAC is in compliance with their coating material limits based on the data sheets.

The 12-month rolling limit for VOC is 0.75 tpy. From January 2015 through December 2015, the 12-month rolling VOC emissions were 0.08 tpy (160 lb/year) (based on the VOC content without water and gallon usage during the 12-month period). This 12-month rolling VOC emission report is an overestimation of actual emissions, as the VOC content used in the spreadsheet was based on a 0.05 lb/gal VOC content and a 14-month rolling total (based on excel spreadsheet formulas). I will inform IAC of this overestimation, although at this moment in time it is not a concern considering IAC is maintaining VOC emission well below their VOC limits for EUADHESIVELN. IAC is in therefore in compliance with their VOC 12-month rolling emission limits from EUADHESIVELN.

**FGCOATING2**

J. McConkie said the FGCOATING2 line is referred to as the "Camaro Line." FGCOATING2 consists of 2 conveyerized automotive interior plastic parts coating lines: a flame treatment booth, de-stat blow-off tunnel, 1 manual spray booth (EUMANUAL), 3 automatic robotic spray applicators (2 booths) (EUROBOTIC), a flash tunnel and a natural gas-fired curing oven. The 3<sup>rd</sup> automatic robotic applicator (Robot 4) was installed December 2015. The flame treatment booth contains a flame that comes within inches of the part and treats the olefin plastic so that the paint can adhere to the part.

The EUMANUAL booth was not operating during the inspection; however, all filters were installed properly, as a follow-up to the last inspection where 2 of the filters were improperly installed. J. McConkie said that the fabric filters for all booths are replaced every day during the second shift and the floors are swept to dispose of booth fall-out particulate. J. McConkie said that OSHA had visited IAC a few weeks back to test the air in EUMANUAL to ensure that workers were not getting exposed above the PEL. He said that the results indicated all levels of pollutants were below the PEL.

There are 2 booths for the robotic applicators: robot 4 is located in one spray booth and robots 1 and 3 are both located in the other paint booth. All fabric filters were installed properly. During the inspection the automatic robotic coating line was being used.

The flash tunnel is used to evaporate the water and solvents from the coating. There is 1 natural gas-fired oven that services the Camaro line. The parts are sent through the oven to activate the catalyst in order to cure the paint on the parts.

Prior to the parts being coated they are hand-wiped to remove dirt and cardboard fibers with a mixture of isopropyl alcohol. There is one container of isopropyl alcohol that is less than 1 gallon in size that dispenses the solvent onto rags. Emission from this process are negligible.

**II. Material Limits**

The coating VOC content limit for all coatings used in the Camaro line is 3.0 lb VOC/gal (minus water). Table 1 lists each coating with their associated VOC and TAC contents, per the Environmental Data Sheets (EDS). The EDS provide more accurate information on the content of each coating than the Air Quality Data Sheets or the SDS. For future inspections, it is recommended that verification of coating specifications be done using the EDS. Per the EDS, all coating contents appear to be in compliance with the 3.0 lb VOC/gal.

IAC coating booth operators took samples of 396W light camel (although it is no longer being used as of January 2016), and 396W24313C black lacquer to determine VOC content using Method 24 through Trace Analytical. Results were received electronically from Trace Analytical on February 23, 2016 (attached). Table 1 shows these results. Based on Trace Analytical's Method 24 results, IAC is in violation of the VOC coating contents for both sampled coatings: both coatings exceed the 3.0 VOC lb/gallon (minus water) permit limit. A violation notice will be sent. In the future, coating AWDF-9397 and AWWL-0256 will be sampled separately and VOC content determined as applied using the 3.5:1 ratio that IAC uses.

Table 1. Coating Specs for the Camaro Line (VOC): based on AQDS, EDS and Trace Analytical results

Coating	VOC (w/ H <sub>2</sub> O) lb/gal	VOC (w/o H <sub>2</sub> O) lb/gal	Trace Analytical Results (VOC lb/gal minus water)	Density (lb/gal)	Coating VOC Content Compliance?
396W102 (light camel)	1.37	2.9	3.4	9.86	No
364W13X (medium camel)	0.72	2.1	NA	9.5	Yes
364W12AX (black)	0.78	2.1	NA	9.14	Yes
396W24313C (black lacquer)	1.19	2.8	3.5	8.77	No
AWDF-9397 (coating)	1.4	3.0 (2.97 as applied)**	NA	8.96	Yes
AWXL-0256 (hardener)	2.7	2.8 (2.97 as applied)**	NA	9.03	Yes

\*\* J. Colmer said although the AWDF-9397 has a VOC content of 3.02 lb/gallon (minus water and exempt solvents) the “as applied” VOC content is 2.97 lb/gallon because they do a mixture of 3.5 parts AWDF-9397 paint to 1 part of the AWXL-0256 hardener before applying it to the part. Attached is the manufacturer’s formulation mix ratio which explains this.

J. Colmer explained that coating manufacturers have been known to alter the formulations of their coatings slightly, but still call it by the same name. It is in the facility’s best interest to occasionally check with the manufacturer to ensure that the coating contents they are using to determine emissions have remained consistent within the data sheets.

*IV. Design/Equipment Parameters*

According to SC IV.2, IAC is required to keep test caps available for pressure testing of high-velocity low-pressure (HVLP) applicators. HVLP, by state definition, means the applicators must have an application pressure of 10 psig or less. After the July 2015 inspection, J. McConkie had EUMANUAL, and Robot 1 and 3 applicators pressure-tested. The table below shows the atomization set points and actual test cap pressure readings. See the table below for the atomization set points and the actual pressure reading from the test caps. During the inspection I had wanted to retrieve test cap data for Robots 1, 3 and 4, but because production had already been shut down too long in order to grab paint samples we did not take the time to verify HVLP is being used at that time. Verifying the applicators on Robots 1, 3, 4 and EUMANUAL are HVLP will have to be done at a future inspection. While the July 2015 pressure test readings on EUMANUAL and Robots 1 and 3 were not done in my presence, the readings indicate compliance: all actual readings are at or below 10 psig. IAC is in compliance with SC IV.2.

	Atomization Set Point (psig)	Actual Reading (psig)
Manual Spray	30	7
Robot 1 43	10	
Robot 3 43	10	

*V. Testing/Sampling*

Based on the differences between what the manufacturer has reported and what Trace Analytical’s Method 24 results show for VOC content minus water for 396W102 Light Camel and 396W24313C, it may be necessary to require IAC to conduct Method 24 analyses for all coatings for determining coating content and reporting emissions in the future. A determination on this will be made once the AQD receives IAC’s response to the violation notice.

*VI. Monitoring/Recordkeeping*

IAC keeps electronic records of the coating specs for each coating (VOC, HAP and TAC wt%; water content, and density – See Table 3 for TAC coating contents); the VOC emission calculations per calendar month and 12-month rolling tonnage; TAC emissions calculations per calendar month and 12-month rolling tonnage; and HAP emissions calculations per calendar month and 12-month rolling tonnage (for FGFACILITY). Attached are the spreadsheets. I verified that all calculations used in determining the emissions in Table 4 were correct. Note that the emissions are much lower than the limits IAC applied for. Emissions are determined using the worst-case (highest VOC, TAC, and HAP content) coating. Overall emissions are expected

to be greater in the 12-month rolling time period between October 2015 and November 2016 than they are for the current 12-month rolling period because of increased production on the Camaro line.

The VOC contents for 396W102 light camel and 396W24313C black lacquer, although they exceed the VOC content limits, do not increase VOC emissions above the 64.2 tpy limit for FGCOATING; therefore, IAC is in compliance with the 12-month rolling VOC limit. Table 4 also shows that IAC is in compliance with their 12-month rolling TAC limits at this time.

Table 3. Coating Specs for the Camaro Line (TACs): based on AQDS or EDS

Coating	Cumene (wt%)	2-propanol, 1-(2-butoxy-1-methylethoxy) (wt%) CAS #29911-28-2	tripropylene glycol methyl (wt%) CAS #25498-49-1
396W102 (light camel)	NA	NA	6.04
364W13X (medium camel)	0.01	5.83	NA
364W12AX (black)	0.01	7.19	NA
396W24313C (black lacquer)	NA	NA	NA
AWDF-9397	NA	NA	NA
AWXL-0256	0.16	NA	NA

Table 4. 12-month rolling emissions for VOC and TACs

Pollutant	Actual (Jan 2015 – Dec 2015)	Limit (12-month rolling)
VOC	3.22 tpy	64.2 tpy
Cumene	26.1 lb/yr	152.4 lb/year
1-(2-butoxy-1-methylethoxy)-2-propanol	2,020 lb/year	16,965 lb/year
Tripropylene glycol methyl	1,810 lb/year	16,675 lb/year

Upon initial review of IAC's records in July 2015 for the July inspection, I found that some of the coating contents were either inaccurate, duplicated from one coating to the next in the spreadsheet, or were not accurately represented based on the SDS. This led to working with J. Colmer to look into the coating specs of each coating that is used at IAC and to provide me with the most up-to-date coating specs and the resulting, accurate emissions calculations for VOCs, TACs and HAPs. A violation was not issued for the discrepancies in the recordkeeping at that time. All 364 and 396 series coatings were used during the past 12-month rolling period (Jan 2015 – Dec 2015); however, J. Colmer said that 364W12AX, 364W13X, and 396W102 (light camel) coatings have been discontinued and will no longer be used in the production lines. In the future, therefore, it may be possible to no longer use the worst-case coatings for determining emissions, but rather to use the actual coating usage rates and VOC, HAP, and TAC coating contents for determining emissions

IAC is in compliance with both its emissions limits and monitoring/recordkeeping requirements at this time.

*VIII. Stack/Vent Restrictions*

Verification of the stack heights for all stacks was done by J. McConkie. New stacks were installed to accommodate the new booths for FGCOATING2 (SV-MANUAL, SV-ROBOT1, SV-ROBOT2 and SV-NATGASOVEN2). All stacks listed in the previous permit have been removed, except for SV-ADHESIVELN and SV-NATGASOVEN. The following table summarizes the floor plan heights versus the required stack heights in PTI 170-79H. Attached is the floor plan with associated stack heights. There were no signs of opacity emitting from any of the stacks during the inspection. IAC is in compliance with the stack height requirements at this time.

Table 5.

Stack & Vent ID	Permitted Minimum Height Above Ground (ft)	Actual Height Above Ground (ft)
SV-MANUAL	37	38.2
SV-ROBOT1	37	38
SV-ROBOT2	37	39
SV-NATGASOVEN2	37	38

**FGFACILITY**

IAC has individual and aggregate HAP limits. The permit evaluation form contained acrylonitrile and formaldehyde as HAPs. IAC has also included hexamethylene diisocyanate (HDI), chlorobenzene, cumene, ethyle benzene, and xylene as HAPs in their HAPs recordkeeping. Within their electronic spreadsheet IAC tracks the gallons of HAP-containing materials used, the HAP content, and individual and aggregate HAP emissions calculations on a monthly and 12-month rolling basis. Table 6 shows the HAP content of all coatings IAC is currently using. Table 7 shows HAP emissions versus permit limits. As shown in Table 7, IAC is in compliance with all FGFACILITY individual and aggregate HAP limits at this time. Table 5. HAP content of various coatings

Coating	EU	Chloro-benzene (wt%)	Cumene (wt%)	Diethylethan-amine (wt%)	Acrylo-nitrile (wt%)	Ethenyl-benzene (wt%)	Formal-dehyde (wt%)	HDI (wt%)	Xylene (wt%)
364W	FGCOATING2	NA	0.01	0.05	NA	NA	NA	NA	NA
396W	FGCOATING2	NA	NA	NA	NA	0.01	0.01	NA	NA
AWDF-9397	FGCOATING2	NA	NA	NA	NA	NA	NA	NA	NA
AWXL-0256	FGCOATING2	NA	0.16	NA	NA	NA	NA	0.23	0.23
T8085	EUADHESIVELN	0.1	NA	NA	NA	NA	NA	NA	NA

Table 6. Aggregate and Individual HAP emissions vs. HAP limits

Pollutant	Actual Individual HAP (tpy) Jan 2015 – Dec 2015	Limit Individual HAP (tpy) Jan 2015 – Dec 2015
Chlorobenzene	0.014	9.0
Cumene	0.01	
Diethylethanamine	0.007	
Acrylonitrile	0.0	
Ethenyl benzene	0.001	
Formaldehyde	0.001	
HDI	0.017	
Xylene	0.018	
<b>Total Aggregate HAPs Jan 2015 – Dec 2015</b>	<b>0.1</b>	<b>22.5</b>

**Compliance statement:** IAC appears to be in violation of the VOC lb/gal minus water coating limits and a violation notice will be sent, accordingly; however, IAC is in compliance with all other PTI requirements at this time.

**Inspector's Safety and Health:** Those entering the facility are required to electronically sign in and watch a safety presentation. After confirming you've watched the presentation a "badge" is printed out for you.

Safety glasses are required. J. McConkie said there are no respiratory hazards throughout the plant, although I did detect some paint odors inside near the Camaro line. Hard hats are not required.

NAME Michelle M. Ludlow

DATE 2-29-16

SUPERVISOR 

