TECHNICAL SUPPORT DOCUMENT
(STATEMENT of BASIS)

for Permit Issuance

TECHNICAL INFORMATION PRESENTED IN REVIEW OF AN
APPLICATION FOR AN AUTHORITY TO CONSTRUCT FOR A PART 70 SOURCE

SUBMITTED BY

Amec Foster Wheeler Environment & Infrastructure, Inc.

for

Faraday Future

ATC Operating Permit Number: 17777
SIC Code - 3711: Automobile and Light Duty Truck Assembly
NAICS Code – 336111: Automobile Manufacturing

Clark County
Department of Air Quality
Permitting Section

July, 2016

EXECUTIVE SUMMARY

Faraday Future is an electric car manufacturing facility located in Apex Industrial Park in North Las Vegas, Nevada. The legal description of the source location is as follows: portions of Township 18S, Range 63E, Section 16 in North Las Vegas Valley, Clark County, State of Nevada. The source is situated in hydrographic area 216 (Garnet Valley), which is currently designated attainment for all regulated air pollutants.

Faraday Future is a major Title V source for VOC and combined HAPs and a minor source for PM_{10}, $PM_{2.5}$, NO_x, SO_2, and CO. This source consists of production areas and support facilities, including utilities and an on-site test track, a single emergency generator rated at 463 hp, and two 15.63 MMBtu/hr boilers. The production areas of the facility include body shop, paint shop, and assembly shop with their associated ovens.

The following table summarizes the source potential to emit for each regulated air pollutant from all emission units for which an Authority to Construct has been issued:

Pollutant	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs
Tons/year	15.15	6.28	62.16	68.66	0.50	242.41	41.17
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25[1]
Major Stationary Source Thresholds	250	250	250	250	250	250	10/25[1]

[1]Ten tons for any individual HAP or 25 tons for combination of all HAPs.

This automobile manufacturing facility is subject to 40 CFR Part 60, Subpart MM. The emergency engine is subject to 40 CFR Part 60, Subpart IIII. By complying with 40 CFR Part 60, Subpart IIII, the generator engine meets the requirements of 40 CFR Part 63, Subpart ZZZZ and the boilers are subject to 40 CFR Part 60, Subpart Dc. The source will be major for combined HAPs source. Therefore, the source will be subject to 40 CFR Part 63, IIII for the painting and coating processes and 40 CFR Part 63, Subpart DDDDD for the boilers.

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I. ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
ADR	Carbon Adsorption
Air Quality	Clark County Department of Air Quality
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct
CAAA	Clean Air Act, as amended, or Clean Air Act Amendments
CFR	United States Code of Federal Regulations
cfm	Cubic Foot per Minute
CO	Carbon Monoxide
CU	Control Unit
dscf	Dry Standard Cubic Feet
E-Coat	Electrodeposition coating
EPA	United States Environmental Protection Agency
EU	Emission Unit
HAP	Hazardous Air Pollutant
hp	Horse Power
kg	Kilogram
MMBtu	Millions of British Thermal Units
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NDO	Natural Draft Openings
NED	National Elevation Dataset
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standards
$PM_{2.5}$	Particulate Matter less than 2.5 microns
PM_{10}	Particulate Matter less than 10 microns
ppm	Parts per Million
ppmvd	Parts per Million, Volumetric Dry
PTE	Potential to Emit
RACT	Reasonably Achievable Control Technology
RTO	Regenerative Thermal Oxidizer
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_X	Sulfur Oxides
TBD	To Be Determined
TOAS	Temporary Operating Alternate Scenario
U.S.C.	United States Code
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
VEH	Vehicle
VOC	Volatile Organic Compound

II. SOURCE INFORMATION

A. GENERAL

Permittee	Faraday Future
Mailing Address	18455 South Figeroa Street, Gardena, California 90248
Responsible Official	Dag Reckhorn
Phone Number	(424) 276-7616
Contacts	Kevin Sung
Phone Number	(424) 295-2438
Source Location	Apex Industrial Park, North Las Vegas
Hydrographic Area	216, Garnet Valley
Township, Range, Section	T18S, R63E, S16
SIC Code	3711 – Automobile and Light Duty Truck Assembly
NAICS Code	336111 – Automobile Manufacturing

B. DESCRIPTION OF PROCESS

Faraday Future is an electric car manufacturing facility that falls under SIC Code 3711: Automobile and Light Duty Truck Assembly and NAICS Code 336111: Automobile Manufacturing. Faraday Future is a major Title V source for VOC and combined HAPs and a minor source for PM_{10}, $PM_{2.5}$, NO_x, SO_2, and CO.

The primary VOC/HAP emissions processes covered by this ATC permit are listed in Table II-B-1 (EUs: A01 through A12 and A15 through A21):

Table II-B-1: VOC/HAP Processes

EU	Process	Control Device	Throughput (gallons/year)	Manufacturer
A01	Body Shop			
	Welding			
	Betamate 6120		79,181	
	Betamate 1776		5,188	
	HEM Adhesive		375	
	Stiffener		3,487	
	Dampner		18,664	
	Antiflutter		8,754	
A02	Pre-treatment			Eisenmann
	Oxsilan 9830		950	
A03	E-Coat			

EU	Process	Control Device	Throughput (gallons/year)	Manufacturer
	Emulsion		545,000	
	Paste		67,500	
A04	Surfacer	ADR		
	Primer		160,000	
A05	Basecoat	ADR	297,500	
A06	Clearcoat	ADR	132,500	
A07	Liquid Metal			
	Liquid Metal		23,800	
	Top Coat Clear		10,600	
A08	Shop Repair			
	Basecoat		2,500	
	Clearcoat		2,500	
A09	Heavy Repair			
	Basecoat		250	
	Clearcoat		250	
A10	Final Inspection			
	Basecoat		1,250	
	Clearcoat		1,250	
A11	Sealing			
	Sealer – Tereson PV 1097		8,005	
	Deadner- Terophon 8275		111, 365	
A12	Paint Mix Room			
			1,380,130	
A15	Solvent Use			
	Isopropyl alcohol		33,333	
A15a	Purge Basecoat/Gun Cleaning		30,000	
	Purge Clearcoat/Gun Cleaning		30,000	
	Purge Topcoat Clear/Gun Cleaning		2,400	
A16	Window Assembly			
	Cleaning		462	
	Glass Primer		330	
	Adhesive/Sealing		57,500	
A17	Battery Adhesive			
	Loctite 4311		29,723	
	Loctite 5910		5,021	
	HumiSeal UV40		1.72	
A18	Fluids Filling			
	Brake Fluid		66,050	
	Anti-Freeze		990,753	
	Windshield Washer		264,201	
	Power Steering Fluid		79,260	

EU	Process	Control Device	Throughput (gallons/year)	Manufacturer
	Assembly Shop Booths			
A19	Primer		200	
A20	Basecoat		200	
A21	Top Coat		200	

The miscellaneous processes covered by this ATC permit are listed in Table II-B-2 (EUs: A13 and A14).

Table II-B-2: Miscellaneous Processes

EU	Process	Manufacturer
A13	EC Sanding	Eisenmann
A14	Wet Sanding	Eisenmann

The following units or activities listed in in Table II-B-3 are present at this source, but are being deemed insignificant.

Table II-B-3: Insignificant Activities

Product	Equipment Description	Capacity	Throughput (gallons/year)
	Test Track		375,000 VMT/yr
Battery Coolant	Above Ground Storage tank, fixed roof	Not to exceed 30,000 gallons	4,002,642
Coolant Anti-Freeze	Above Ground Storage tank, fixed roof	Not to exceed 15,000 gallons	990,753
Windshield Wiper Fluid	Above Ground Storage tank, fixed roof	Not to exceed 15,000 gallons	250,991
Transmission Fluid	Above Ground Storage tank, fixed roof	Not to exceed 15,000 gallons	396,301
Brake Fluid	Above Ground Storage tank, fixed roof	Not to exceed 15,000 gallons	66,050
HFO=1234yf (Refrigerant)	Above Ground Storage tank, fixed roof	Not to exceed 7,000 gallons	51,514

The combustion units covered by this ATC permit are listed in Table II-B-4 (EUs: B01 through B12, B16 through B22, C01, C02, and D01, and CUs:B13 through B15):

Table II-B-4: Combustion Units

Units	Process	Rating (MMbtu/hr)	Control Device	Type	Manufacturer	Model No.	Serial No.
EU: B01	Body Shop	14.238	RTO	Oven	TBD	TBD	TBD
EU: B02	E-Coat	13.589	RTO	Oven	Eisenmann	TBD	TBD
EU: B03	E-Coat	13.589	RTO	Oven	Eisenmann	TBD	TBD
EU: B04	Liquid Metal	1.793		Oven	Eisenmann	TBD	TBD
EU: B05	Liquid Metal	1.793		Oven	Eisenmann	TBD	TBD
EU: B06	Primer Surfacer	9.506	RTO	Oven	Eisenmann	TBD	TBD
EU: B07	Primer Surfacer	9.506	RTO	Oven	Eisenmann	TBD	TBD
EU: B08	Sanding	9.711		Oven	Eisenmann	TBD	TBD

Units	Process	Rating (MMbtu/hr)	Control Device	Type	Manufacturer	Model No.	Serial No.
EU: B09	Sanding	9.714		Oven	Eisenmann	TBD	TBD
EU: B10	Flash Off	3.585	RTO	Oven	Eisenmann	TBD	TBD
EU: B11	Topcoat	8.768	RTO	Oven	Eisenmann	TBD	TBD
EU: B12	Topcoat	8.768	RTO	Oven	Eisenmann	TBD	TBD
CU: B13	Adsorber	3.414		Burner	Eisenmann	TBD	TBD
CU: B14	RTO	5.122		Burner	TBD	TBD	TBD
CU: B15	RTO	5.122		Burner	TBD	TBD	TBD
EU: B16	Work Deck	4.78		Air Supply Unit	Eisenmann	TBD	TBD
EU: B17	Work Deck	5.429		Air Supply Unit	Eisenmann	TBD	TBD
EU: B18	Spot Repair	4.436		Air Supply Unit	Eisenmann	TBD	TBD
EU: B19	Shop	12.291		Air Supply Unit	Eisenmann	TBD	TBD
EU: B20	Shop	5.053		Air Supply Unit	Eisenmann	TBD	TBD
EU; B21	Assembly Shop	2.764		Air Supply Unit	Eisenmann	TBD	TBD
EU: B22	Liquid Metal	5.634		Air Supply Unit	Eisenmann	TBD	TBD
EU: C01		15.63		Boiler	TBD	TBD	TBD
EU: C02		15.63		Boiler	TBD	TBD	TBD
EU: D01		345 kW		Genset – Emergency	Kohler	300REOZJ	TBD
		463 hp		Engine – Diesel DOM: 2015	John Deere	6090HFG86 A	TBD

The control devices covered by this ATC permit are listed in Table II-B-5 (CUs: B13 through B15):

Table II-B-5: Summary of Control Devices

CU	Device Type	Manufacturer	Model No.	Serial No.	Pollutant
B13	ADR	TBD	TBD	TBD	VOC, HAPs
B14	RTO	TBD	TBD	TBD	VOC, HAPs
B15	RTO	TBD	TBD	TBD	VOC, HAPs

The carbon adsorber (CU: B13) has to operate with at least 92 percent control efficiency based on a minimum inlet of 300 ppmv VOC as propane or no more than 24 ppmv VOC at the outlet to control VOCs from the primer surfacer booth (EU: A04), basecoat booth (EU: A05), and clearcoat booth (EU: A06) at all times VOC containing materials are used in any booth associated with the carbon adsorber.

The RTOs (CUs: B14 and B15) has operate with at least 98 percent control efficiency based on a minimum inlet of 1000 ppmv VOC as propane or no more than 20 ppmv VOC at the outlet to control VOCs on the body shop oven (EU: B01), e-coat ovens (EUs: B01 and B02), primer surfacer ovens (EUs: B06 and B07), basecoat and, clearcoat ovens (EUs: B11 and B12), and flash off oven (EU: B10) at all times ovens are being operated associated with the RTOs.

C. PERMITTING HISTORY

There is no permitting history. This is a new source.

D. CURRENT PERMITTING ACTION

Faraday Future has submitted an application in accordance with the provisions of Section 12.4 ATC permit application and requirements for Part 70 sources. The proposed proof of concept phase project PTE exceeds 100 tons per year threshold for VOC's and the combined HAPs threshold of 25 tons per year.

This proposed ATC will be subject to and required to comply with federal and local air quality regulations.

The manufacturing facility will include production areas and support facilities, including utilities and an on-site test track. The production areas of the facility include the body shop, paint shop, and assembly shop. This ATC has proposed a limit of 250,000 vehicles per year at an estimated rate of 50 vehicles per hour.

During startup of operations of this facility, there will be a commissioning period. The commissioning period is defined as no productions of cars for sale. Also during the normal operation, the man access doors for all the tunnels and ovens are to be closed. The roll-up doors of the inlet and outlet of the tunnels can be open during normal operations.

Body Shop

There will be one body shop designed and permitted to facilitate the manufacture of all models of vehicles. There will be welding activities for the body panels and components. All the panels will be shipped in, stamped, and ready from outside suppliers. Bonding will occur and the sealed units will be cured in the body shop oven in the paint shop prior to being conveyed to the pretreatment process. The body shop oven will be exhausted to the RTOs in the paint shop.

Paint Shop

There will be one paint shop handling the coating operations for all vehicle models. Activities include the mixing of coatings, application of coatings (i.e. dipping and spraying), drying/curing of coatings in the ovens, sanding, and touchup. The units from the body shop are cleaned and pre-treated in a dipping process before undergoing the E-Coat. These units are then sealed and fitted with sound deadeners, prime painted, and then finish painted with a two part topcoat (clearcoat and basecoat). The paint shop will utilize low VOC and HAP water-based E-Coat and topcoat basecoat. The solvent based primer, surface, topcoat, and clearcoat with a recirculating air spray booth will be controlled by the ADR and the RTOs for the VOC and HAPs emissions. An ADR will control emissions from the primer and the topcoat spray booths. The ADR substrate will be desorbed and then directed to the RTOs. The paint shop ovens with the exception of the liquid metal oven will be exhausted directly to the RTOs. PM_{10} emissions from the paint booths will be controlled by a filtration system consisting of an E-cube control system and backup filters. The E-cube removes overspray from the paint booth then is exhausted through backup filters before going to the ADR. PM_{10} emissions from the workstations within the paint shop will be controlled by filters rated at a vendor specified grain loading.

The paint shop also will include a liquid metal line which is for specialty coatings. The liquid metal line will be used to coat specialty coatings and clear coatings and cured in the liquid metal oven. With the throughput of cars being limits in this coating line, no controls will be installed.

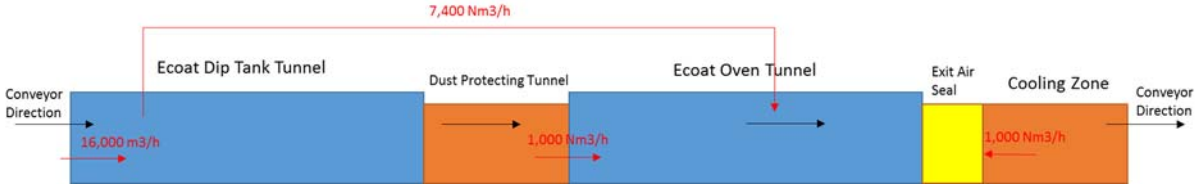
Background

The intent of the following information is to provide a clarification of the E-Coat process and its ovens, the primer process and its ovens, and the basecoat/clearcoat process and its ovens. We hope the clarifications will provide insights on the applicable requirements to comply with NESHAP IIII.

E-Coat

The E-Coat process is a necessary initial step in the entire automotive coating process. The E-Coat process is a multi-stage dip tank process in an enclosed tunnel. The end of the E-Coat dip tanks tunnel is directly connected to the entrance of the E-Coat ovens. There are no gaps or NDO in the E-Coat dip tank tunnels and the oven tunnels for the purpose of quality. NDOs are not existent to avoid any dust or particles coming into the tunnels and contaminating the auto body. The entrance to the E-Coat dip tank tunnel is an air seal with volumetric air designed to flow into the tunnel at 16000 m^3/hr. Air from the tunnel of the dip tank holding VOCs is exhausted out and recirculated to the E-Coat ovens as supply air. The air exhausted from the E-Coat ovens are directed to the RTOs. The end of the E-Coat oven tunnels consists of an exit air seal and a cooling zone. Air flow is directed into the oven from the exit air seal.

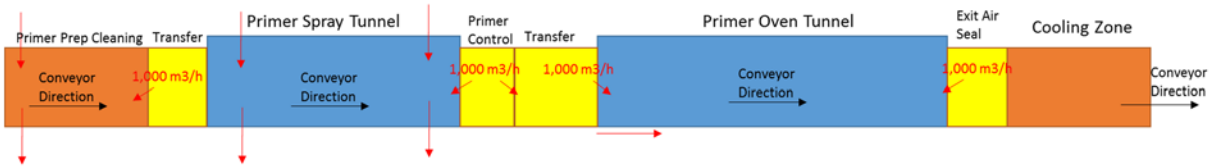
The entire E-Coat process tunnel and oven tunnels are one permanent total enclosure as defined in 40 CFR 63 Subpart IIII. There are no NDOs and the tunnel openings are air seals. The direction of the air flow can be demonstrated to be into the tunnel/ovens by placement of plastic streamers to show movement into the tunnel/oven tunnel.



Primer

The primer process consists of the primer spray tunnel with a downdraft system and is directly connected to the primer ovens. This process does not contain any NDOs for the purpose of quality. The exit tunnel opening of the primer ovens contains exit air seals. Air flow is directed into the tunnels at the exit air seals. The entrance to the primer spray tunnel consists of a prep cleaning (non-VOCs) stage and a transfer stage that act as an entrance air seal to the primer spray zones. The air flow at the entrance to the primer prep cleaning stage (which is also the entrance to the entire primer tunnel operations) is neutralized to keep dust out of the primer operations. No air is designed to enter and exit the prep cleaning stage at the entrance of the tunnel. The following transfer stage is over pressurized to push any possible dust and dirt away from the spray zones. Manufacturer designs show that as long as the air flow at entrance to the primer prep cleaning zone and at the spray zones are neutral, there should be no air flow exiting at the tunnel entrance. This design is required for quality purposes. Paint overspray is not desired to escape from the spray zones to prevent cross contamination of coatings to other car bodies. Uneven coating thickness or unwanted color contamination can occur from spray zone cross contamination.

The entire primer process tunnel (spray and oven tunnels) is one permanent total enclosure. There are no NDOs and the tunnel openings act as air seals. Per manufacturer specifications, maintaining minimum volumetric flow to and from the prep cleaning and transfer zones will prevent any air flow of from exiting at the tunnel entrance. The primer spray tunnel is connected directly to the oven tunnel. The exit of the oven tunnel has an exit air seal with air designed to go into the tunnel. The direction of the air flow can be demonstrated by placement of plastic streamers to show movement into the tunnel.



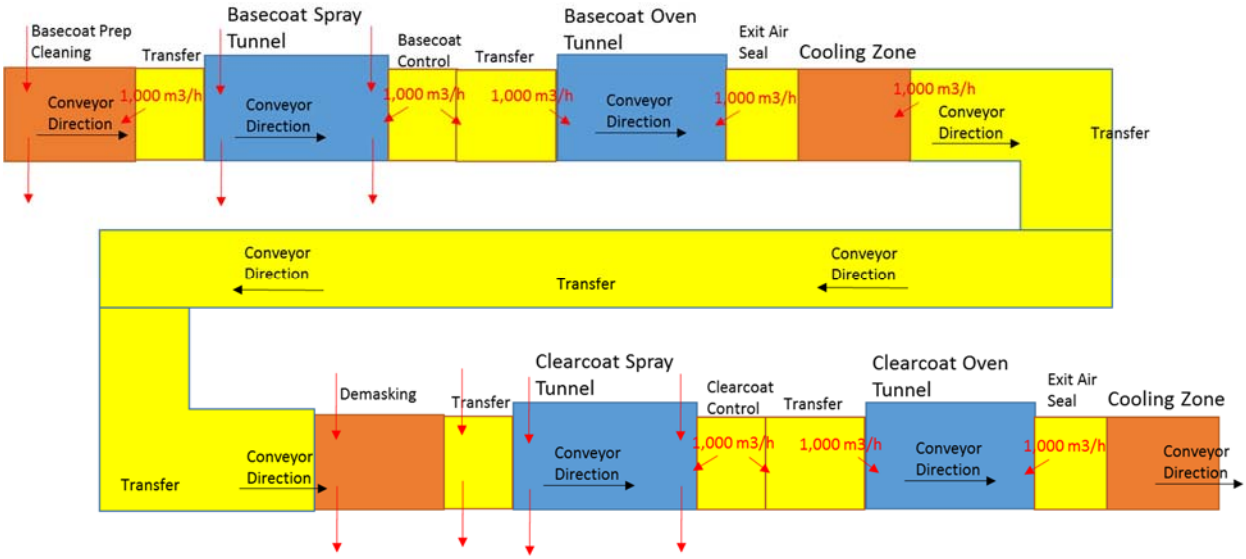
Topcoat Process

The topcoat process consists of the following operations in numerical order. All operations are connected directly with each other to form one long topcoat process tunnel:

1. Basecoat spray tunnel with a downdraft system
2. Basecoat oven tunnel
3. Clearcoat spray tunnel with a downdraft system
4. Clearcoat oven tunnel

This process does not contain any NDOs for the purpose of quality. The exit tunnel which is the exit of the clearcoat ovens contains exit air seals. Air flow is directed into the tunnels at the exit air seals. The entrance to the entire topcoat tunnel is the entrance to the basecoat spray tunnel. The entrance of the basecoat spray tunnel consists of a prep cleaning (non-VOCs) stage and a transfer stage that act as an entrance air seal to the basecoat spray zones. The air flow at the entrance to the basecoat prep cleaning stage is neutralized to keep dust out of the primer operations. No air is designed to enter and exit the prep cleaning stage at the entrance of the tunnel. The following transfer stage is over pressurized to push any possible dust and dirt away from the spray zones. Manufacturer designs show that as long as the air flow at entrance to the basecoat prep cleaning zone and at the spray zones are neutral, there should be no air flow exiting at the tunnel entrance. This design is required for quality purposes. Paint overspray is not desired to escape from the spray zones to prevent cross contamination of coatings to other car bodies. Uneven coating thickness or unwanted color contamination can occur from spray zone cross contamination.

The entire topcoat process tunnel (basecoat spray tunnel, basecoat oven tunnels, clearcoat spray tunnel, and clearcoat oven tunnels) is one permanent total enclosure. There are no NDOs and the tunnel openings act as air seals. Per manufacturer specifications, maintaining minimum volumetric flow to and from the prep cleaning and transfer zones will prevent any air flow of from exiting at the tunnel entrance. The spray tunnels are connected directly to the oven tunnels. The exit of the clearcoat oven tunnels has exit air seals with air designed to go into the tunnel. The direction of the air flow can be demonstrated by placement of plastic streamers to show movement into the tunnel.



There are no NDOs in the tunnels and will not require monitoring of NDO facial velocities. However, these tunnels will not be able to meet paragraph (a) of item (6). The entrance to the tunnels (i.e. Primer spray tunnel and Basecoat Spray tunnel) act as air seals prior to the spray zones. Air flow is neutrally balanced to not allow direction of air flow into the tunnels for quality purposes. Air is supplied at the ceiling of the tunnel and balanced air is exhausted at the floor (tunnels are downdrafts) to prevent air flow exiting at the tunnel entrance. While air flow at all times cannot be demonstrated to be into the enclosure, air flow at all times will not be out of the enclosure since air flow is neutrally balanced. The purpose of paragraph (a) is to not allow air flow out of the tunnels and these tunnels achieve this intent by maintaining neutrally balanced air flow at the entrance. The source is proposing to monitor the manufacturer's specification of volumetric flow at the entrance of the primer spray tunnel and the basecoat spray tunnel to ensure no air flow exits at the tunnel entrance. The manufacturer specified the lowest volumetric flow rate the system can operate at before alarms are alerted is 6000 m3/h which is 3531.4 cfm. The source is proposing to maintain the volumetric flow rate to be a minimum of 3531.4 cfm as an alternative to paragraph (a) and section (i) of item (6) to satisfy the following table:

Per Table 1 of this Subpart for Emission Capture Systems:

6. Emission capture system that is a PTE	a. The direction of the air flow at all times must be into the enclosure; and either b. The average facial velocity of air through all natural draft openings in the enclosure must be at least 200 feet per minute; or c. The pressure drop across the enclosure must be at least 0.007 inch water, as established in Method 204 of appendix M to 40 CFR part 51	i. Collecting the direction of air flow, and either the facial velocity of air through all natural draft openings according to §63.3168(g)(1) or the pressure drop across the enclosure according to §63.3168(g)(2); and ii. Maintaining the facial velocity of air flow through all natural draft openings or the pressure drop at or above the facial velocity limit or pressure drop limit, and maintaining the direction of air flow into the enclosure at all times.

Clark County is approving an alternative monitoring method to the requirements in 40 CFR 63.3093(d) and Table 1, item 6. 40 CFR 63.3093(d) states that if an owner or operator wishes to monitor an alternative parameter and comply with a different operating limit , then such alternative must be approved under 40 CFR 63.8(f) by the Administrator. Some of the Administrator's authorities under

40 CFR 63.8(f) have been delegated to Clark County for 40 CFR part 63, Subpart IIII. See 40 CFR 63.99(a)(29) and 40 CFR 63.3175(c). Such authorities are limited to minor or intermediate changes to monitoring, as defined in 40 CFR 63.90

Assembly Shop/Battery Assembly

There will be one assembly shop designed to facilitate the manufacture of all models. The painted body will enter the assembly shop where the panels, battery, powertrain, windows, trim, and other interior/exterior components are installed. This assembly shop will have (5) booths each with the capability to coat primer, basecoat and clearcoat. Smaller quantities of VOCs and PM_{10} emissions will be related to window glazing, adhesive usage, and fluid filling activities. No plastic related operations will be performed. This activity will be performed outside the facility by an outside supplier.

Other On-Site Facilities

Other facility support equipment will include the following: paint mixing room, (2) 15.63 MMBtu/hr boilers, a 463 hp emergency diesel fueled generator, a not to exceed 30,000 gallon tank for battery coolant, and (4) not to exceed 15,000 gallon tanks for anti-freeze, screen washer, transmission fluid, and brake fluid, and a not to exceed 7,000 gallon tank for refrigerant. The boilers and all other combustion units will be fueled only by natural gas, except for the emergency generator.

E. OPERATING SCENARIO

None proposed.

III. EMISSIONS INFORMATION

A. SOURCE-WIDE PTE

Faraday Future is a major Title V source for VOC and combined HAPs and a minor source for PM_{10}, $PM_{2.5}$, NO_x, SO_2, and CO.

Table III-A-1: Applicability PTE (tons per year)

PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs
63.88	6.63	74.11	71.49	0.51	2448.89	463.25

Table III-A-2: Source-Wide Allowable Emissions (tons per year)

PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs
15.15	6.28	62.16	68.66	0.50	242.41	41.34

B. PTE VOC/HAP EMISSIONS

The following tables summarize the PTE for the following:

Table III B-1-1: Body Shop VOC PTE (EU: A01)

Material	Through-put	Usage	VOC EF	Hourly Production	Maximum Annual Production	Uncontrolled PTE		Area Emissions	Predicted Emissions		Capture	RTOs		
	gallons/yr	lb/veh	%	veh/hr	veh/yr	lb/hr	lb/yr	%	lb/hr	lb/yr	%	lb/hr	lb/yr	tons/ yr
Betamate 6120	79,181	3.36	0.1	50	250,000	0.16	792	5	0.008	39.6	95	0.003	15	
Betamate 1776	5,188	0.21	1.4	50	250,000	0.15	726	5	0.007	36.3	95	0.003	13.8	
HEM Adhesive	375	0.02	0.4	50	250,000	0.00	15	5	0.00	0.75	95	0.00	0.3	
Stiffener	3,487	0.16	0.0	50	250,000	0.00		5	0.00	0.00	95	0.00	0.00	
Dampner	18,664	1.07	0.0	50	250,000	0.02	107	5	0.001	5.35	95	0.01	2.0	
Antiflutter	8,754	0.39	0.0	50	250,000	0.00	0.00	5	0.00	0.00	95	0.00	0.00	
									Total:	82			31	0.06

Table III B-1-2: Body Shop HAP PTE (EU: A01)

Material	Through-put	Usage	HAP EF	Hourly Production	Maximum Annual Production	Uncontrolled PTE		Area Emissions			Capture	RTOs		
	gallons/yr	lb/veh	%	veh/hr	veh/yr	lb/hr	lb/yr	%	lb/hr	lb/yr	%	lb/hr	lb/yr	tonsyr
Betamate 6120	79,181	3.36	0.0	50	250,000	0.00	0.00	5	0.00	0.00	95	0.00	0.00	
Betamate 17761	5,188	0.21	0.0	50	250,000	0.00	0.00	5	0.00	0.00	95	0.00	0.00	
HEM Adhesive	375	0.02	0.0	50	250,000	0.00	0.00	5	0.00	0.00	95	0.00	0.00	
Stiffener	3,487	.016	0.0	50	250,000	0.00	0.00	5	0.00	0.00	95	0.00	0.00	
Dampner	18,664	1.03	0.0	50	250,000	0.00	0.00	5	0.01	0.00	95	0.00	0.00	
Antiflutter	8,754	0.39	0.0	50	250,000	0.00	0.00	5	0.00	0.00	95	0.00	0.00	
									Total:	0			0.00	0.00

Paint Mixing Room (EU: A12)

Total gallons per year	1,380,130		
Vapor pressure	0.468	psia	P_{atm}
Molecular weight of toluene	92.130	lb/lb mole	MW
Atmospheric pressure	14.7	psia	$P_{toluene}$
Ideal gas constant - R	10.730	ft^3- psia/lb-mole	ºR
Absolute temperature	532	ºR	T
Vapor density = MW*n/V = MW*P/R*T			
Volume of displaced toluene – saturated air	1,380,130	gallons	
Volume of displaced toluene – saturated air	184,509	ft^3	Volume of displaced air
Volume of displaced toluene	5,874	ft^3	Volume of displaced air* $P_{toluene}$/ P_{atm}
Vapor density =	0.2373	lb/ft^3	
Total VOCs = ft^3* lb/ft^3/2000	0.70 tons/year		
Total HAPs	0.11 tons/year		

Table III B-1-3: Solvent Use VOC PTE (EU: A15)

Production related products: Isopropyl alcohol IPA wipes

Process	Material	Usage		Density		VOC Content, by weight		Estimated Emissions	
		liter/yr	gallons/yr	kg/liter	lb/gal	% VOC	lb/gal	lb/yr	tons/yr
Solvent Use	Isopropyl alcohol	126,263	33,333	-	6.54	100	6.54	218,130	109.07

Table III B-1-4: Solvent Use HAP PTE (EU: A15)

Process	Material	Usage		Density		HAP Content, by weight		Estimated Emissions	
		liter/yr	gallons/yr	kg/liter	lb/gal	% HAP	lb/gal	lb/yr	tons/yr
Solvent Use	Isopropyl alcohol	126,263	33,333	-	6.54	15	.98	32,720	16.36

Table III B-1-5: Window Assembly VOC PTE (EU: A16)

Material	gallons/yr	Throughput		Material Density	VOC Content			Product Usage	Potential Emission Rates		
				lb/gal	wt. %	veh/hr	veh/yr	lb/yr	lb/hr	lb/yr	tons/yr
Cleaning	462	0.0018	gal/veh	6.54	100	50	250,000	3,022	0.61	3,022	1.51
Glass Primer	330	0.0013	gal/veh	6.59	100	50	250,000	2,175	0.43	2,175	1.09
Adhesive/Sealing	57,500	0.23	gal/veh	9.84	1	50	250,000	565,800	1.15	5,658	2.83
							Total:	570,997	-	-	5.43

Table III B-1-6: Window Assembly HAP PTE (EU: A16)

Material	gallons/yr	Throughput		Material Density	HAP Content	HAP Component			Product Usage	Potential Emission Rates		
				lb/gal	wt. %	lb/gal	veh/hr	veh/yr	lb/yr	lb/hr	lb/yr	ton/yr
Cleaning	462	0.0018	gal/veh	6.54	15	0.982	50	250,000	3,022	0.09	454	.23
Glass Primer	330	0.0013	gal/veh	6.59	1	0.066	50	250,000	2,175	0.01	22	0.01
Adhesive/Sealing	57,500	0.23	gal/veh	9.84	1	0.098	50	250,000	565,800	1.13	5,658	2.83
								Total:	570,997	-	-	3.07

Table III B-1-7: Battery Adhesive VOC PTE (EU: A17)

Material	Usage		Density	VOC Content, by weight		Estimated Emissions	
	liter/yr	gallons/yr	lb/gal	% VOC	gallon/liter	lb/yr	ton/yr
Loctite 4311	112,500	29,723	9.08	-	20	4,956	2.48
Loctite 5910	19,004	5,021	11.18	-	53.7	2,248	1.12
HumiSeal UV40	6.5	1.72	8.84	3	31.8	0.45	0.0002
					Total:	5763.36	3.60

Table III B-1-8: Battery Adhesive HAP PTE (EU: A17)

Material	Usage		Density	HAP Content, by weight		Estimated Emissions	
	liter/yr	gallons/yr	lb/gal	% HAP	gallon/liter	lb/yr	ton/yr
Loctite 4311	112,500	29,723	9.08	5	54.41	13,496	6..75
Loctite 5910	19,004	5,021	11.18	1	13.39	561	0.28
HumiSeal UV40	6.5	1.72	8.84	1	10.59	0.15	0.01[1]
					Total:	11244.12	7.04

[1]Emissions are 0.0001, therefore rounded to the nearest tenth.

Table III B-1-9: Fluid Filling VOC PTE (EU: A18)

Material	gallons/yr	liter/veh	True Vapor Pressure (psia)	Molecular Weight	veh/hr	veh/yr	Estimated Emissions		
							lb/hr	lb/yr	tons/yr
Brake fluid	66,050	1.0	0.03	75	50	250,000	0.0001	3.5	
Antifreeze	990,753	15	0.001	62	50	250,000	0.0003	1.5	
Windshield washer	250,991	4	0.66	32	50	250,000	0.025	125	
Power steering fluid	79,260	1.2	0.002	76	50	250,000	0.0001	0.3	
Transmission fluid	396,301	6.0	0.002	500	50	250,000	0.0019	9.4	
Battery Coolant	4,002,642	-	-	-	50	250,000	-	-	
							0.03	140	0.07

Table III B-1-10 Paint Booths VOCs:

EU	Type	Approximate Production (gal/yr)	VOC Content (lbs/gal)	Emissions (lbs/yr)	PTE (tons/yr)	Worst Case PTE (tons/yr)
A02	Pre-Treatment	950	0.42	399	0.20	0.44
A03	E-Coat	545000	0.21	114450	57.23	125.32
A03	E-Coat	67500	0.09	6075	3.04	6.65
A04	Surfacer	160000	3.50	560000	280.00	613.20
A05	Basecoat	297500	1.50	446250	223.13	488.64
A06	Clearcoat	132500	3.54	469050	234.53	513.61
A07	Liquid Metal	23800	1.30	30940	15.47	33.88
A07	Top Coat	10600	3.54	37524	18.76	41.09
A08	Touch up Base	2500	1.50	3750	1.88	4.11
A08	Touch up Clear	2500	3.54	8850	4.43	9.69
A09	Heavy Repair	250	3.54	885	0.44	0.97
A09	Heavy Repair	250	3.54	885	0.44	0.97
A10	Final Base	1250	1.50	1875	0.94	2.05
A10	Final Clear	1250	3.54	4425	2.21	4.85
A11	Sealer	8005	0.15	1201	0.60	1.31
A15a	Solvents	30000	7.23	216900	108.45	237.51
	Solvents	30000	3.85	115500	57.75	126.47
	Solvents	2400	7.23	17352	8.68	19.00
A19	Primer Booth	200	3.50	700	0.35	0.77
A20	Basecoat Booth	200	1.50	300	0.15	0.33
A21	Clearcoat Booth	200	3.54	708	0.35	0.78

VOCs

					Booth					Oven		
EU	**Type**	**Booth %**	**lbs/yr**	**ADR Control %**	**Subtotal (lbs/yr)**	**Oven %**	**Desorbtion**	**lbs/yr**	**RTOs Control %**	**Subtotal (lb/yr)**	**Total (lbs/yr)**	**Allowable (tons/yr)**
A02	Pre-Treatment	0	399	0	399	0			0	399	399	0.20
A03	E-Coat	20	22890	0	22890	80		91560	98	1831	24721	12.36
A03	E-Coat	20	1215	0	1215	80		4860	98	97	1312	0.66
A04	Surfacer	73	408800	92	32704	27	376096	527296	98	10546	43250	21.62
A05	Basecoat	62	276675	92	22134	38	254541	424116	98	8482	30616	15.31
A06	Clearcoat	82	384621	92	30770	18	353851	438280	98	8766	39535	19.77
A07	Liquid Metal	62	19183	0	19183	38	11757	0	0	11757	30940	15.47
A07	Top Coat	82	30770	0	30770	18	6754	0	0	6754	37524	18.76
A08	Touch up Base											
A08	Touch up Clear											6.30
A09	Heavy Repair											
A09	Heavy Repair											0.70
A10	Final Base											
A10	Final Clear											3.15
A11	Sealer	20	240	0	240	80	961	0	0		1201	0.60
A15a	Solvents	15	32535	92	2603	0		0	0		2603	1.30
	Solvents	15	17325	92	1386	0		0	0		1386	0.69
	Solvents	15	2603	0	2603	0		0	0		2603	1.30
A19	Primer Booth											0.35
A20	Basecoat Booth											0.15
A21	Clearcoat Booth											0.35

Table III B-1-11 Paint Booth HAPs:

EU	Type	Approximate Production (gal/yr)	Hap Content (lbs/gal)	Emissions (lbs/yr)	PTE (tons/yr)	Worst Case PTE (tons/yr)
A02	Pre-Treatment	950	0.08	79	0.04	0.09
A03	E-Coat	545000	0.09	49050	24.53	53.71
A03	E-Coat	67500	0.14	9450	4.73	10.35
A04	Surfacer	160000	0.14	22400	11.20	24.53
A05	Basecoat	297500	0.10	29750	14.88	32.58
A06	Clearcoat	132500	0.02	2650	1.33	2.90
A07	Liquid Metal	23800	0.09	2142	1.07	2.35
A07	Top Coat	10600	0.02	212	0.11	0.23
A08	Touch up Base	2500	0.10	250	0.13	0.27
A08	Touch up Clear	2500	0.02	50	0.03	0.05
A09	Heavy Repair	250	0.10	25	0.01	0.03
A09	Heavy Repair	250	0.02	5	0.00	0.01
A10	Final Base	1250	0.10	125	0.06	0.14
A10	Final Clear	1250	0.02	25	0.01	0.03
A11	Sealer	8005	0.12	961	0.48	1.05
A15a	Solvents	30000	7.88	236400	118.20	258.86
	Solvents	30000	0.08	2400	1.20	2.63
	Solvents	2400	7.90	18960	9.48	20.76
A19	Primer Booth	200	0.14	28	0.01	0.03
A20	Basecoat Booth	200	0.10	20	0.01	0.02
A21	Clearcoat Booth	200	0.02	4	0.00	0.00

HAPs

					Booth					Oven		
EU	**Type**	**Booth %**	**lbs/yr**	**ADR Control %**	**Subtotal (lbs/yr)**	**Oven %**	**Desorbtion**	**lbs/yr**	**RTOs Control %**	**Subtotal (lbs/yr)**	**Total (lbs/yr)**	**Allowable (tons/yr)**
A02	Pre-Treatment	100	0	0	0	0		79	0	0	79	0.04
A03	E-Coat	20	9810	0	9810	80		39240	98	785	10595	5.30
A03	E-Coat	20	1890	0	1890	80		7560	98	151	2041	1.02
A04	Surfacer	73	16352	92	1308	27	15044	21092	98	422	1730	0.86
A05	Basecoat	62	18445	92	1476	38	16969	28274	98	565	2041	1.02
A06	Clearcoat	82	2173	92	174	18	1999	2476	98	50	223	0.11
A07	Liquid Metal	62	1328	0	1328	38	814	0	0	814	2142	1.07
A07	Top Coat	82	174	0	174	18	38	0	0	38	212	0.11
A08	Touch up Base											
A08	Touch up Clear											0.15
A09	Heavy Repair											
A09	Heavy Repair											0.02
A10	Final Base											
A10	Final Clear											0.08
A11	Sealer	20	192	0	192	80	768	0	0		961	0.49
A15a	Solvents	15	35460	92	2837	0		0	0	0	2837	1.42
	Solvents	15	360	92	29	0		0	0	0	98	0.05
	Solvents	15	2844	0	2844	0		0	0		2844	1.42
A19	Primer Booth											0.01
A20	Basecoat Booth											0.01
A21	Clearcoat Booth											0.01

All the booths will operate in accordance with manufacture's specifications to ensure 100 percent capture for VOCs.

The following will be used for the calculations for each of their respective operations:

20 percent for e-coat booth (EU: A03)/80 percent for the ovens (EUs: B02 and B03) in the e-coat operations.

73 percent for primer surfacer booth (EU: A04)/27 percent for the ovens (EUs: B06 and B07) in the primer surfacer operations.

62 percent basecoat booth (EU: A05)/38 percent for the oven (EU: B11) in the basecoat operations

82 percent clearcoat booth (EU: A06)/18 percent for the oven (EU: B12) in the clearcoat operations

62 percent liquid metal booth (EU: A07)/38 percent for the ovens (EUs: B04 and B5) in the liquid metal operations.

The purge solvent operations for gun cleaning (EU: A15a) and have 15 percent VOC loss in the booth during the purge operations.

The Permittee shall monitor the minimum volumetric flow rate daily of operation during operations of the source as follows:

a. primer surfacer operations: 3531.4 cfm
b. basecoat/clearcoat operations: 3531.4 cfm

The source can request to change the monitoring to weekly upon written request and approval.

Any flow rate recorded reported as a deviation (3 deviations in a 30-day period) and will be required to performance testing to establish a new flow rate.

Table III-B-2: Particulate Matter$_{10}$ Emissions

EU	Process	PM_{10}	$PM_{2.5}$
A01	Welding	0.61	0.00
A04, A05, A06, A07	Paint Shop Production	3.46	0.00
A13, A14	Paint Shop Work Decks	1.38	0.00
A08	Touch up Painting	0.67	0.00
A09	Heavy Repair	0.97	0.00
A10	Final Inspection	1.69	0.00
A19, A20, A21	Assembly Shop Booths	0.09	0.00
Combustion Units	All Ovens	5.24	5.24
	All Boilers	1.02	1.02
	Engine	0.02	0.02
	Total (tons/year)	15.15	6.28

PM_{10} Emissions

The calculations covered by this ATC permit are listed for the PM_{10} from the welding operations, VOC/HAP operations, and repair and touch up booths:

Welding operation in the Body Shop (EU: A01):
Welding material usage – 30 g/vehicle
EF – 20 lb/1000 lb weld material (AP-42 Section 12.19, conservative GMAW factor)
Production – 50 units/hour; 250,000 units/year

Process	Welding		Hourly Rate	Maximum	EF	PTE	
	gallon/veh	lb/veh	veh/hr	veh/yr	lb/1000 lb	lb/year	tons/yr
Welding – Body Shop	30	0.07	50	250,000	20	331	0.17

Metal Grinding:
Estimated EF 0.22 lb/hr emissions based on similar facilities

0.22 lb/hr x 4,000 hrs = 880 lb/year
880 lb/year/2000 lb/ton = 0.44 tons/year

0.44 + 0.17 = 0.61 tons/year

Paint Shop Production Paint Booths

EU	Paint Spray Booths	Coatings Applied (lbs/yr)	Solid Content (lb/lb)	E-Cube Control %	Filter Control %	Transfer Efficiency %	PM-10 Emissions (tons/yr)
A07	Liquid Metal	297,420	0.26	0	80	65	2.71
A04	Primer	1,568,000	0.53	99	80	60	0.33
A05	Basecoat	2,885,750	0.26	99	80	60	0.20
A06	Clearcoat	1,099,750	0.51	99	80	60	0.22
						Total:	3.46

Uncontrolled lbs/yr = gallons/yr x lbs/gal x weight fraction solids x (1-transfer efficiency) x (1-capture efficiency)
Controlled lbs/yr = Uncontrolled lbs/yr x (1-filter efficiency)

Paint Shop Work Decks

EU	Process	Flow Rate (acfm)	Control	EF (gr/dscf)	lbs/hr	tons/yr
A09	Heavy Repair	37,760	Filter	0.0015	.49	0.97
					Total:	0.97
A13	EC Sanding	22,420	Filter	0.0015	.29	0.58
A14	Wet Sanding	30,975	Filter	0.0015	.40	0.80
					Total:	1.38

acfm x 1 lb/7000 grains x EF x 60 min/hr = lbs/hr

Paint Repair and Touch-up Booths

Process	Usage (gallons/yr)	Density (lb/gal)	Usage (lbs/gal)	Solid Content (lb/lb)	Filter Control %	Transfer Efficiency %	PM-10 Emissions (tons/yr)
EU: A08							
Touch up Painting							
Basecoat	2,500	9.7	24,250	0.26	80	60	0.25
Clearcoat	2,500	8.3	20,750	0.51	80	60	0.42
Total							0.67
EU: A10							
Final Inspection							
Basecoat	1,250	9.7	12,125	0.26	0	60	0.63
Clearcoat	1,250	8.3	10,375	0.51	0	60	1.06
						Total:	1.69

Uncontrolled lbs/yr = gallons/yr x lbs/gal x weight fraction solids x (1-transfer efficiency) x (1-capture efficiency)
Controlled lbs/yr = Uncontrolled lbs/yr x (1-filter efficiency)

Assembly Shop Booths

EU	Process	Usage (gals/yr)	Density (lb/gal)	Usage (lbs/gal)	Solid Content (lb/lb)	Filter Control %	Transfer Efficiency %	PM-10 Emissions (tons/yr)
	Booths							
A19	Primer	200	9.8	1,960	0.53	80	60	0.04
A20	Basecoat	200	9.7	1,940	0.26	80	60	0.02
A21	Clearcoat	200	8.3	1,660	0.51	80	60	0.03
							Total:	0.09

Uncontrolled lbs/yr = gallons/yr x lbs/gal x weight fraction solids x (1-transfer efficiency) x (1-capture efficiency)
Controlled lbs/yr = Uncontrolled lbs/yr x (1-filter efficiency)

The Permittee shall operate with E-cube filteration system that are rated or demonstrated to achieve 0.0004 gr/dscf percent in accordance with manufacture's specifications for PM_{10} emissions for the primer booth, basecoat booth, and clearcoat booth.

The Permittee shall operate with exhaust filters that are rated or demonstrated to achieve 0.0015 gr/dscf percent in accordance with manufacture's specifications for PM_{10} emissions for the spot repair, E-coat sanding, heavy repair, wet sanding, and liquid metal booth.

Test Track Emissions
EF AP-42, Section 13.2.1, Paved Road

Equation: EF (lb/VMT) = $[k(sL)^{0.91} \times W^{1.02}](1-P/4N)$

Process	k (lb/VMT)	sL (g/m^2)	W (tons)	P (days)	N (days)	PM-10 Emissions (tons/yr)
PM_{10}	0.0022	0.6	2.5	30	365	0.65
$PM_{2.5}$	0.00054	0.6	2.5	30	365	0.17

This activity was deemed insignificant, but the source will be required to keep track of the VMT. The source proposed 375,000 VMT/yr.

Combustion Units PTE (tons/yr)

	8760							
Units			VOC	NOx	PM-10	SOx	CO	HAP
EU: B01	Body Shop	14.238	0.34	4.37	0.47	0.04	5.14	0.12
EU: B02	E-Coat 1	13.589	0.32	4.17	0.45	0.04	4.9	0.11
EU: B03	E-Coat 2	13.589	0.28	4.17	0.45	0.04	4.9	0.11
EU: B04	Liquid Metal	1.793	0.04	0.55	0.06	0.01	0.65	0.01
EU: B05	Liquid Metal	1.793	0.04	0.55	0.06	0.01	0.65	0.01
EU: B06	Primer	9.506	0.22	2.91	0.31	0.02	3.43	0.08
EU: B07	Primer	9.506	0.22	2.91	0.31	0.02	3.43	0.08
EU: B08	Sanding Oven 1	9.711	0.23	2.98	0.32	0.03	3.5	0.08
EU: B09	Sanding Oven 2	9.714	0.23	2.98	0.32	0.03	3.51	0.08
EU: B10	Flash Off	3.585	0.08	1.1	0.12	0.01	1.29	0.03
EU: B11	Top Coat	8.768	0.21	2.69	0.29	0.02	3.16	0.07
EU: B12	Top Coat	8.768	0.21	2.69	0.29	0.02	3.16	0.07
CU: B13	ADR	3.414	0.08	1.05	0.11	0.01	1.23	0.03
CU: B14	RTO	5.122	0.12	4.49	0.17	0.01	1.85	0.04
CU: B15	RTO	5.122	0.12	4.49	0.17	0.01	1.85	0.04
EU: B16	ASU Workdeck 1	4.78	0.11	2.05	0.16	0.01	1.73	0.04
EU: B17	ASU Workdeck 2	5.429	0.13	2.33	0.18	0.01	1.96	0.05
EU: B18	ASU Spot Repair	4.436	0.1	1.9	0.15	0.01	1.6	0.04
EU: B19	ASU Shop 1	12.291	0.29	5.28	0.4	0.03	4.44	0.1
EU: B20	ASU Shop 2	5.053	0.12	2.17	0.17	0.01	1.82	0.04
EU: B21	ASU Assembly Shop	2.764	0.07	1.19	0.09	0.01	1	0.02
EU: B22	ASU Liquid Metal	5.634	0.13	2.42	0.19	0.01	2.03	0.05
	PTE:		**3.69**	**59.44**	**5.24**	**0.41**	**57.23**	**1.3**
EU: C01	Boiler	15.63	0.37	1	0.51	0.04	5.63	0.13
EU: C02	Boiler	15.63	0.37	1	0.51	0.04	5.63	0.13
	PTE:		**0.74**	**2**	**1.02**	**0.08**	**11.26**	**0.26**
EU: D01	Generator	463	0.17	12.67	0.37	0.02	3	0.09
	PTE:		**0.17**	**12.67**	**0.37**	**0.02**	**3**	**0.09**
	500 hr Limit:		**0.01**	**0.72**	**0.02**	**0.01**	**0.17**	**0.01**
	PTE:		**4.6**	**74.11**	**6.63**	**0.51**	**71.49**	**1.65**
	Limited:		**4.44**	**62.16**	**6.28**	**0.5**	**68.66**	**1.57**

See attachments for calculations.

C. PERFORMANCE TESTING

All performance testing is subject to 40 CFR Part 60.8 and Air Quality Guideline for Source Testing, (Jan 2013). Performance testing shall be the instrument for determining initial and subsequent compliance with emission limitations set forth in this permit.

Initial performance testing will be concluded within 180 days after initial startup for the carbon adsorber (CU: B13) and the RTOs (CU: B14 and B15) to demonstrate compliance with control efficiency specified in conditions Control Requirements section for VOC Controls. The permit outlines temperature and ppmv limits in which the manufacture guaranteed the respective efficiencies. These tests will establish monitoring parameters to be utilized in future permitting actions. *[40 CFR 63.3083(a)(2)]*

The Permittee shall conduct an initial performance test in accordance with §60.8(a) and thereafter for each calendar month for each affected facility according to the procedures in this regulation. *[40 CFR Part 60, Subpart MM]*

The Permittee must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.3151. The initial compliance period begins on the applicable compliance date specified in § 63.3083 and ends on the last day of the month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next month. You must determine the mass average organic HAP content of the materials used each month for each group of materials for which an emission limitation is established in § 63.3090(c) and (d) or § 63.3091(c) and (d). The initial compliance demonstration includes the calculations according to § 63.3151 and supporting documentation showing that during the initial compliance period, the mass average organic HAP content for each group of materials was equal to or less than the applicable emission limits in § 63.3090(c) and (d) or § 63.3091(c) and (d). *[40 CFR Part 63, Subpart IIII]*

The Permittee shall perform initial performance testing within 180 days after initial startup of each boiler. (EUs: C01 and C02)

The Permittee shall conduct performance testing according to the following conditions:

a. Performance tests on each boiler (EUs: C01 and C02) shall be conducted on or before every five-year anniversary date of the previous performance test.

b. Performance tests on the carbon adsorber (CU: B13) shall be conducted annually.

c. Performance tests on the RTOs (CU: B14 and B15) shall be conducted annually.

d. After completion of three consecutive compliant performance tests for the carbon adsorber (CU: B13) and the RTOs (CU: B14 and B15), the permittee can request in writing consideration to change the performance testing frequency to every three years or every five years.

e. If the permittee reports for the volumetric flow rate velocity identified in this permit as a deviation, performance testing will be required to be conducted to establish a new volumetric flow rate for that process.

The Permittee shall utilize performance testing methodologies for individual emission units as indicated in Table V-D-1. The Control Officer will consider approving a request for alternative performance test methods if proposed in writing in the performance test protocols:

Table V-D-1: Performance Testing Protocol Requirements

Device ID	Test Point	Pollutant	Method	Frequency
EUs: C01 and C02	Boiler Exhaust Outlet Stack	NO_x	Chemiluminescence Analyzer (EPA Method 7E)	5 years
CU: B13	Carbon Adsorder Inlet and outlet	VOC	25A	Annual
CU: B14 and B15	RTOs Inlet and outlet	VOC	25A	Annual

D. RACT ANALYSIS

The determination of RACT involves the feasibility of applying emission controls alternatives to an emission unit taking in account technological and economic feasibility, energy, and secondary environmental impacts. This phase project will exceed the significance threshold of 20 tons per year for VOC and NO_x, the 50 tons per year threshold for CO, and the 7.5 tons per year threshold for PM_{10} as illustrated in Table I-D-1.

Table I-D-1: Significant Levels PTE (tons/year)

	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC
Significant	7.5	5.0	20.0	50.0	50.0	20.0
Emissions	63.88	6.63	74.11	71.49	0.51	2448.89
Exceeds	Yes	Yes	Yes	Yes	No	Yes

For VOC emissions, the source has determined that the RTOs will satisfy RACT for the following processes: body shop oven, E-coat oven, primer oven, top coat oven, and flash off oven.

For VOC emissions, the source has determined that an ADR will satisfy RACT for the following processes: primer spray booth, basecoat spray booth, and clearcoat spray booth.

For other VOC emissions, the source had determined that low-VOC materials will satisfy RACT for the following processes: pretreatment, E-Coat dip tank, liquid metal spray booth and oven, spot repair and final inspection workdecks, and sealer workdeck.

For other VOC emissions, the source had determined that good housekeeping practices will satisfy RACT for the following processes: paint mixing room, miscellaneous solvent usage, and assembly shop.

For other VOC emissions, the source had determined that good combustion practices will satisfy RACT for the following processes: all natural gas firing units and diesel generator.

For other VOC emissions, the source had determined that good engineering practices will satisfy RACT for the following processes: battery adhesive and fluids filling.

For PM_{10} emissions, the source has determined that fabric filter exhausts that represent 0.0015 gr/dscf will satisfy RACT for the following processes: spot repair, E-coat sanding, heavy repair, wet sanding workdecks, and liquid metal booths.

For $PM_{10}/PM_{2.5}$ emissions, the source has determined that E-cube filtration that represents 0.0004 gr/dscf will satisfy RACT for the following processes: primer, basecoat, and clearcoat.

For other $PM_{10}/PM_{2.5}$ emissions, the source had determined that good engineering practices will satisfy RACT for final inspection operations.

For other $PM_{10}/PM_{2.5}$ emissions, the source had determined that good combustion practices will satisfy RACT for all natural gas firing units the diesel generator.

For other $PM_{10}/PM_{2.5}$ emissions, the source had determined that dust suppression will satisfy RACT for test track.

For NO_x emissions, the source has determined that 0.07 lb/MMBtu represents and will satisfy RACT for all other natural gas (no ASU) combustion burners except the RTOs burners.

For NO_x emissions, the source has determined that 0.098 lb/MMBtu represents and will satisfy RACT for all ASU natural gas combustion burners.

For NO_x emissions, the source has determined that 0.20 lb/MMBtu represents and will satisfy RACT for RTOs burners.

For NO_x emissions, the source has determined that 12 ppm @ 3% O_2 represents and will satisfy RACT for the boilers.

RACT is triggered for CO, for this source. The source has already elected 12 ppm for NO_x as RACT. If source tries to apply RACT to CO, the NO_x ppm will have to change. Due to the upcoming status for ozone, Clark County will accept the 12 ppm for NO_x to satisfy RACT for CO. The source will be required to demonstrate good combustion practices for all the natural gas combustion units.

For other NO_x emissions, the source had determined that good combustion practices will satisfy RACT for the diesel generator.

IV. REGULATORY REVIEW

A. LOCAL REGULATORY REQUIREMENTS

Air Quality has determined that the following public law, statutes and associated regulations are applicable:

1. Section 26 - Emission of Visible Air Contaminants
2. Section 40 - Prohibitions of Nuisance
3. Section 43 - Odors in the Ambient Air
4. Section 70 - Emergency Procedures
5. Section 80 - Circumvention

B. FEDERALLY APPLICABLE REGULATIONS

40 CFR 60-STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES:

Subpart A - General Provisions

40 CFR Part 60.7-Notification and record keeping

Discussion: This regulation requires notification to Air Quality of modifications, opacity testing, records of malfunctions of process equipment and/or continuous monitoring device, and performance test data. These requirements are found in the Part 70 OP in Sections III-B

and III-C. Air Quality requires records to be maintained for five years, a more stringent requirement than the two (2) years required by 40 CFR Part 60.7.

40 CFR Part 60.8 - Performance tests

Discussion: These requirements are found in the Part 70 OP in Section III-D. Notice of intent to test, the applicable test methods, acceptable test method operating conditions, and the requirement for three runs are outlined in this regulation. Air Quality requirements for initial performance testing in accordance with 40 CFR Part 60.8. Air Quality also requires periodic performance testing for compliance with the initial performance testing operating parameters.

Subpart Dc - New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units constructed after June 9, 1989

Subpart MM - Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations

Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Subpart Dc:

40 CFR Part 60.40c - Applicability and designation of affected facility

Discussion: Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

Future Faraday has two 15.6 boilers (EUS C01 and C02) subject to this subpart. These boilers will only combust natural gas. Therefore not subject to the stand for SO_x or PM.

These boilers are subject to the notification of the date of construction or reconstruction and the actual startup, as provided by 40 CFR 60.7 to include the following:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2 emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

The owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

Subpart MM:

40 CFR Part 60.390 - Applicability and designation of affected facility

Discussion: The provisions of this subpart are applicable to the following affected facilities in an automobile or light duty truck assembly plant each prime coat operation, each guide coat operation, and each topcoat operation. Any facility under paragraph (a) of this section which commences construction, modification, or reconstruction after October 5, 1979, is subject to the requirements of this part except as provided in paragraphs (b) 40 CFR Part 60.390.

[45 FR 85415, Dec. 24, 1980, unless otherwise noted]

40 CFR Part 60.392-Standard for volatile organic compounds

Discussion: Faraday Future is subject to 0.17kg of VOC per liter applied coating solids for each primer operation, 1.40 kg of VOC per liter applied coating solids for each guide coat operation, and 1.47 kg of VOC per liter applied coating solids for each topcoat operation.

40 CFR Part 60.393 - Test methods and procedures.

Discussion: The source is required to conduct initial testing. The source shall determine the monthly weighted average mas of VOC for each calendar month for each affected facility.

40 CFR Part 60.394 - Monitoring of operations

Discussion: Each temperature measurement devise shall be installed, calibrated, and maintained according to accepted practice and manufacturer's specifications. The device shall have an accuracy of the greater of ± 5% of the temperature being measured expressed in degrees Celsius or ± 2.5 ºC.

40 CFR Part 60.395 – Reporting and recordkeeping requirements.

Discussion: Each Owner or operator of an affected facility shall include the following data: The owner or operator shall report the volume weighted average mass of VOC per volume of applied coating solids for each affected facility and where compliance is achieved through the use of incineration, the owner or operator shall include the following additional data in the control device initial performance test required by §60.8(a) or subsequent performance tests at which destruction efficiency is determined: the combustion temperature (or the gas temperature upstream and downstream of the catalyst bed), the total mass of VOC per volume of applied coating solids before and after the incinerator, capture efficiency, the destruction efficiency of the incinerator used to attain compliance with the applicable emission limit specified in §60.392 and a description of the method used to establish the fraction of VOC captured and sent to the control device.

Following the initial performance test, the owner or operator of an affected facility shall identify, record, and submit a written report to the Administrator every calendar quarter of each instance in which the volume-weighted average of the total mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under §60.392. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Administrator semiannually. Where compliance is achieved through the use of a capture

system and control device, the volume-weighted average after the control device should be reported.

Where compliance with §60.392 is achieved through the use of incineration, the owner or operator shall continuously record the incinerator combustion temperature during coating operations for thermal incineration or the gas temperature upstream and downstream of the incinerator catalyst bed during coating operations for catalytic incineration. The owner or operator shall submit a written report at the frequency specified in §60.7(c) and as defined below.

For thermal incinerators, every three-hour period shall be reported during which the average temperature measured is more than 28 °C less than the average temperature during the most recent control device performance test at which the destruction efficiency was determined as specified under §60.393.

Subpart IIII:

40 CFR Part 60.4200 – Applicability and designation of affected facility

Discussion: Future Faraday has a 463 hp 2015 diesel powered emergency engine (EU: D01) which is subject to this applicable subpart.

40 CFR Part 60.4219 – Reporting and recordkeeping requirements.

Discussion: As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4211(f)(2)(ii) or (iii) and §60.4211(f)(3)(i).

40 CFR Part 63 – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES:

Subpart A - General Provisions

40 CFR Part 63.4 – Prohibited activities and circumvention

Discussion: This prohibition is addressed in the Part 70 OP. This is also local rule AQR Section 80.1.

Subpart IIII - National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks

Subpart ZZZZ- National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Subpart IIII:

40 CFR Part 63.8 Monitoring requirements

(f) ***Use of an alternative monitoring method—***
Discussion: (1) ***General.*** Until permission to use an alternative monitoring procedure (minor, intermediate, or major changes; see definition in § 63.90(a)) has been granted by the Administrator under this paragraph (f)(1), the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.
(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of this part including, but not limited to, the following:
(i) Alternative monitoring requirements when installation of a CMS specified by a relevant standard would not provide accurate measurements due to liquid water or other interferences caused by substances within the effluent gases;
(ii) Alternative monitoring requirements when the affected source is infrequently operated;
(iii) Alternative monitoring requirements to accommodate CEMS that require additional measurements to correct for stack moisture conditions;
(iv) Alternative locations for installing CMS when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements;
(v) Alternate methods for converting pollutant concentration measurements to units of the relevant standard;
(vi) Alternate procedures for performing daily checks of zero (low-level) and high-level drift that do not involve use of high-level gases or test cells;
(vii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified by any relevant standard;
(viii) Alternative CMS that do not meet the design or performance requirements in this part, but adequately demonstrate a definite and consistent relationship between their measurements and the measurements of opacity by a system complying with the requirements as specified in the relevant standard. The Administrator may require that such demonstration be performed for each affected source; or

(ix) Alternative monitoring requirements when the effluent from a single affected source or the combined effluent from two or more affected sources is released to the atmosphere through more than one point.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section or in the relevant standard. If the results of the specified and alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4) (i) ***Request to use alternative monitoring procedure.*** An owner or operator who wishes to use an alternative monitoring procedure must submit an application to the Administrator as described in paragraph (f)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring procedure is not the performance test method used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring procedure will serve as the performance test method that is to be used to demonstrate compliance with a relevant standard, the application must be submitted at least 60 days before the performance evaluation is scheduled to begin and must meet the requirements for an alternative test method under § 63.7(f).

(ii) The application must contain a description of the proposed alternative monitoring system which addresses the four elements contained in the definition of monitoring in § 63.2 and a performance evaluation test plan, if required, as specified in paragraph (e)(3) of this section. In addition, the application must include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (f)(4)(i) above to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this section or the relevant standard.

(iv) Application for minor changes to monitoring procedures, as specified in paragraph (b)(1) of this section, may be made in the site-specific performance evaluation plan.

(5) ***Approval of request to use alternative monitoring procedure.***

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the request to use an alternative monitoring method within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. If a request for a minor change is made in conjunction with site-specific performance evaluation plan, then approval of the plan will constitute approval of the minor change. Before disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant of the Administrator's intention to disapprove the request together with—

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the applicant of his or her intention to disapprove the request, the Administrator will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

(ii) The Administrator may establish general procedures and criteria in a relevant standard to accomplish the requirements of paragraph (f)(5)(i) of this section.

(iii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (f)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until he or she receives approval from the Administrator to use another monitoring method as allowed by § 63.8(f).

(6) ***Alternative to the relative accuracy test.*** An alternative to the relative accuracy test for CEMS specified in a relevant standard may be requested as follows:

(i) ***Criteria for approval of alternative procedures.*** An alternative to the test method for determining relative accuracy is available for affected sources with emission rates demonstrated to be less than 50 percent of the relevant standard. The owner or operator of an affected source may petition the Administrator under paragraph (f)(6)(ii) of this section to substitute the relative accuracy test in section 7 of Performance Specification 2 with the procedures in section 10 if the results of a performance test conducted according to the requirements in § 63.7, or other tests performed following the criteria in § 63.7, demonstrate that the emission rate of the pollutant of interest in the units of the relevant standard is less than 50 percent of the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the owner or operator may petition the Administrator to substitute the relative accuracy test with the procedures in section 10 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the CEMS is used continuously to determine compliance with the relevant standard.

(ii) ***Petition to use alternative to relative accuracy test.*** The petition to use an alternative to the relative accuracy test shall include a detailed description of the procedures to be applied, the location and the procedure for conducting the alternative, the concentration or response levels of the alternative relative accuracy materials, and the other equipment checks included in the alternative procedure(s). The Administrator will review the petition for completeness and applicability. The Administrator's determination to approve an alternative will depend on the intended use of the CEMS data and may require specifications more stringent than in Performance Specification 2.

(iii) ***Rescission of approval to use alternative to relative accuracy test.*** The Administrator will review the permission to use an alternative to the CEMS relative accuracy test and may rescind such permission if the CEMS data from a successful completion of the alternative relative accuracy procedure indicate that the affected source's emissions are approaching the level of the relevant standard. The criterion for reviewing the permission is that the collection of CEMS data shows that emissions have exceeded 70 percent of the relevant standard for any averaging period, as specified in the relevant standard. For affected sources subject to emission limitations expressed as control efficiency levels, the criterion for reviewing the permission is that the collection of CEMS data shows that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for any averaging period, as specified in the relevant standard. The owner or operator of the affected source shall maintain records and determine the level of emissions relative to the criterion for permission to use an alternative for relative accuracy testing. If this criterion is exceeded, the owner or operator shall notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increased emissions. The Administrator will review the notification and may rescind permission to use an alternative and require the owner or operator to conduct a relative accuracy test of the CEMS as specified in section 7 of Performance Specification 2.

40 CFR Part 63.99 Delegated Federal authorities. Link to an amendment published at 77 FR 11391, Feb. 27, 2012.

Discussion: This section lists the specific source categories that have been delegated to the air pollution control agencies in each State under the procedures described in this subpart.

(29) ***Nevada.***

(i) The following table lists the specific part 63 standards that have been delegated unchanged to the air pollution control agencies in the State of Nevada. The (X) symbol is used to indicate each category that has been delegated.

As per the table, 40 CFR Part 63, Subpart IIII has been delegated to Clark County Air Quality.

40 CFR Part 63.3081 Am I subject to this subpart?

Discussion: You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in § 63.3082, that, except as noted in paragraph (b)(1) of this section, is located at a facility which applies topcoat to new automobile or new light-duty truck bodies or body parts for new automobiles or new light-duty trucks, and that is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAP). You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in § 63.3082, in which you choose to include, pursuant to § 63.3082(c), any coating operations which apply coatings to new other motor vehicle bodies or body parts for new other motor vehicles; parts intended for use in new automobiles, new light-duty trucks, or new other motor vehicles; or aftermarket repair or replacement parts for automobiles, light-duty trucks, or other motor vehicles; and the affected source is located at a facility that is a major source, is located at a major source, or is part of a major source of emissions of HAP. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year or any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

40 CFR Part 63.3082 What part of my plant does this subpart cover?

Discussion: (a) This subpart applies to each new, reconstructed, and existing affected source. **(b)** The affected source is the collection of all of the items listed in paragraphs (b)(1) through (4) of this section that are used for surface coating of new automobile or new light-duty truck bodies, or body parts for new automobiles or new light-duty trucks: **(1)** All coating operations as defined in § 63.3176. **(2)** All storage containers and mixing vessels in which coatings, thinners, and cleaning materials are stored or mixed. **(3)** All manual and automated equipment and containers used for conveying coatings, thinners, and cleaning materials. **(4)** All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation. **(c)** In addition, you may choose to include in your affected source, and thereby make subject to the requirements of this subpart, any coating operations, as defined in § 63.3176, which would otherwise be subject to the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products (subpart MMMM of this part) or the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products (subpart PPPP of this part) which apply coatings to new other motor vehicle bodies or body parts for new other motor vehicles, parts intended for use in new automobiles, new light-duty trucks, or new other motor vehicles, or aftermarket repair or replacement parts for automobiles, light-duty trucks, or other motor vehicles. **(d)** For all coating operations which you choose to add to your affected source pursuant to paragraph (c) of this section: **(1)** All associated storage containers and mixing vessels in which coatings, thinners, and cleaning materials are stored or mixed; manual and automated equipment and containers used for conveying coatings, thinners, and cleaning materials; and storage containers and manual and automated equipment and containers used for conveying waste materials are also included in your affected source and are subject to the requirements of this subpart. **(2)** All cleaning and purging of equipment associated with the added surface coating operations is subject to the requirements of this subpart. **(3)** You must identify and describe all additions to the affected source made pursuant to paragraph (c) of this section in the initial notification required in § 63.3110(b). **(e)** An affected source is a new affected source if: **(1)** You commenced its construction after December 24, 2002; and **(2)** The construction is of a completely new automobile and light-duty truck assembly plant, automobile and light-duty truck paint shop, automobile and light-duty truck topcoat operation, other motor

vehicle assembly plant, other motor vehicle paint shop, or other motor vehicle topcoat operation where previously no automobile and light-duty truck assembly plant, automobile and light-duty truck assembly paint shop, or automobile and light-duty truck assembly topcoat operation had existed; and **(i)** No other motor vehicle assembly plant, other motor vehicle paint shop, or other motor vehicle topcoat operation had existed previously; or **(ii)** No previously existing other motor vehicle assembly plant, other motor vehicle paint shop, or other motor vehicle topcoat operation is subject to this subpart; or **(iii)** If the facility was previously not a major source for HAP, no previously existing other motor vehicle assembly plant, other motor vehicle paint shop, or other motor vehicle topcoat operation is made part of the affected source under this subpart. **(f)** An affected source is reconstructed if its paint shop undergoes replacement of components to such an extent that: **(1)** The fixed capital cost of the new components exceeded 50 percent of the fixed capital cost that would be required to construct a new paint shop; and **(2)** It was technologically and economically feasible for the reconstructed source to meet the relevant standards established by the Administrator pursuant to section 112 of the Clean Air Act (CAA). **(g)** An affected source is existing if it is not new or reconstructed.

[69 FR 22623, Apr. 26, 2004, as amended at 71 FR 76926, Dec. 22, 2006]

40 CFR Part 63.3090 What emission limits must I meet for a new or reconstructed affected source?

Discussion: (a) Except as provided in paragraph (b) of this section, you must limit combined organic HAP emissions to the atmosphere from electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer and glass bonding adhesive operations plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to § 63.3082(c) to no more than 0.036 kilogram (kg)/liter (0.30 pound (lb)/gallon (gal)) of coating solids deposited during each month, determined according to the requirements in § 63.3161. **(b)** If you meet the operating limits of § 63.3092(a) or (b), you must either meet the emission limits of paragraph (a) of this section or limit combined organic HAP emissions to the atmosphere from primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to § 63.3082(c) to no more than 0.060 kg/liter (0.50 lb/gal) of applied coating solids used during each month, determined according to the requirements in § 63.3171. If you do not have an electrodeposition primer system, you must limit combined organic HAP emissions to the atmosphere from primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to § 63.3082(c) to no more than 0.060 kg/liter (0.50 lb/gal) of applied coating solids used during each month, determined according to the requirements in § 63.3171. **(c)** You must limit average organic HAP emissions from all adhesive and sealer materials other than materials used as components of glass bonding systems to no more than 0.010 kg/kg (lb/lb) of adhesive and sealer material used during each month. **(d)** You must limit average organic HAP emissions from all deadener materials to no more than 0.010 kg/kg (lb/lb) of deadener material used during each month. **(e)** For coatings and thinners used in coating operations added to the affected source pursuant to § 63.3082(c):

(1) Adhesive and sealer materials that are not components of glass bonding systems are subject to and must be included in your demonstration of compliance for paragraph (c) of this section. **(2)** Deadener materials are subject to and must be included in your demonstration of compliance for paragraph (d) of this section. **(3)** All other coatings and thinners are subject to and must be

included in your demonstration of compliance for paragraphs (a) or (b) of this section. **(f)** If your facility has multiple paint lines (*e.g.,* two or more totally distinct paint lines each serving a distinct assembly line, or a facility with two or more paint lines sharing the same paint kitchen or mix room), then for the operations addressed in paragraphs (a) and (b) of this section: **(1)** You may choose to use a single grouping under paragraph (a) of this section for all of your electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations. **(2)** You may choose to use a single grouping under paragraph (b) of this section for all of your primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations as long as each of your electrodeposition primer systems meets the operating limits of § 63.3092(a) or (b). **(3)** You may choose to use one or more groupings under paragraph (a) of this section for the electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations from one or more of your paint lines; and one or more groupings under paragraph (b) of this section for the primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations from the remainder of your paint lines, as long as each electrodeposition primer system associated with each paint line you include in a grouping under paragraph (b) of this section meets the operating limits of § 63.3092(a) or (b). For example, if your facility has three paint lines, you may choose to use one grouping under paragraph (a) of this section for two of the paint lines; and a separate grouping under paragraph (b) of this section for the third paint line, as long as the electrodeposition primer system associated with the paint line you include in the grouping under paragraph (b) of this section meets the operating limits of § 63.3092(a) or (b). Alternatively, you may choose to use one grouping for two of the paint lines and a separate grouping of the same type for the third paint line. Again, each electrodeposition primer system associated with each paint line you include in a grouping under paragraph (b) of this section must meet the operating limits of § 63.3092(a) or (b). **(4)** You may choose to consider the electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations from each of your paint lines as a separate grouping under either paragraph (a) or paragraph (b) of this section. The electrodeposition primer system associated with each paint line you choose to consider in a grouping under paragraph (b) of this section must meet the operating limits of § 63.3092(a) or (b). For example, if your facility has two paint lines, you may choose to use the grouping under paragraph (a) of this section for one paint line and the grouping under paragraph (b) of this section for the other paint line.

40 CFR Part 63.3092 How must I control emissions from my electrodeposition primer system if I want to comply with the combined primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive emission limit?

Discussion: If your electrodeposition primer system meets the requirements of either paragraph (a) or (b) of this section, you may choose to comply with the emission limits of § 63.3090(b) or § 63.3091(b) instead of the emission limits of § 63.3090(a) or § 63.3091(a). **(a)** Each individual material added to the electrodeposition primer system contains no more than: **(1)** 1.0 percent by weight of any organic HAP; and **(2)** 0.10 percent by weight of any organic HAP which is an Occupational Safety and Health Administration (OSHA)-defined carcinogen as specified in 29 CFR 1910.1200(d)(4). **(b)** Emissions from all bake ovens used to cure electrodeposition primers must be captured and ducted to a control device having a destruction or removal efficiency of at least 95 percent.

40 CFR Part 63.3093 - What operating limits must I meet?

Discussion: (a) You are not required to meet any operating limits for any coating operation(s) without add-on controls. **(b)** Except as provided in paragraph (d) of this section, for any controlled coating operation(s), you must meet the operating limits specified in Table 1 to this subpart. These operating limits apply to the emission capture and add-on control systems on

the coating operation(s) for which you use this option, and you must establish the operating limits during the performance test according to the requirements in § 63.3167. You must meet the operating limits at all times after you establish them. **(c)** If you choose to meet the emission limitations of § 63.3092(b) and the emission limits of § 63.3090(b) or § 63.3091(b), then except as provided in paragraph (d) of this section, you must operate the capture system and add-on control device used to capture and control emissions from your electrodeposition primer bake oven(s) so that they meet the operating limits specified in Table 1 to this subpart. **(d)** If you use an add-on control device other than those listed in Table 1 to this subpart, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under § 63.8(f).

40 CFR Part 63.3094 - What practice standards must I meet?

Discussion: (a) [Reserved] (b) You must develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of coatings, thinners, and cleaning materials used in, and waste materials generated by, all coating operations for which emission limits are established under §63.3090(a) through (d) or §63.3091(a) through (d). The plan must specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of this section are implemented.

(1) All organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be stored in closed containers. (2) The risk of spills of organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be minimized. (3) Organic-HAP-containing coatings, thinners, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes. (4) Mixing vessels, other than day tanks equipped with continuous agitation systems, which contain organic-HAP-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents. (5) Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.

(c) You must develop and implement a work practice plan to minimize organic HAP emissions from cleaning and from purging of equipment associated with all coating operations for which emission limits are established under §63.3090(a) through (d) or §63.3091(a) through (d).

(1) The plan shall, at a minimum, address each of the operations listed in paragraphs (c)(1)(i) through (viii) of this section in which you use organic-HAP-containing materials or in which there is a potential for emission of organic HAP.

(i) The plan must address vehicle body wipe emissions through one or more of the techniques listed in paragraphs (c)(1)(i)(A) through (E) of this section, or an approved alternative.

(A) Use of solvent-moistened wipes. (B) Keeping solvent containers closed when not in use. (C) Keeping wipe disposal/recovery containers closed when not in use. (D) Use of tack-wipes. (E) Use of solvents containing less than 1 percent organic HAP by weight.

(ii) The plan must address coating line purging emissions through one or more of the techniques listed in paragraphs (c)(1)(ii)(A) through (D) of this section, or an approved alternative.

(A) Air/solvent push-out. (B) Capture and reclaim or recovery of purge materials (excluding applicator nozzles/tips). (C) Block painting to the maximum extent feasible. (D) Use of low-HAP or no-HAP solvents for purge.

(iii) The plan must address emissions from flushing of coating systems through one or more of the techniques listed in paragraphs (c)(1)(iii)(A) through (D) of this section, or an approved alternative.

(A) Keeping solvent tanks closed. (B) Recovering and recycling solvents. (C) Keeping recovered/recycled solvent tanks closed. (D) Use of low-HAP or no-HAP solvents.

(iv) The plan must address emissions from cleaning of spray booth grates through one or more of the techniques listed in paragraphs (c)(1)(iv)(A) through (E) of this section, or an approved alternative.

(A) Controlled burn-off. (B) Rinsing with high-pressure water (in place). (C) Rinsing with high-pressure water (off line). (D) Use of spray-on masking or other type of liquid masking. (E) Use of low-HAP or no-HAP content cleaners.

(v) The plan must address emissions from cleaning of spray booth walls through one or more of the techniques listed in paragraphs (c)(1)(v)(A) through (E) of this section, or an approved alternative.

(A) Use of masking materials (contact paper, plastic sheet, or other similar type of material). (B) Use of spray-on masking. (C) Use of rags and manual wipes instead of spray application when cleaning walls. (D) Use of low-HAP or no-HAP content cleaners. (E) Controlled access to cleaning solvents.

(vi) The plan must address emissions from cleaning of spray booth equipment through one or more of the techniques listed in paragraphs (c)(1)(vi)(A) through (E) of this section, or an approved alternative.

(A) Use of covers on equipment (disposable or reusable). (B) Use of parts cleaners (off-line submersion cleaning). (C) Use of spray-on masking or other protective coatings. (D) Use of low-HAP or no-HAP content cleaners. (E) Controlled access to cleaning solvents.

(vii) The plan must address emissions from cleaning of external spray booth areas through one or more of the techniques listed in paragraphs (c)(1)(vii)(A) through (F) of this section, or an approved alternative.

(A) Use of removable floor coverings (paper, foil, plastic, or similar type of material). (B) Use of manual and/or mechanical scrubbers, rags, or wipes instead of spray application. (C) Use of shoe cleaners to eliminate coating track-out from spray booths. (D) Use of booties or shoe wraps. (E) Use of low-HAP or no-HAP content cleaners. (F) Controlled access to cleaning solvents.

(viii) The plan must address emissions from housekeeping measures not addressed in paragraphs (c)(1)(i) through (vii) of this section through one or more of the techniques listed in paragraphs (c)(1)(viii)(A) through (C) of this section, or an approved alternative.

(A) Keeping solvent-laden articles (cloths, paper, plastic, rags, wipes, and similar items) in covered containers when not in use. (B) Storing new and used solvents in closed containers. (C) Transferring of solvents in a manner to minimize the risk of spills.

(2) Notwithstanding the requirements of paragraphs (c)(1)(i) through (viii) of this section, if the type of coatings used in any facility with surface coating operations subject to the requirements of this section are of such a nature that the need for one or more of the practices specified under paragraphs (c)(1)(i) through (viii) is eliminated, then the plan may include approved alternative or equivalent measures that are applicable or necessary during cleaning of storage, conveying, and application equipment.

(d) As provided in §63.6(g), we, the Environmental Protection Agency (EPA), may choose to grant you permission to use an alternative to the work practice standards in this section.

(e) The work practice plans developed in accordance with paragraphs (b) and (c) of this section are not required to be incorporated in your title V permit. Any revisions to the work practice plans

developed in accordance with paragraphs (b) and (c) of this section do not constitute revisions to your title V permit.

(f) Copies of the current work practice plans developed in accordance with paragraphs (b) and (c) of this section, as well as plans developed within the preceding 5 years must be available on-site for inspection and copying by the permitting authority.

40 CFR Part 63.3100 - What practice standards must I meet?

Discussion: (a) You must be in compliance with the emission limitations in §§63.3090 and 63.3091 at all times, as determined on a monthly basis. (b) The coating operations must be in compliance with the operating limits for emission capture systems and add-on control devices required by §63.3093 at all times except during periods of startup, shutdown, and malfunction. (c) You must be in compliance with the work practice standards in §63.3094 at all times. (d) You must always operate and maintain your affected source including all air pollution control and monitoring equipment you use for purposes of complying with this subpart according to the provisions in §63.6(e)(1)(i). (e) You must maintain a log detailing the operation and maintenance of the emission capture systems, add-on control devices, and continuous parameter monitoring systems (CPMS) during the period between the compliance date specified for your affected source in §63.3083 and the date when the initial emission capture system and add-on control device performance tests have been completed, as specified in §63.3160. (f) If your affected source uses emission capture systems and add-on control devices, you must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in §63.6(e)(3). The SSMP must address startup, shutdown, and corrective actions in the event of a malfunction of the emission capture system or the add-on control devices.

40 CFR Part 63.3100 - What parts of the General Provisions apply to me?

Discussion: Table 2 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

40 CFR Part 63.3110 - What notifications must I submit?

Discussion: b) You must submit the Initial Notification required by §63.9(b) for a new or reconstructed affected source no later than 120 days after initial startup or 120 days after June 25, 2004, whichever is later. For an existing affected source, you must submit the Initial Notification no later than 1 year after April 26, 2004. Existing sources that have previously submitted notifications of applicability of this rule pursuant to §112(j) of the CAA are not required to submit an Initial Notification under §63.9(b) except to identify and describe all additions to the affected source made pursuant to §63.3082(c). If you elect to include the surface coating of new other motor vehicle bodies, body parts for new other motor vehicles, parts for new other motor vehicles, or aftermarket repair or replacement parts for other motor vehicles in your affected source pursuant to §63.3082(c) and your affected source has an initial startup before February 20, 2007, then you must submit an Initial Notification of this election no later than 120 days after initial startup or February 20, 2007, whichever is later.

(c) *Notification of compliance status.* If you have an existing source, you must submit the Notification of Compliance Status required by §63.9(h) no later than 30 days following the end of the initial compliance period described in §63.3160. If you have a new source, you must submit the Notification of Compliance Status required by §63.9(h) no later than 60 days after the first day of the first full month following completion of all applicable performance tests. The Notification of Compliance Status must contain the information specified in paragraphs (c)(1) through (12) of this section and in §63.9(h).

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in §63.3160 that applies to your affected source.

(4) Identification of the compliance option specified in §63.3090(a) or (b) or §63.3091(a) or (b) that you used for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c) in the affected source during the initial compliance period.

(5) Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.

(6) If you had a deviation, include the information in paragraphs (c)(6)(i) and (ii) of this section.

(i) A description and statement of the cause of the deviation.

(ii) If you failed to meet any of the applicable emission limits in §63.3090 or §63.3091, include all the calculations you used to determine the applicable emission rate or applicable average organic HAP content for the emission limit(s) that you failed to meet. You do not need to submit information provided by the materials suppliers or manufacturers, or test reports.

(7) All data and calculations used to determine the monthly average mass of organic HAP emitted per volume of applied coating solids from:

(i) The combined primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c) if you were eligible for and chose to comply with the emission limits of §63.3090(b) or §63.3091(b); or

(ii) The combined electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c).

(8) All data and calculations used to determine compliance with the separate limits for electrodeposition primer in §63.3092(a) or (b) if you were eligible for and chose to comply with the emission limits of §63.3090(b) or §63.3091(b).

(9) All data and calculations used to determine the monthly mass average HAP content of materials subject to the emission limits of §63.3090(c) or (d) or the emission limits of §63.3091(c) or (d).

(10) All data and calculations used to determine the transfer efficiency for primer-surfacer and topcoat coatings, and for all coatings, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c).

(11) You must include the information specified in paragraphs (c)(11)(i) through (iii) of this section.

(i) For each emission capture system, a summary of the data and copies of the calculations supporting the determination that the emission capture system is a permanent total enclosure (PTE) or a measurement of the emission capture system efficiency. Include a description of the

procedure followed for measuring capture efficiency, summaries of any capture efficiency tests conducted, and any calculations supporting the capture efficiency determination. If you use the data quality objective (DQO) or lower confidence limit (LCL) approach, you must also include the statistical calculations to show you meet the DQO or LCL criteria in appendix A to subpart KK of this part. You do not need to submit complete test reports.

(ii) A summary of the results of each add-on control device performance test. You do not need to submit complete test reports unless requested.

(iii) A list of each emission capture system's and add-on control device's operating limits and a summary of the data used to calculate those limits.

(12) A statement of whether or not you developed and implemented the work practice plans required by §63.3094(b) and (c).

40 CFR Part 63.3120 - What reports must I submit?

Discussion: a) *Semiannual compliance reports.* You must submit semiannual compliance reports for each affected source according to the requirements of paragraphs (a)(1) through (9) of this section. The semiannual compliance reporting requirements may be satisfied by reports required under other parts of the CAA, as specified in paragraph (a)(2) of this section.

(1) *Dates.* Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must prepare and submit each semiannual compliance report according to the dates specified in paragraphs (a)(1)(i) through (iv) of this section.

(i) The first semiannual compliance report must cover the first semiannual reporting period which begins the day after the end of the initial compliance period described in §63.3160 that applies to your affected source and ends on June 30 or December 31, whichever occurs first following the end of the initial compliance period.

(ii) Each subsequent semiannual compliance report must cover the subsequent semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(iii) Each semiannual compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(iv) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the date specified in paragraph (a)(1)(iii) of this section.

Review the rest of this regulation to see how to report for deviation and no deviations.

40 CFR Part 63.3120 - What reports must I submit?

Discussion: You must collect and keep records of the data and information specified in this section. Failure to collect and keep these records is a deviation from the applicable standard.

(a) A copy of each notification and report that you submitted to comply with this subpart, and the documentation supporting each notification and report.

(b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data, or test data used to determine the mass fraction of organic HAP, the density and the volume fraction of coating solids for each coating, the mass fraction

of organic HAP and the density for each thinner, and the mass fraction of organic HAP for each cleaning material. If you conducted testing to determine mass fraction of organic HAP, density, or volume fraction of coating solids, you must keep a copy of the complete test report. If you use information provided to you by the manufacturer or supplier of the material that was based on testing, you must keep the summary sheet of results provided to you by the manufacturer or supplier. If you use the results of an analysis conducted by an outside testing lab, you must keep a copy of the test report. You are not required to obtain the test report or other supporting documentation from the manufacturer or supplier.

(c) For each month, the records specified in paragraphs (c)(1) through (6) of this section.

(1) For each coating used for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations and for each coating, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c), a record of the volume used in each month, the mass fraction organic HAP content, the density, and the volume fraction of solids.

(2) For each thinner used for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations and for each thinner, except for thinner used for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c), a record of the volume used in each month, the mass fraction organic HAP content, and the density.

(3) For each deadener material and for each adhesive and sealer material, a record of the mass used in each month and the mass organic HAP content.

(4) A record of the calculation of the organic HAP emission rate for electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c) for each month if subject to the emission limit of §63.3090(a) or §63.3091(a). This record must include all raw data, algorithms, and intermediate calculations. If the guidelines presented in the “Protocol for Determining Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-450/3-88-018 (Docket ID No. OAR-2002-0093 and Docket ID No. A-2001-22), are used, you must keep records of all data input to this protocol. If these data are maintained as electronic files, the electronic files, as well as any paper copies must be maintained. These data must be provided to the permitting authority on request on paper, and in (if calculations are done electronically) electronic form.

(5) A record of the calculation of the organic HAP emission rate for primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c) for each month if subject to the emission limit of §63.3090(b) or §63.3091(b), and a record of the weight fraction of each organic HAP in each material added to the electrodeposition primer system if subject to the limitations of §63.3092(a). This record must include all raw data, algorithms, and intermediate calculations. If the guidelines presented in the “Protocol for Determining Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations,” EPA-450/3-88-018 (Docket ID No. OAR-2002-0093 and Docket ID No. A-2001-22), are used, you must keep records of all data input to this protocol. If these data are maintained as electronic files, the electronic files, as well as any paper copies

must be maintained. These data must be provided to the permitting authority on request on paper, and in (if calculations are done electronically) electronic form.

(6) A record, for each month, of the calculation of the average monthly mass organic HAP content of:

(i) Sealers and adhesives; and

(ii) Deadeners.

(d) A record of the name and volume of each cleaning material used during each month.

(e) A record of the mass fraction of organic HAP for each cleaning material used during each month.

(f) A record of the density for each cleaning material used during each month.

(g) A record of the date, time, and duration of each deviation, and for each deviation, a record of whether the deviation occurred during a period of startup, shutdown, or malfunction.

(h) The records required by §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(i) For each capture system that is a PTE, the data and documentation you used to support a determination that the capture system meets the criteria in Method 204 of appendix M to 40 CFR part 51 for a PTE and has a capture efficiency of 100 percent, as specified in §63.3165(a).

(j) For each capture system that is not a PTE, the data and documentation you used to determine capture efficiency according to the requirements specified in §§63.3164 and 63.3165(b) through (g), including the records specified in paragraphs (j)(1) through (4) of this section that apply to you.

(4) *Records for an alternative protocol.* Records needed to document a capture efficiency determination using an alternative method or protocol, as specified in §63.3165(f), if applicable.

(k) The records specified in paragraphs (k)(1) and (2) of this section for each add-on control device organic HAP destruction or removal efficiency determination as specified in §63.3166.

(1) Records of each add-on control device performance test conducted according to §§63.3164 and 63.3166.

(2) Records of the coating operation conditions during the add-on control device performance test showing that the performance test was conducted under representative operating conditions.

(l) Records of the data and calculations you used to establish the emission capture and add-on control device operating limits as specified in §63.3167 and to document compliance with the operating limits as specified in Table 1 to this subpart.

(m) Records of the data and calculations you used to determine the transfer efficiency for primer-surfacer and topcoat coatings and for all coatings, except for deadener and for adhesive and sealer that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c).

(n) A record of the work practice plans required by §63.3094(b) and (c) and documentation that you are implementing the plans on a continuous basis. Appropriate documentation may include operational and maintenance records, records of documented inspections, and records of internal audits.

(o) For each add-on control device and for each continuous parameter monitoring system, a copy of the equipment operating instructions must be maintained on-site for the life of the

equipment in a location readily available to plant operators and inspectors. You may prepare your own equipment operating instructions, or they may be provided to you by the equipment supplier or other third party.

40 CFR Part 63.3150 – By what date must I conduct the initial compliance? - Adhesive, Sealer and Deadner

Discussion: You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3151. The initial compliance period begins on the applicable compliance date specified in §63.3083 and ends on the last day of the month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next month. You must determine the mass average organic HAP content of the materials used each month for each group of materials for which an emission limitation is established in §63.3090(c) and (d) or §63.3091(c) and (d). The initial compliance demonstration includes the calculations according to §63.3151 and supporting documentation showing that during the initial compliance period, the mass average organic HAP content for each group of materials was equal to or less than the applicable emission limits in §63.3090(c) and (d) or §63.3091(c) and (d).

40 CFR Part 63.3151 – How do demonstrate compliance with the emission limitations?

Discussion: You must separately calculate the mass average organic HAP content of the materials used during the initial compliance period for each group of materials for which an emission limit is established in §63.3090(c) and (d) or §63.3091(c) and (d). If every individual material used within a group of materials meets the emission limit for that group of materials, you may demonstrate compliance with that emission limit by documenting the name and the organic HAP content of each material used during the initial compliance period. If any individual material used within a group of materials exceeds the emission limit for that group of materials, you must determine the mass average organic HAP content according to the procedures of paragraph (d) of this section.

40 CFR Part 63.3152 – How do demonstrate continuous compliance with the emission limitations?

Discussion: (a) To demonstrate continuous compliance, the mass average organic HAP content for each compliance period, determined according to §63.3151(a) through (d), must be less than or equal to the applicable emission limit in §63.3090(c) and (d) or §63.3091(c) and (d). A compliance period consists of 1 month. Each month after the end of the initial compliance period described in §63.3150 is a compliance period consisting of that month.

(b) If the mass average organic HAP emission content for any compliance period exceeds the applicable emission limit in §63.3090(c) and (d) or §63.3091(c) and (d), this is a deviation from the emission limitations for that compliance period and must be reported as specified in §§63.3110(c)(6) and 63.3120(a)(5).

(c) You must maintain records as specified in §§63.3130 and 63.3131.

40 CFR Part 63.3160 – By what date must I conduct the performance tests and other initial compliances? - Combined eledctrodesition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive limitations

Discussion: (a) *New and reconstructed affected sources.* For a new or reconstructed affected source, you must meet the requirements of paragraphs (a)(1) through (4) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in §63.3083. You must conduct a performance test of each capture system and add-on control device according to §§63.3164 through 63.3166 and establish the operating limits required by §63.3093 no later than 180 days after the applicable compliance date specified in §63.3083.

(2) You must develop and begin implementing the work practice plans required by §63.3094(b) and (c) no later than the compliance date specified in §63.3083.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of §63.3161. The initial compliance period begins on the applicable compliance date specified in §63.3083 and ends on the last day of the month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next month. You must determine the mass of organic HAP emissions and volume of coating solids deposited in the initial compliance period. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§63.3164 through 63.3166; supporting documentation showing that during the initial compliance period the organic HAP emission rate was equal to or less than the emission limit in §63.3090(a); the operating limits established during the performance tests and the results of the continuous parameter monitoring required by §63.3168; and documentation of whether you developed and implemented the work practice plans required by §63.3094(b) and (c).

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by §63.3093 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and CPMS during the period between the compliance date and the performance test. You must begin complying with the operating limits for your affected source on the date you complete the performance tests specified in paragraph (a)(1) of this section.

40 CFR Part 63.3161 – How do demonstrate initial compliance?

Discussion: (a) You must meet all of the requirements of this section to demonstrate initial compliance. To demonstrate initial compliance, the organic HAP emissions from the combined electrodeposition primer, primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive operations plus all coatings and thinners, except for deadener materials and for adhesive and sealer materials that are not components of glass bonding systems, used in coating operations added to the affected source pursuant to §63.3082(c) must meet the applicable emission limitation in §63.3090(a) or §63.3091(a).

(b) *Compliance with operating limits.* Except as provided in §63.3160(a)(4), you must establish and demonstrate continuous compliance during the initial compliance period with the operating limits required by §63.3093, using the procedures specified in §§63.3167 and 63.3168.

(c) *Compliance with work practice requirements.* You must develop, implement, and document your implementation of the work practice plans required by §63.3094(b) and (c) during the initial compliance period, as specified in §63.3130.

(d) *Compliance with emission limits.* You must follow the procedures in paragraphs (e) through (o) of this section to demonstrate compliance with the applicable emission limit in §63.3090(a) or §63.3091(a). You may also use the guidelines presented in "Protocol for Determining Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations," EPA-450/3-88-018 (Docket ID No. OAR-2002-0093 and Docket ID No. A-2001-22) in making this demonstration.

(e) *Determine the mass fraction of organic HAP, density, and volume used.* Follow the procedures specified in §63.3151(a) through (c) to determine the mass fraction of organic HAP and the density and volume of each coating and thinner used during each month. For electrodeposition primer operations, the mass fraction of organic HAP, density, and volume used must be determined for each material added to the tank or system during each month.

(f) *Determine the volume fraction of coating solids for each coating.* You must determine the volume fraction of coating solids (liter of coating solids per liter of coating) for each coating used during the compliance period by a test or by information provided by the supplier or the manufacturer of the material, as specified in paragraphs (f)(1) and (2) of this section. For electrodeposition primer operations, the volume fraction of solids must be determined for each material added to the tank or system during each month. If test results obtained according to paragraph (f)(1) of this section do not agree with the information obtained under paragraph (f)(2) of this section, the test results will take precedence unless, after consultation, the facility demonstrates to the satisfaction of the enforcement authority that the facility's data are correct.

Review the remaining regulation for the appropriate equation(s) to determine compliance.

40 CFR Part 63.3162 – How do demonstrate continuous compliance with the emission limitations?

Discussion: (a) To demonstrate continuous compliance with the applicable emission limit in §63.3090(a) or §63.3091(a), the organic HAP emission rate for each compliance period, determined according to the procedures in §63.3161, must be equal to or less than the applicable emission limit in §63.3090(a) or §63.3091(a). A compliance period consists of 1 month. Each month after the end of the initial compliance period described in §63.3160 is a compliance period consisting of that month. You must perform the calculations in §63.3161 on a monthly basis.

(b) If the organic HAP emission rate for any 1 month compliance period exceeded the applicable emission limit in §63.3090(a) or §63.3091(a), this is a deviation from the emission limitation for that compliance period and must be reported as specified in §§63.3110(c)(6) and 63.3120(a)(6).

(c) You must demonstrate continuous compliance with each operating limit required by §63.3093 that applies to you, as specified in Table 1 to this subpart.

(1) If an operating parameter is out of the allowed range specified in Table 1 to this subpart, this is a deviation from the operating limit that must be reported as specified in §§63.3110(c)(6) and 63.3120(a)(6).

(2) If an operating parameter deviates from the operating limit specified in Table 1 to this subpart, then you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation except as provided in §63.3161(p).

(d) You must meet the requirements for bypass lines in §63.3168(b) for control devices other than solvent recovery systems for which you conduct liquid-liquid material balances. If any bypass line is opened and emissions are diverted to the atmosphere when the coating operation is running, this is a deviation that must be reported as specified in §63.3110(c)(6) and 63.3120(a)(6). For the purposes of completing the compliance calculations specified in

§63.3161(k), you must assume that the emission capture system and add-on control device were achieving zero efficiency during the time period of the deviation.

(e) You must demonstrate continuous compliance with the work practice standards in §63.3094. If you did not develop a work practice plan, if you did not implement the plan, or if you did not keep the records required by §63.3130(n), this is a deviation from the work practice standards that must be reported as specified in §§63.3110(c)(6) and 63.3120(a)(6).

(f) If there were no deviations from the emission limitations, submit a statement as part of the semiannual compliance report that you were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in §63.3090(a) or §63.3091(a), and you achieved the operating limits required by §63.3093 and the work practice standards required by §63.3094 during each compliance period.

(h) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction of the emission capture system, add-on control device, or coating operation that may affect emission capture or control device efficiency are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). The Administrator will determine whether deviations that occur during a period you identify as a startup, shutdown, or malfunction are violations according to the provisions in §63.6(e).

(j) You must maintain records as specified in §§63.3130 and 63.3131.

40 CFR Part 63.3166 – How do I determine the add-on control device emission destruction or removal efficiency?

Discussion: You must use the procedures and test methods in this section to determine the add-on control device emission destruction or removal efficiency as part of the performance test required by §63.3160. You must conduct three test runs as specified in §63.7(e)(3), and each test run must last at least 1 hour.

(a) For all types of add-on control devices, use the test methods specified in paragraphs (a)(1) through (5) of this section.

(1) Use Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select sampling sites and velocity traverse points.

(2) Use Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.

(3) Use Method 3, 3A, or 3B of appendix A to 40 CFR part 60, as appropriate, for gas analysis to determine dry molecular weight. The ANSI/ASME PTC 19.10-1981, “Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus]” (incorporated by reference, see §63.14), may be used as an alternative to Method 3B.

(4) Use Method 4 of appendix A to 40 CFR part 60 to determine stack gas moisture.

(5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.

(b) Measure total gaseous organic mass emissions as carbon at the inlet and outlet of the add-on control device simultaneously, using either Method 25 or 25A of appendix A to 40 CFR part 60, as specified in paragraphs (b)(1) through (3) of this section. You must use the same method for both the inlet and outlet measurements.

(1) Use Method 25 if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be more than 50 parts per million by volume (ppmv) at the control device outlet.

(2) Use Method 25A if the add-on control device is an oxidizer and you expect the total gaseous organic concentration as carbon to be 50 ppmv or less at the control device outlet.

(3) Use Method 25A if the add-control device is not an oxidizer.

Review the remaining regulation for the appropriate method(s) and equation(s) to determine compliance.

40 CFR Part 63.3167 – How do I establish the add-on control device operating limits during the performance test?

Discussion: During the performance test required by §63.3160 and described in §§63.3164 and 63.3166, you must establish the operating limits required by §63.3093 according to this section, unless you have received approval for alternative monitoring and operating limits under §63.8(f) as specified in §63.3093.

(a) *Thermal oxidizers.* If your add-on control device is a thermal oxidizer, establish the operating limit according to paragraphs (a)(1) through (3) of this section.

(1) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(2) Use all valid data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum 3-hour average operating limit for your thermal oxidizer.

(3) As an alternative, if the latest operating permit issued before April 26, 2007, for the thermal oxidizer at your facility contains recordkeeping and reporting requirements for the combustion temperature that are consistent with the requirements for thermal oxidizers in 40 CFR 60.395(c), then you may set the minimum operating limit for the combustion temperature for each such thermal oxidizer at your affected source at 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion temperature during the performance test of that thermal oxidizer. If you do not have an operating permit for the thermal oxidizer at your facility and the latest construction permit issued before April 26, 2007, for the thermal oxidizer at your facility contains recordkeeping and reporting requirements for the combustion temperature that are consistent with the requirements for thermal oxidizers in 40 CFR 60.395(c), then you may set the minimum operating limit for the combustion temperature for each such thermal oxidizer at your affected source at 28 degrees Celsius (50 degrees Fahrenheit) below the average combustion temperature during the performance test of that thermal oxidizer. If you use 28 degrees Celsius (50 degrees Fahrenheit) below the combustion temperature maintained during the performance test as the minimum operating limit for a thermal oxidizer, then you must keep the combustion temperature set point on that thermal oxidizer no lower than 14 degrees Celsius (25 degrees Fahrenheit) below the lower of that set point during the performance test for that thermal oxidizer and the average combustion temperature maintained during the performance test for that thermal oxidizer.

(c) *Regenerative carbon adsorbers.* If your add-on control device is a regenerative carbon adsorber, establish the operating limits according to paragraphs (c)(1) and (2) of this section.

(1) You must monitor and record the total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each regeneration cycle and the carbon bed temperature after each carbon bed

regeneration and cooling cycle for the regeneration cycle either immediately preceding or immediately following the performance test.

(2) The operating limits for your carbon adsorber are the minimum total desorbing gas mass flow recorded during the regeneration cycle and the maximum carbon bed temperature recorded after the cooling cycle.

40 CFR Part 63.3168 – What are the requirements for continuous parameter monitoring system installation, operation, and maintenance?

Discussion: (a) *General.* You must install, operate, and maintain each CPMS specified in paragraphs (c), (e), (f), and (g) of this section according to paragraphs (a)(1) through (6) of this section. You must install, operate, and maintain each CPMS specified in paragraphs (b) and (d) of this section according to paragraphs (a)(3) through (5) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally-spaced successive cycles of CPMS operation in 1 hour.

(2) You must determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation.

(3) You must record the results of each inspection, calibration, and validation check of the CPMS.

(4) You must maintain the CPMS at all times and have available necessary parts for routine repairs of the monitoring equipment.

(5) You must operate the CPMS and collect emission capture system and add-on control device parameter data at all times that a controlled coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments).

(6) You must not use emission capture system or add-on control device parameter data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. You must use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits.

(7) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the CPMS to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out of control and data are not available for required calculations is a deviation from the monitoring requirements.

(c) *Thermal oxidizers and catalytic oxidizers.* If you are using a thermal oxidizer or catalytic oxidizer as an add-on control device (including those used to treat desorbed concentrate streams from concentrators or carbon adsorbers), you must comply with the requirements in paragraphs (c)(1) through (3) of this section:

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(d) *Regenerative carbon adsorbers.* If you are using a regenerative carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas (*e.g.,* steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) and (2) of this section.

(1) The regeneration desorbing gas mass flow monitor must be an integrating device having a measurement sensitivity of plus or minus 10 percent, capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must have a measurement sensitivity of 1 percent of the temperature (as expressed in degrees Fahrenheit) recorded or 1 degree Fahrenheit, whichever is greater, and must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

40 CFR Part 63.3175 Who implements and enforces this subpart?

Discussion: (c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section: (1) Approval of alternatives to the work practice standards in § 63.3094under § 63.6(g).
(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.
(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.
(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

Subpart ZZZZ:

40 CFR Part 63.6585 Am I subject to this subpart?

Discussion: Subpart ZZZZ applies to the diesel emergency generator (EU: D01) at this source.

Pursuant to 63.6590(c), an affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR Part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part.

Subpart DDDDD:

40 CFR Part 63.7485 Am I subject to this subpart?

Discussion: You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.
[78 FR 7162, Jan. 31, 2013]

40 CFR Part 63.7490 What is the affected source of this subpart?

Discussion: (a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section. (1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in §63.7575. (2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in §63.7575, located at a major source.

40 CFR Part 63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

Discussion: (10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this

section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

V. COMPLIANCE

A. REPORTING REQUIREMENTS

Requirements for reporting:

(a) Regardless of the date of issuance of this ATC, the schedule for the submittal of reports to the Air Quality shall be as follows:

Table V-A-1: Reporting Schedule

Required Report	Applicable Period	Due Date
Semiannual Report for 1st half of the year.	January, February, March, April, May, June	July 30th each year[1]
Semiannual Report for 2nd half of the year. Any additional annual records required.	July, August, September, October, November, December	January 30th each year[1]
Annual Emission Inventory Report	Calendar Year	March 31st each year[1]
Excess Emission Notification	As Required	Within 24 hours of the onset of the event
Excess Emission Report	As Required	As soon as practicable but not to exceed 72 hours from notification
Deviation Report	As Required	Along with semiannual reports

[1]If the due date falls on a Saturday, Sunday or a Federal or Nevada holiday, then the submittal are due on the next regularly scheduled business day.

(b) A statement of methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods.
(c) A schedule for submission of compliance certifications during the permit term.
(d) A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.

Table V-A-2: Required Submission Dates for MACT Reports

Required Report	Applicable Period	Due Date[1]
Semi-annual Report for 1st Six-Month Period	January, February, March, April, May, June	July 31th each year[1]
Semi-annual Report for 2nd Six-Month Period, Any additional annual records required.	July, August, September, October, November, December	January 31th each year[1]

[1] If the due date falls on a Saturday, Sunday, or Federal or Nevada holiday, then the submittal is due on the next regularly scheduled business day.

This source is required to submit initial notifications for the coating/painting operations and the boilers.

This source is also required to submit notification of compliance status reports the coating/painting operations and the boilers.

VI. EMISSION REDUCTION CREDITS (OFFSETS)

None.

VII. ADMINISTRATIVE REQUIREMENTS

AQR Section 12.4 requires that Air Quality identify the original authority for each term or condition in the ATC permit. Such reference of origin or citation is denoted by [italic text in brackets] after each ATC permit condition. Air Quality proposes to issue the ATC permit.

VIII. MODELING

Faraday Future is a major Title V source in the Hydrographic Area 216 (Garnet Valley). Permitted emission units include automobile manufacturing processes. Faraday Future submitted modeling analysis to Air Quality in accordance with AQR Section 12.4.3.2.

INCREMENT ANALYSIS

Since minor source baseline dates for PM_{10} (December 31, 1980), NO_2 (January 24, 1991) and SO_2 (December 31, 1980) have been triggered in HA 216, Prevention of Significant Deterioration (PSD) increment analysis is required.

Air Quality reviewed the modeling submitted by AMEC Foster Wheeler on behalf of Faraday Future. Air Quality modeled the source with the information provided in the submittal using AERMOD to track the increment consumption. Five years (1999 to 2003) of meteorological data from the McCarran station and Desert Rock station were used in the model. (USGS NED terrain data was used to calculate elevations. Table VIII-1 presents the results of the modeling.

Table VIII-1: PSD Increment Consumption

Pollutant	Averaging Period	PSD Increment Consumption by the Source (μg/m^3)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO_2	3-hour	0.74[1]	685845	4029480
SO_2	24-hour	0.27[1]	685845	4029580
SO_2	Annual	0.08	685661	4029830
PM_{10}	24-hour	6.83[1]	685850	4029550
PM_{10}	Annual	1.93	685845	4029630
NO_X	Annual	5.85	685661	4029830

[1]Second High Concentration

Table VIII-1 shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

NAAQS ANALYSIS

Air Quality also reviewed the NAAQS modeling submitted by AMEC Foster Wheeler on behalf of Faraday Future. Using the information from the submittal, Air Quality modeled the source with AERMOD to evaluate the impacts with NAAQS. Table VIII-2 shows the results of the analysis.

Table VIII-2: NAAQS Analysis

Pollutant	Averaging Period	Source Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)
NO_2	1-hour	64.78[1]	78.3[3]	143.08	188
NO_2	Annual	5.85	9.9[4]	15.75	100
PM_{10}	24-hour	6.83[2]	128[5]	134.83	150
$PM_{2.5}$	24-hour	1.70	20[6]	21.7	35
$PM_{2.5}$	Annual	0.53	9.9[7]	10.43	12
CO	1-hour	77.86	3550[8]	3627.86	40000
CO	8-hour	40.02	2576[8]	2616.02	10000

[1] Eighth high concentration
[2] Second high concentration
[3] 2010-2012 average of 98th percentile concentration at Joe Neal monitoring station
[4] 2012 Annual average concentration at Joe Neal monitoring station
[5] 2007-09 Design Value at Apex monitoring station
[6] 2014 98th percentile concentration at JD Smith monitoring station
[7] 2014 Annual average concentration at JD Smith monitoring station
[8] 2014-15 Average concentration at JD Smith monitoring station

Table VIII-2 shows that the source will be in compliance with the NAAQS.

IX. ATTACHMENTS

Table IX-1: PTE for Ovens

Body Shop

EU#:	B01			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.11	2.56	0.47
S/N:			NOx	0.0700	1.00	23.92	4.37
			CO	0.0824	1.17	28.16	5.14
14.238	mmBtu/hr		SOx	0.0006	0.01	0.21	0.04
24.0	hr/day		VOC	0.0054	0.08	1.85	0.34
8760	hr/yr		HAP	1.900E-03	0.03	0.65	0.12
PPM		%Oxygen					
57	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

E-Coat

EU#:	B02 and B03			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.10	2.45	0.45
S/N:			NOx	0.0700	0.95	22.83	4.17
			CO	0.0824	1.12	26.87	4.90
13.589	mmBtu/hr		SOx	0.0006	0.01	0.20	0.04
24.0	hr/day		VOC	0.0054	0.07	1.76	0.32
8760	hr/yr		HAP	1.900E-03	0.03	0.62	0.11
PPM		%Oxygen					
57	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Liquid Metal

EU#:	B04 and B05			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.01	0.32	0.06
S/N:			NOx	0.0700	0.13	3.01	0.55
			CO	0.0824	0.15	3.55	0.65
1.793	mmBtu/hr		SOx	0.0006	0.01	0.03	0.01
24.0	hr/day		VOC	0.0054	0.01	0.23	0.04
8760	hr/yr		HAP	1.900E-03	0.01	0.08	0.01
PPM		%Oxygen					
57	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Primer

EU#:	B06 and B07			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.07	1.71	0.31
S/N:			NOx	0.0700	0.67	15.97	2.91
			CO	0.0824	0.78	18.80	3.43
9.506	mmBtu/hr		SOx	0.0006	0.01	0.14	0.02
24.0	hr/day		VOC	0.0054	0.05	1.23	0.22
8760	hr/yr		HAP	1.900E-03	0.02	0.43	0.08
PPM		%Oxygen					
57	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Sanding 1

				Emission Factor (lb/mmBtu)	Potential Emissions		
EU#:	B08				lb/hr	lb/day	ton/yr
Make:							
Model:			PM10	0.0075	0.07	1.75	0.32
S/N:			NOx	0.0700	0.68	16.31	2.98
			CO	0.0824	0.80	19.20	3.50
9.711	mmBtu/hr		SOx	0.0006	0.01	0.14	0.03
24.0	hr/day		VOC	0.0054	0.05	1.26	0.23
8760	hr/yr		HAP	1.900E-03	0.02	0.44	0.08
PPM		%Oxygen					
57	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Sanding 2

				Emission Factor (lb/mmBtu)	Potential Emissions		
EU#:	B09				lb/hr	lb/day	ton/yr
Make:							
Model:			PM10	0.0075	0.07	1.75	0.32
S/N:			NOx	0.0700	0.68	16.32	2.98
			CO	0.0824	0.80	19.21	3.51
9.714	mmBtu/hr		SOx	0.0006	0.01	0.14	0.03
24.0	hr/day		VOC	0.0054	0.05	1.26	0.23
8760	hr/yr		HAP	1.900E-03	0.02	0.44	0.08
PPM		%Oxygen					
57	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Flash Off

EU#:	B10			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.03	0.65	0.12
S/N:			NOx	0.0700	0.25	6.02	1.10
			CO	0.0824	0.30	7.09	1.29
3.585	mmBtu/hr		SOx	0.0006	0.01	0.05	0.01
24.0	hr/day		VOC	0.0054	0.02	0.46	0.08
8760	hr/yr		HAP	1.900E-03	0.01	0.16	0.03
PPM		%Oxygen					
57	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Top Coat

EU#:	B11 and B12			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.07	1.58	0.29
S/N:			NOx	0.0700	0.61	14.73	2.69
			CO	0.0824	0.72	17.34	3.16
8.768	mmBtu/hr		SOx	0.0006	0.01	0.13	0.02
24.0	hr/day		VOC	0.0054	0.05	1.14	0.21
8760	hr/yr		HAP	1.900E-03	0.02	0.40	0.07
PPM		%Oxygen					
57	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

ADR

EU#:	B13			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.03	0.61	0.11
S/N:			NOx	0.0700	0.24	5.74	1.05
			CO	0.0824	0.28	6.75	1.23
3.414	mmBtu/hr		SOx	0.0006	0.01	0.05	0.01
24.0	hr/day		VOC	0.0054	0.02	0.44	0.08
8760	hr/yr		HAP	1.900E-03	0.01	0.16	0.03
PPM		%Oxygen					
57	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

RTOs

EU#:	B14 and B15			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.04	0.92	0.17
S/N:			NOx	0.2000	1.02	24.59	4.49
			CO	0.0824	0.42	10.13	1.85
5.122	mmBtu/hr		SOx	0.0006	0.01	0.07	0.01
24.0	hr/day		VOC	0.0054	0.03	0.66	0.12
8760	hr/yr		HAP	1.900E-03	0.01	0.23	0.04
PPM		%Oxygen					
164	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Workdeck 1

EU#:	B16			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.04	0.86	0.16
S/N:			NOx	0.0980	0.47	11.24	2.05
			CO	0.0824	0.39	9.45	1.73
4.78	mmBtu/hr		SOx	0.0006	0.01	0.07	0.01
24.0	hr/day		VOC	0.0054	0.03	0.62	0.11
8760	hr/yr		HAP	1.900E-03	0.01	0.22	0.04
PPM		%Oxygen					
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Workdeck 2

EU#:	B17			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.04	0.98	0.18
S/N:			NOx	0.0980	0.53	12.77	2.33
			CO	0.0824	0.45	10.74	1.96
5.429	mmBtu/hr		SOx	0.0006	0.01	0.08	0.01
24.0	hr/day		VOC	0.0054	0.03	0.70	0.13
8760	hr/yr		HAP	1.900E-03	0.01	0.25	0.05
PPM		%Oxygen					
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Spot Repair

EU#:	B18			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.03	0.80	0.15
S/N:			NOx	0.0980	0.43	10.43	1.90
			CO	0.0824	0.37	8.77	1.60
4.436	mmBtu/hr		SOx	0.0006	0.01	0.06	0.01
24.0	hr/day		VOC	0.0054	0.02	0.57	0.10
8760	hr/yr		HAP	1.900E-03	0.01	0.20	0.04
PPM		%Oxygen					
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Shop 1

EU#:	B19			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.09	2.21	0.40
S/N:			NOx	0.0980	1.20	28.91	5.28
			CO	0.0824	1.01	24.31	4.44
12.291	mmBtu/hr		SOx	0.0006	0.01	0.18	0.03
24.0	hr/day		VOC	0.0054	0.07	1.59	0.29
8760	hr/yr		HAP	1.900E-03	0.02	0.56	0.10
PPM		%Oxygen					
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Shop 2

EU#:	B20			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.04	0.91	0.17
S/N:			NOx	0.0980	0.50	11.88	2.17
			CO	0.0824	0.42	9.99	1.82
5.053	mmBtu/hr		SOx	0.0006	0.01	0.07	0.01
24.0	hr/day		VOC	0.0054	0.03	0.65	0.12
8760	hr/yr		HAP	1.900E-03	0.01	0.23	0.04
PPM		%Oxygen					
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Assembly Shop

EU#:	B21			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.02	0.50	0.09
S/N:			NOx	0.0980	0.27	6.50	1.19
			CO	0.0824	0.23	5.47	1.00
2.764	mmBtu/hr		SOx	0.0006	0.01	0.04	0.01
24.0	hr/day		VOC	0.0054	0.01	0.36	0.07
8760	hr/yr		HAP	1.900E-03	0.01	0.13	0.02
PPM		%Oxygen					
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

				Emission Factor (lb/mmBtu)	Potential Emissions		
EU#:	B22						
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.04	1.01	0.19
S/N:			NOx	0.0980	0.55	13.25	2.42
			CO	0.0824	0.46	11.14	2.03
5.634	mmBtu/hr		SOx	0.0006	0.01	0.08	0.01
24.0	hr/day		VOC	0.0054	0.03	0.73	0.13
8760	hr/yr		HAP	1.900E-03	0.01	0.26	0.05
PPM		%Oxygen					
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Table IX-2: PTE for Boilers

				Emission Factor (lb/mmBtu)	Potential Emissions		
EU#:	C01 and C02						
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.12	2.81	0.51
S/N:			NOx	0.0146	0.23	5.48	1.00
			CO	0.0824	1.29	30.91	5.64
15.63	mmBtu/hr		SOx	0.0006	0.01	0.23	0.04
24.0	hr/day		VOC	0.0054	0.08	2.03	0.37
8760	hr/yr		HAP	1.900E-03	0.03	0.71	0.13
PPM		%Oxygen					
12	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas						

Table IX-3: PTE for Emergency Generator (EU: D01)

EU#			Horsepower:	463		Emission Factor	Control	Potential Emissions	
Make:			Hours/Day:	24.0		(lb/hp-hr)	Efficiency	lb/hr	ton/yr
Model:			Hours/Year	8760	PM10	1.81E-04	0.00%	0.08	0.37
S/N:					NOx	6.25E-03	0.00%	2.89	12.67
					CO	1.48E-03	0.00%	0.69	3.00
Manufacturer Guarantees					SOx	1.21E-05	0.00%	0.01	0.02
PM10	0.11	g/kW-hr			VOC	8.22E-05	0.00%	0.04	0.17
NOx	3.8	g/kW-hr			HAP	4.52E-05	0.00%	0.02	0.09
CO	0.9	g/kW-hr							
SOx		g/hp-hr							
VOC	0.05	g/kW-hr							
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

EU#			Horsepower:	463		Emission Factor	Control	Potential Emissions	
Make:			Hours/Day:	24.0		(lb/hp-hr)	Efficiency	lb/hr	ton/yr
Model:			Hours/Year	500	PM10	1.81E-04	0.00%	0.08	0.02
S/N:					NOx	6.25E-03	0.00%	2.89	0.72
					CO	1.48E-03	0.00%	0.69	0.17
Manufacturer Guarantees					SOx	1.21E-05	0.00%	0.01	0.01
PM10	0.11	g/kW-hr			VOC	8.22E-05	0.00%	0.04	0.01
NOx	3.8	g/kW-hr			HAP	4.52E-05	0.00%	0.02	0.01
CO	0.9	g/kW-hr							
SOx		g/hp-hr							
VOC	0.05	g/kW-hr							
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

Table IX-4: Facility PTE for VOC/PM10/HAPs/Limited PTE for VOC/PM10/HAPs (tons/yr):

			Allowable VOC	PTE	Allowable HAPs	PTE	Allowable PM-10	PTE
A01	Body Shop							
		Welding					0.61	1.34
		Bonding	0.06	0.13	0.00			
A02	Paint Shop	Pre-treatment	0.2	0.44	0.04	0.09		
A03	E-Coat	E-Coat Dip/Ovens	13.02	131.97	6.32	64.06		
A04	Primer Surfacer	Primer Booth/Oven	21.62	613.2	0.86	24.53	0.33	1.69
	Topcoat							
A05		Basecoat Booth/Oven	15.31	488.64	1.02	32.58	0.2	1
A06		Clearcoat Booth/Oven	19.77	513.61	0.11	2.90	0.22	1.1
A07	Liquid Metal	Liquid Metal Booth/Oven	15.47	33.88	1.07	2.35	2.71	13.55
		Top Coat	18.76	41.09	0.11	0.23		
	Work Decks							
A08		Touch up	6.3	13.8	0.15	0.32	0.67	22.33
A09		Heavy Repair	0.7	1.94	0.02	0.04	0.97	1.75
A10		Final Inspection	3.15	6.9	0.08	0.17	1.69	11.27
A11		Sealing	0.6	1.31	0.49	1.05		
A12	Paint Mix Room		0.7	1.53	0.11	0.24		
A13		Sanding					0.58	1.27
A14		Wet Sanding					0.80	1.75
A15	Solvent use	Wipes	109.07	191.08	16.36	28.67		
A15a		Solvents	1.3		1.42			
		Solvents	0.69	363.98	0.05	261.49		
		Solvents	1.3	19	1.42	20.76		

	Assembly Shop							
A16		Window Assembly	5.43	11.89	3.07	6.72		
A17		Battery Adhesive	3.6	7.88	7.04	15.42		
A18		Fluids Filling	0.07	0.15				
A19		Primer Booth	0.35	0.77	0.01	0.02	0.04	0.09
A20		Basecoat Booth	0.15	0.33	0.01	0.02	0.02	0.04
A21		Clearcoat Booth	0.35	0.77	0.01	0.02	0.03	0.07
B numbers	Oven Burners		3.69	3.69	1.30	1.30	5.24	5.24
C01	15.63 MMBtu/hr		0.37	0.37	0.13	0.13	0.51	0.51
C02	15.63 MMBtu/hr		0.37	0.37	0.13	0.13	0.51	0.51
D01	463 hp Generator		0.01	0.17	0.01	0.01	0.02	0.37
		PTE		2448.89		463.25		63.88
	Total:	Limited	242.41		41.34		15.15	

X. TEMPORARY OPERATING ALTERNATE SCENARIO

Eisenmann is the paint equipment manufacturer of most of the equipment to be permitted, in which is delayed in building the entire paint shop for the source. However, even with the delay the source will still be on schedule to install parts of the paint shop equipment. Therefore, the source has requested a TOAS. This TOAS will prioritize the design and installation of the paint shop equipment to include: pretreatment, e-coat line, sealer, LASD, and the liquid metal equipment first. The remaining paint shop equipment design will be finalized afterwards, and installed accordingly. During the TOAS, the initial equipment will have emissions that will not be controlled by the proposed ADR/RTOs yet. The ADR/RTOs will be installed with the remainder of the paint shop equipment, as its design is based on the paint shop operations as a whole. The source has submitted documentation of a RACT analysis to show why we will not be installing a different, new control system for the TOAS. With the RACT analysis, during the TOAS operations, the source will be in compliance with NSPS Subpart MM and NESHAP Subpart IIII limits along with the RACT requirements approved in this permitting action. The TOAS will avoid future delays because it is necessary for the source to meet our original start of operations date for business strategy.

Temporary is defined to be less than 365 days. During this operation, the source will be limited to 12,000 vehicles/components. The source is anticipating the date to finish building all emission units in the paint shop by February 2018.

Any production while operating in the TOAS will have to be incorporated with the production of the source upon normal operations.

A. EMISSIONS

Table X-A-1 summarizes the emissions from the operations of the TOAS.

Table X-A-1 Source-wide PTE (tons per year)

PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAPs
8.61	5.11	41.36	56.87	0.43	53.42	8.27

B. EMISSION UNITS

Table X-B-1 outlines the emissions units and their respective throughputs of the TOAS.

Table X-B-1: VOC/HAP Processes

EU	Process	Throughput
A01	Body Shop	
	Welding	
	Betamate 6120	3,801 gallons
	Betamate 17761	249 gallons
	HEM Adhesive	18 gallons
	Stiffener	167 gallons
	Dampner	896 gallons
	Antiflutter	420 gallons
A02	Pre-treatment	
	Oxsilan 9830	950 gallons
A03	E-Coat	
	Emulsion	26,160 gallons
	Paste	3,240 gallons

EU	Process	Throughput
A04	Surfacer	
	Primer	7,680 gallons
A07	Liquid Metal	
	Base Coat	14,280 gallons
	Clear Coat	6,360 gallons
A08	Shop Repair	
	Base Coat	120 gallons
	Clear Coat	120 gallons
A09	Heavy Repair	
	Base Coat	12 gallons
	Clear Coat	12 gallons
A10	Final Inspection	
	Base Coat	60 gallons
	Clear Coat	60 gallons
A11	Sealing	
	Sealer – Tereson PV 1097	385 gallons
	Deadner- Terophon 8275	5,345 gallons
A12	Paint Mix Room	
		65,711 gallons
A15	Solvent Use	
	Isopropyl alcohol	1,600 gallons
A15a	Purge Clearcoat/Gun Cleaning for Liquid Metal	720 gallons
	Purge Basecoat/Gun Cleaning for Liquid Metal	720 gallons
A16	Window Assembly	
	Cleaning	22 gallons
	Glass Primer	16 gallons
	Adhesive/Sealing	2,760 gallons
A17	Battery Adhesive	
	Loctite 4311	1,427 gallons
	Loctite 5910	241 gallons
	HumiSeal UV40	0.08 gallons
A18	Fluids Filling	
	Brake Fluid	3,170 gallons
	Anti-Freeze	47,556 gallons
	Windshield Washer	12,682 gallons
	Power Steering Fluid	3,804 gallons
	Assembly Shop Booths	
A19	Primer	200 gallons
A20	Basecoat	200 gallons
A21	Top Coat	200 gallons

Table X-B-2 outlines the miscellaneous processes covered in the TOAS.

Table X-B-2: Miscellaneous Processes

EU	Process	Manufacturer
A13	EC Sanding	Eisenmann
A14	Wet Sanding	Eisenmann

Table X-B-3 outlines insignificant activities present.

Table X-B-3: Insignificant Activities

Product	Equipment Description	Capacity
	Test Track	375,000 VMT/yr
Battery Coolant	Above Ground Storage tank, fixed roof	Not to exceed 30,000 gallons
Coolant Anti-Freeze	Above Ground Storage tank, fixed roof	Not to exceed 15,000 gallons
Windshield Wiper Fluid	Above Ground Storage tank, fixed roof	Not to exceed 15,000 gallons
Motor Case Lube	Above Ground Storage tank, fixed roof	Not to exceed 15,000 gallons
Brake Fluid	Above Ground Storage tank, fixed roof	Not to exceed 15,000 gallons
HFO=1234yf (Refrigerant)	Above Ground Storage tank, fixed roof	Not to exceed 7,000 gallons

Table X-B-4 outlines the combustion units to be operated in the TOAS.

Table X-B-4: Combustion Units

EU	Process	Rating	Type	Manufacturer	Model No.	Serial No.
B01	Body Shop	14.238 MMbtu/hr	Oven	TBD	TBD	TBD
B02	E-Coat	13.589 MMbtu/hr	Oven	Eisenmann	TBD	TBD
B03	E-Coat	13.589 MMbtu/hr	Oven	Eisenmann	TBD	TBD
B04	Liquid Metal	1.793 MMbtu/hr	Oven	Eisenmann	TBD	TBD
B05	Liquid Metal	1.793 MMbtu/hr	Oven	Eisenmann	TBD	TBD
B06	Primer Surfacer	9.506 MMbtu/hr	Oven	Eisenmann	TBD	TBD
B07	Primer Surfacer	9.506 MMbtu/hr	Oven	Eisenmann	TBD	TBD
B08	Sanding	9.711 MMbtu/hr	Oven	Eisenmann	TBD	TBD
B09	Sanding	9.714 MMbtu/hr	Oven	Eisenmann	TBD	TBD
B16	Work Deck	4.78 MMbtu/hr	Air Supply Unit	Eisenmann	TBD	TBD
B17	Work Deck	5.429 MMBtu/hr	Air Supply Unit	Eisenmann	TBD	TBD
B18	Spot Repair	4.436 MMBtu/hr	Air Supply Unit	Eisenmann	TBD	TBD
B19	Shop	12.291 MMbtu/hr	Air Supply Unit	Eisenmann	TBD	TBD
B20	Shop	5.053 MMbtu/hr	Air Supply Unit	Eisenmann	TBD	TBD
B21	Assembly Shop	2.764 MMbtu/hr	Air Supply Unit	Eisenmann	TBD	TBD
B22	Liquid Metal	5.634 MMbtu/hr	Air Supply Unit	Eisenmann	TBD	TBD
C01		15.63 MMBtu/hr	Boiler		TBD	TBD
C02		15.63 MMBtu/hr	Boiler		TBD	TBD
D01		345 kW	Genset – Emergency	Kohler	300REOZJ	TBD
		463 hp	Engine – Diesel DOM: 2015	John Deere	6090HFG86A	TBD

Table X-B-5 outlines the emission units not to be operated in the TOAS.

Table X-B-5: Emission units not to be operated in the TOAS

Units	Process	Rating (MMBtu/hr)	Type	Manufacturer	Model No.	Serial No.
EU: A05	Basecoat			Eisenmann		
EU: A06	Clearcoat			Eisenmann		
EU: A15a	Purge/Gun Cleaning for the Liquid Metal Booth for the initial booth					
EU: B10	Flash Off	3.585	Oven	Eisenmann	TBD	TBD
EU: B11	Topcoat	8.768	Oven	Eisenmann	TBD	TBD
EU: B12	Topcoat	8.768	Oven	Eisenmann	TBD	TBD
CU: B13	Adsorber	3.414	Burner	Eisenmann	TBD	TBD
CU: B14	RTO	5.122	Burner	TBD	TBD	TBD
CU: B15	RTO	5.122	Burner	TBD	TBD	TBD
CU: E01	Carbon Adsorber			TBD	TBD	TBD
CU: E02	RTO			TBD	TBD	TBD
CU: E03	RTO			TBD	TBD	TBD

C. CALCULATIONS

Table X-C-1: Body Shop – VOC Emissions (EU: A01)

VOCs			VOC EF	Hourly	Production	Uncontrolled Emissions		Area Emissions	Potential Rates		
	Gallons	lb/veh	%	veh/hr	veh	lb/hr	lb	%	lb/hr	lb	tons
Betamate 6120	3,801	3.36	0.1	50	12,000	0.16	38	100	0.16	38	
Betamate 1776	249	0.21	1.4	50	12,000	0.15	35	5	0.007	2	
HEM Adhesive	18	0.02	0.4	50	12,000	0.00	1	5	0.00	0	
Stiffener	167	0.16	0.0	50	12,000	0.00		5	0.00	0	
Dampner	896	1.07	0.0	50	12,000	0.02	5	5	0.02	0	
Antiflutter	420	0.39	0.0	50	12,000	0.00		5	0.00	0	
										40	0.02

Table X-C-2: Body Shop - HAPs Emissions (EU: A01)

HAPs	Gallons	lb/veh	HAP EF %	Hourly veh/hr	Maximum veh	Potential Rates		
						lb/hr	lb	tons
Betamate 6120	3,801	3.36	0.0	50	12,000	0.00	0.00	
Betamate 1776	249	0.21	0.0	50	12,000	0.00	0.00	
HEM Adhesive	18	0.02	0.0	50	12,000	0.00	0.00	
Stiffener	167	.016	0.0	50	12,000	0.00	0.00	
Dampner	896	1.03	0.0	50	12,000	0.00	0.00	
Antiflutter	420	0.39	0.0	50	12,000	0.00	0.00	0.00
							0.00	0.00

Paint Mixing Room (EU: A12)

Total gallons	65,711		
Vapor pressure	0.468	psia	P_{atm}
Molecular weight of toluene	92.130	lb/lb mole	MW
Atmospheric pressure	14.7	psia	$P_{toluene}$
Ideal gas constant - R	10.730	ft^3- psia/lb-mole	ºR
Absolute temperature	532	ºR	T
Vapor density = MW*n/V = MW*P/R*T			
Volume of displaced toluene – saturated air	65,711 gallons		
Volume of displaced toluene – saturated air	8,785	ft^3	Volume of displaced air
Volume of displaced toluene	280	ft^3	Volume of displaced air* $P_{toluene}$/ P_{atm}
Vapor density =	0.2373	lb/ft^3	
Total VOCs = ft^3* lb/ft^3/2000	0.03 tons		
Total HAPs	0.01 tons		

Table X-C-3: Booth – VOC Emissions

EU	Process	Approximate Production (gal)	VOC Content (lbs)	Emissions (lbs)	tons
A02	Pre-Treatment	950	0.42	399	0.20
A03	E-Coat	26180	0.21	5498	2.75
A03	E-Coat	3240	0.09	292	0.15
A04	Surfacer	7680	3.50	26880	13.44
A07	Basecoat	14280	1.50	21420	10.71
A07	Clearcoat	6360	3.54	22514	11.26
A08	Touch up Base	120	1.50	180	0.09
A08	Touch up Clear	120	3.54	425	0.21
A09	Heavy Repair	12	3.54	42	0.02
A09	Heavy Repair	120	3.54	425	0.21
A10	Final Base	60	1.50	90	0.05
A10	Final Clear	60	3.54	212	0.11
A11	Sealer	385	0.15	58	0.03
A15a	Solvents	720	7.23	5206	2.60
	Solvents	720	3.85	2772	1.39

Table X-C-4: Booth – HAPs Emissions

EU	Process	Approximate Production (gal)	VOC Content (lbs)	Emissions (lbs)	tons
A02	Pre-Treatment	950	0.08	79	0.04
A03	E-Coat	26180	0.09	2356	1.18
A03	E-Coat	3240	0.14	454	0.23
A04	Surfacer	7680	0.14	1075	0.54
A07	Basecoat	14280	0.10	1428	0.71
A07	Clearcoat	6360	0.02	127	0.06
A08	Touch up Base	120	0.10	12	0.01
A08	Touch up Clear	120	0.02	2	0.00
A09	Heavy Repair	12	0.10	1	0.00
A09	Heavy Repair	120	0.02	2	0.00
A10	Final Base	60	0.10	6	0.00
A10	Final Clear	60	0.02	1	0.00
A11	Sealer	385	0.12	46	0.02
A15a	Solvents	720	7.88	5674	2.84
	Solvents	720	0.08	58	0.03

Table X-C-5: Solvent Use – VOC Emissions (EU: A15)

Production related products: Isopropyl alcohol IPA wipes

Process	Material	Usage		Density		VOC Content, by weight		Estimated Emissions	
		Liter	Gallons	kg/liter	lb/gal	% VOC	lb/gal	lb	ton
Solvent Use	Isopropyl alcohol	6,061	1,600		6.54	100	6.54	10,470	5.24

Table X-C-6: Solvent Use - HAPs Emissions (EU: A15)

Process	Material	Usage		Density		HAP Content, by weight		Estimated Emissions	
		liter	Gallons	kg/liter	lb/gal	% HAP	lb/gal	lb	ton
Solvent Use	Isopropyl alcohol	6.061	1,600		6.54	15	.98	1,571	0.79

Table X-C-7: Window Assembly - VOC Emissions (EU: A16)

Window Assembly		Throughput		Material Density	VOC Content			Product Usage	Potential Emission Rates		
Material	gallons			lb/gal	wt. %	veh/hr	veh	lb	lb/hr	lb	ton
Cleaning	22	0.0018	gal/veh	6.54	100	50	12,000	145	0.61	145	0.07
Glass Primer	16	0.0013	gal/veh	6.59	100	50	12,000	105	0.44	105	0.05
Adhesive/ Sealing	2,760	0.23	gal/veh	9.84	.1	50	12,000	27,155	1.15	276	0.14
							Total:	27,405		526	0.26

Table X-C-8: Window Assembly – HAPs Emissions (EU: A16)

Window Assembly		Throughput		Material Density	HAP Content	HAP Component			Product Usage	Potential Emission Rates		
Material	gallons			lb/gal	wt. %	lb/gal	veh/hr	veh	lb	lb/hr	lb	ton
Cleaning	22	0.0018	gal/veh	6.54	15	0.981	50	12,000	22	0.09	22	0.01
Glass Primer	16	0.0013	gal/veh	6.59	1	0.066	50	12,000	1	0.0	1	0.01
Adhesive/ Sealing	2,760	0.23	gal/veh	9.84	1	0.1	50	12,000	272	1.15	272	0.14
								Total:	294			0.16

Table X-C-9: Battery Adhesive – Voc Emissions (EU: A17)

Material	Usage		Density	VOC Content, by weight		Estimated Emissions	
	liter	Gallons	lb/gal	% VOC	gallon/liter	lb	ton
Loctite 4311	5,400	1,427	9.08		20	238	0.12
Loctite 5910	912	241	11.18		53.7	108	0.05
HumiSeal UV40	0.312	0.08	8.84	3	31.8	0.02	0.00
					Total:	346.02	0.17

Table X-C-10: Battery Adhesive – HAPs Emissions (EU: A17)

Material	Usage		Density	HAP Content, by weight		Estimated Emissions	
	liter	gallons	lb/gal	% HAP	gallon/liter	lb	ton
Loctite 4311	5,400	1,427	9.08	5	54.41	648	0.32
Loctite 5910	912	241	11.18	1	13.39	27	0.01
HumiSeal UV40	0.312	0.08	8.84	1	10.59	0.01	0.00[1]
					Total:	675.01	0.33

[1]Emissions are 0.00006, therefore rounded to the nearest tenth.

Table X-C-11: Fluid Filling (EU: A18)

Assembly Shop	Material	Gallons	liter/veh	True Vapor Pressure (psia)	Molecular Weight	veh/ hr	veh	Estimated Emissions		
								lb/hr	lb	ton
	Brake fluid	3,170	1.0	0.03	75	50	12,000	0.001	0.20	
	Antifreeze	47,556	15	0.001	62	50	12,000	0.0003	0.10	
	Windshield washer	12,682	4	0.66	32	50	12,000	0.026	6.0	
	Power steering fluid	3,804	1.2	0.002	76	50	12,000	0.0000	0.01	
								0.03	6.31	.01

Table X-C-12: Particulate Matter$_{10}$ Emissions (tons)

EU	Process	PM_{10}	$PM_{2.5}$
A01	Welding	0.45	0.00
A07	Liquid Metal	0.47	0.00
A04	Primer	0.01	0.00
A13, A14	Paint Shop Work Decks	1.38	0.00
A08	Touch up Painting	0.03	0.00
A09	Heavy Repair	0.97	0.00
A10	Final Inspection	0.08	0.00
A19, A20, A21	Assembly Shop Booths	0.09	0.00
Combustion Units	All Ovens	4.09	4.09
	All Boilers	1.02	1.02
	Engine	0.02	0.02
	Total:	8.61	5.11

<u>PM_{10} Emissions</u>

The calculations covered by this temporary alternate scenario are listed for the PM_{10} from the welding operations, VOC/HAP operations, and repair and touch up booths:

Welding operation in the Body Shop:
Welding material usage – 30 g/vehicle
EF – 20 lb/1000 lb weld material (AP-42 Section 12.19, conservative GMAW factor)
Production – 50 units/hour; 12,000 units

Process	Welding		Hourly Rate	Maximum	EF	PTE	
	gallon/veh	lb/veh	veh/hr	veh	lb/1000 lb	lb	tons
Welding – Body Shop	30	0.07	50	12,000	20	16	0.01

Metal Grinding:
Estimated EF 0.22 lb/hr emissions based on similar facilities.

0.22 lb/hr x 4,000 hrs = 880 lb
880 lb/year/2000 lb/ton = 0.44 tons

0.44 + 0.01 = 0.45 tons

Paint Shop Production Paint Booth (A07)

Paint Spray Booth	Coatings Applied (lbs)	Solid Content (lb/lb)	E-Cube Control %	Filter Control %	Transfer Efficiency %	PM-10 Emissions (tons)
Liquid Metal	51,800	0.26	0	80	65	0.47
					Total:	0.47

Uncontrolled lbs = gallons x lbs/gal x weight fraction solids x (1-transfer efficiency) x (1-capture efficiency)
Controlled lbs = Uncontrolled lbs x (1-filter efficiency)

Paint Shop Work Decks

EU	Process	Flow Rate (acfm)	Control	EF (gr/dscf)	lbs/hr	tons
A04	Primer	1,310	Filter	0.0004	.005	0.01
						0.01
A09	Heavy Repair	37,760	Filter	0.0015	.49	0.97
	Total					0.97
A13	EC Sanding	22,420	Filter	0.0015	.29	0.58
A14	Wet Sanding	30,975	Filter	0.0015	.40	0.80
					Total:	1.38

acfm x 1 lb/7000 grains x EF x 60 min/hr = lbs/hr.

Paint Repair and Touch-up Booths

Process	Usage (gallons)	Density (lb/gal)	Usage (lbs/gal)	Solid Content (lb/lb)	Filter Control %	Transfer Efficiency %	PM-10 Emissions (tons)
Touch up Painting							
Basecoat	120	9.7	1,164	0.26	80	60	0..01
Clearcoat	120	8.3	996	0.51	80	60	0.02
Total							0.03
Final Inspection							
Basecoat	60	9.7	582	0.26	0	60	0.03
Clearcoat	60	8.3	498	0.51	0	60	0.05
						Total:	0.08

Uncontrolled lbs = gallons x lbs/gal x weight fraction solids x (1-transfer efficiency) x (1-capture efficiency)
Controlled lbs = Uncontrolled lbs x (1-filter efficiency)

Assembly Shop Booths

EU	Process	Usage (gallons)	Density (lb/gal)	Usage (lbs/gal)	Solid Content (lb/lb)	Filter Control %	Transfer Efficiency %	PM-10 Emissions (tons)
Booths								
A19	Primer	200	9.8	1,960	0.53	80	60	0.04
A20	Basecoat	200	9.7	1,940	0.26	80	60	0.02
A21	Clearcoat	200	8.3	1,660	0.51	80	60	0.03
							Total:	0.09

Uncontrolled lbs = gallons x lbs/gal x weight fraction solids x (1-transfer efficiency) x (1-capture efficiency)
Controlled lbs = Uncontrolled lbs x (1-filter efficiency)

The Permittee shall operate with exhaust filters that are rated or demonstrated to achieve 0.0004 gr/dscf percent in accordance with manufacture's specifications for PM_{10} emissions for the primer booth, basecoat booth, and clearcoat booth.

The Permittee shall operate with exhaust filters that are rated or demonstrated to achieve 0.0015 gr/dscf percent in accordance with manufacture's specifications for PM_{10} emissions for the spot repair, E-coat sanding, heavy repair, wet sanding, and liquid metal booth.

Test Track Emissions
EF AP-42, Section 13.2.1, Paved Road

Equation: EF (lb/VMT) = $[k(sL)^{0.91} \times W^{1.02}](1-P/4N)$

Process	EF k (lb/VMT)	sL (g/m^2)	W (tons)	P (days)	N (days)	PM-10 Emissions (tons/yr)
PM_{10}	0.0022	0.6	2.5	30	365	0.65
$PM_{2.5}$	0.00054	0.6	2.5	30	365	0.17

This activity was deemed insignificant, but the source will be required to keep track of the VMT. The source proposed 375,000 VMT/yr.

Combustion Units (tons)

EU			VOC	NOx	PM-10	SOx	CO	HAP
B01	Body Shop	14.238	0.34	4.37	0.47	0.04	5.14	0.12
B02	E-Coat 1	13.589	0.32	4.17	0.45	0.04	4.9	0.11
B03	E-Coat 2	13.589	0.28	4.17	0.45	0.04	4.9	0.11
B04	Liquid Metal	1.793	0.04	0.55	0.06	0.01	0.65	0.01
B05	Liquid Metal	1.793	0.04	0.55	0.06	0.01	0.65	0.01
B06	Primer	9.506	0.22	2.91	0.31	0.02	3.43	0.08
B07	Primer	9.506	0.22	2.91	0.31	0.02	3.43	0.08
B08	Sanding Oven 1	9.711	0.23	2.98	0.32	0.03	3.5	0.08
B09	Sanding Oven 2	9.714	0.23	2.98	0.32	0.03	3.51	0.08
B16	ASU Workdeck 1	4.78	0.11	1.47	0.16	0.01	1.73	0.04
B17	ASU Workdeck 2	5.429	0.13	1.66	0.18	0.01	1.96	0.05
B18	ASU Spot Repair	4.436	0.1	1.36	0.15	0.01	1.6	0.04
B19	ASU Shop 1	12.291	0.29	3.77	0.4	0.03	4.44	0.1
B20	ASU Shop 2	5.053	0.12	1.55	0.17	0.01	1.82	0.04
B21	ASU Assembly Shop	2.764	0.07	0.85	0.09	0.01	1	0.02
B22	ASU Liquid Metal	5.634	0.13	1.73	0.19	0.01	2.03	0.05
	PTE:		2.87	37.98	4.09	0.33	44.69	1.02
C01	Boiler	15.63	0.37	1	0.51	0.04	5.63	0.13
C02	Boiler	15.63	0.37	1	0.51	0.04	5.63	0.13
	PTE:		0.74	2	1.02	0.08	11.26	0.26
D01	Generator	463	0.17	12.67	0.37	0.02	3	0.09
	PTE:		0.17	12.67	0.37	0.02	3	0.09
	500 hr Limit:		0.01	0.72	0.02	0.01	0.17	0.01
	PTE:		3.78	52.65	5.48	0.43	58.95	1.37
	Limited:		3.62	40.7	5.13	0.42	56.12	1.29

Facility Emissions for the TOAS (tons)

			Allowable VOC	Allowable HAPs	Allowable PM-10
A01	Body Shop				
		Welding			0.45
		Bonding	0.02	0.00	
A02	Paint Shop	Pre-treatment	0.2	0.04	
A03	E-Coat	E-Coat Dip	2.9	1.41	
A04	Primer Surfacer	Primer Booth	13.44	0.54	0.01
A07	Liquid Metal	Liquid Metal Booth	21.97	0.77	0.47
	Work Decks				
A08		Touch up	0.3	0.01	0.03
A09		Heavy Repair	0.23	0.00	0.97

A10		Final Inspection	0.16	0.00	0.08
A11		Sealing	0.03	0.02	
A12	Paint Mix Room		0.03	0.01	
A13		Sanding			0.58
A14		Wet Sanding			0.80
A15	Solvent use	Wipes	5.24	0.79	
A15a		Solvents	2.6	2.84	
		Solvents	1.39	0.03	
	Assembly Shop				
A16		Window Assembly	0.26	0.16	
A17		Battery Adhesive	0.17	0.33	
A18		Fluids Filling	0.01		
A19		Primer Booth	0.35	0.01	0.04
A20		Basecoat Booth	0.15	0.01	0.02
A21		Clearcoat Booth	0.35	0.01	0.03
B numbers	Oven Burners		2.87	1.02	4.09
C01	15.63 MMBtu/hr		0.37	0.13	0.51
C02	15.63 MMBtu/hr		0.37	0.13	0.51
D01	463 hp Generator		0.01	0.01	0.02
	Total:	TOAS	53.42	8.27	8.61