DEPARTMENT OF ENVIRONMENTAL QUALITY AIR QUALITY DIVISION ACTIVITY REPORT: On-site Inspection

N250369845		
FACILITY: Spartan Fire, LLC		SRN / ID: N2503
LOCATION: 1663 Reynolds Rd, CHARLOTTE		DISTRICT: Lansing
CITY: CHARLOTTE		COUNTY: EATON
CONTACT: Dan Kellogg , EHS/Mainter	nance	ACTIVITY DATE: 11/14/2023
STAFF: Michelle Luplow	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Onsite compliance inspection	on to determine compliance with PTI 112-09.	
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow

Personnel Present: Dan Kellogg, EHS/Maintenance (dkellogg@revgroup.com)

Purpose

NOC000045

Conduct an unannounced, onsite partial compliance evaluation (PCE) inspection by determining compliance with Spartan Fire's Opt-Out Permit No. 112-09, including verification that Spartan Fire stayed within the permit's emission limits to remain an opt-out source and not enter into Title V status. This inspection was conducted as part of a full compliance evaluation (FCE).

Facility Background/Regulatory Overview

Spartan Fire manufactures heavy duty truck chassis for fire department trucks. They also customize, finish, and install fire truck cabs on their respective chassis. No parts are manufactured at this site.

Spartan Fire sold Plants 1, 4, 5, 6, 7 (partial), 9, and 12 to The Shyft Group (Utilimaster – P1175), which included sale of manufacturing operations for specialty vehicles (Isuzu trucks, REACH vehicles like FedEx, motor homes, government contract vehicles), and utility trucks.

Spartan Fire (Spartan) is an opt-out facility for HAPs and VOCs. The opt-out permit consists of FGPAINTBOOTHS and FGFACILITY.

There are currently 4 plants located throughout Spartan's campus on Reynolds and Mikesell Roads (see Table 1). All are considered part of the same stationary source. Although the permit application for PTI 112-09 states 1000 Reynolds Road is the main office address, I was informed that 1541 Reynold Road (Plant 2) is the main office.

All permitted equipment is located within Plant 8.

Any paint booth floor grates that need to have coating buildup removed are shipped out to be sandblasted at a non-Spartan Fire facility.

Spartan Fire has several chassis rolling dynamometer test stands throughout their campus for vehicle testing/performance testing, engine and brake checks. These chassis rolling dynamometer units only test mobile sources and therefore are not regulated by the Air Quality Division.

Table 1. Plants owned by Spartan Fire.

Building	Address	Description
Plant 2	1541 Reynolds Rd	Main Office Building

Plant 3	1580 Mikesell St	Exempt equipment, dynamometers
Plant 8	_	Contains FGPAINTBOOTHS (PTI 112-09) and exempt equipment
Plant 11	1597 Reynolds Rd	Exempt equipment, dynamometers

Inspection: At approximately 8:50 a.m. on November 14, 2023, I arrived at Spartan Fire (Spartan). All visitors must sign in at Plant 2 and provide a driver's license as proof of identity. A visitor's ID badge will then be provided. I met with EHS Manager, Dan Kellogg, in the lobby of Plant 2.

Equipment installed at Spartan was inspected per plant and is identified per plant in this report. Equipment inspected includes both those exempt and permitted.

Plant 2

Plant 2 is the administrative building for Spartan's campus. There is no manufacturing or production in this building. Visitors are required to sign in at this location.

-Equipment	Description/Inspection Notes	Permit Exemption	Compliance Status
2 Lochinvar natural gas-fired boilers	Model # PBN 1302 for each. Serial #'s: C08H00207407, L07H00204266, D0800207594 Rated at 1.3 MMBtu/hr input Used for space heating Exempt from Boiler MACT Subpart JJJJJJ (gas-fired boiler)	Rule 282(2)(b) (i)	Compliance
134 hp Natural gas- fired Cummins Engine	Model # WSG-1068 Serial #: E 182A3004081216141 Install date: 7/15/08 Manufacture date: 5/22/08 Total hours: 252.7 (as of 7/15/19) 1,392,560 Btu/hr, 6.8 L Used for emergency lighting and IT room power Located between Plants 2 and 11.	Rule 285(2)(g)	Compliance

This engine is subject to the area source RICE MACT Subpart ZZZZ, but there are currently no requirements under this regulation. The regulation punts the requirement to the NSPS Subpart JJJJ for spark ignition engines. NSPS Subpart JJJJ applies to emergency stationary SI ICE with an order date after June 12, 2006 (which applies to Spartan) and manufactured after January 1, 2009 (for engines greater than 19 kW), which does not apply to Spartan. Requirement 40 CFR 60.4236 is applicable to all engines ordered after June 12, 2006: Emergency engines greater than 19 kW cannot be installed after January 1, 2011 without being in compliance with the requirements in 40 CFR 60.4233. This does not apply to Spartan as the engine was installed in 2008.	
Based on my review of the NSPS, there are no applicable requirements under the RICE MACT Subpart ZZZZ, nor the NSPS Subpart JJJJ for this engine.	

Plant 3

The "marriage" of the fire truck chassis to the fire truck cab, which includes adding the truck wheels to the chassis, is conducted in this plant. The fire truck engines are also assembled and tested in this plant (bolting, wiring, hoses, adding engine fluids, radiator, etc).

Equipment	Description/Inspection Notes	Permit Exemption	Compliance Status
Engine ABS test stand dynamometer	Dynamometer is used to test engine functions, speedometer, ABS (breaks), the transmission program, etc. A ventilation system vents exhaust to the outside air. The units tested on these test stands are considered mobile sources, particularly since the emission control systems on the motorhomes (generative exhaust for diesel fuel) are already equipped prior to testing. The Air Quality Division does not regulate mobile sources of air pollutants and therefore emissions from this unit should not be incorporated into FGFACILITY emissions.	NA	NA
Aboveground 1,000- gallon Diesel Storage		Rule 284(2)(g) (iii)	Compliance
Welding equipment	1 exempt welding unit	Rule 285(2)(i)	Compliance

Plasma cutting equipment	Exempt emission units, vented to indoor dust control (not exhausted to ambient air)	Rule 285(2)(I) (vi)(A)	Compliance
Aerosol spray can usage and disposal	Spartan Fire uses multiple types of aerosol spray cans and has satellite disposal areas.	Rule 287(2)(b)	Compliance
	I notified D. Kellogg that emissions from the use of these spray cans should be included in FGFACILITY VOC and/or HAPs emission calculations.		

Plant 8 - FGPAINTBOOTHS

Plant 8 is devoted entirely to fire truck cab production. Pre-assembled raw metal cab frames are ordered in, prepped for painting, painted, and assembled (wiring, interior cab components, tread plates, lights, etc) in this plant. The finished cabs get transported to Plant 3 for marriage to the fire truck chassis. All emissions from this plant's permitted equipment are regulated under FGPAINTBOOTHS. There are currently no Material Limits or Reporting requirements for FGPAINTBOOTHS at this time.

FGPAINTBOOTHS includes the following emission units: EU00041 - EU00053 (13 booths).

Emission Limits & Monitoring/Recordkeeping

Each booth is limited to 5.0 tpy VOC per 12-month rolling time period. For each solvent-containing liquid and coating used, Spartan is required to track the number of gallons with water used, the VOC content with and without water (based on manufacturer's formulation data) of each used, and the monthly and 12-month rolling VOC emissions which are based on these numbers. Additionally, Spartan is required to maintain a current listing of the chemical composition of each solvent or coating material, including the weight % of each component, and to use manufacturer's formulation data to determine the VOC content that is used to calculate VOC emissions.

I requested the above records on November 15, 2023, asking that they be submitted by November 27, 2023. Records were not provided, and an extension of December 1, 2023 was granted. By December 4, 2023 the records were still not provided. On December 8, 2023, some of the requested manufacturer's formulation data was provided as well as spreadsheets containing total monthly VOC and HAP tracking for January 2020 – September 2023. I was told that the remainder of the records would be provided by the end of December. An email and call was made to the company on January 3, 2024 noting the deficiencies in the provided recordkeeping. An additional call was made to the company on January 4, 2024. As of January 10, 2024 the AQD still had not received a response from the company.

The provided records did not include the following required records:

- The quantity in gallons of each coating and solvent-containing material used (monthly) from January 2021 September 2023
- The VOC content with and without water for each coating and solvent-containing material used from January 2021

 September 2023
- The monthly VOC emission calculations per paint booth to determine compliance with the per-booth 5.0 tpy limit
- The 12-month rolling VOC emissions were not calculated (per booth, nor across the 3 calendar years of 2021 2023)

• The SDS and the manufacturer's formulation data for the top 10 most-used coatings (not all data sheets were provided).

Based on the spreadsheets submitted (attached), records suggest that Spartan Fire may be in compliance with the 5.0 tpy limit per booth from January 2021 through June 2023 as the records suggest VOC 12-month rolling emissions from all booths combined at no more than 4.77 tons (AQD utilized the data provided to calculate 12-month rolling VOC emissions). However, from July 2023 – October 2023, 12-month rolling VOC emissions increase each month to the highest 12-month rolling of 6.5 tons at the close of October 2023, and because the records do not speciate VOCs per booth, as required by the PTI, it's possible the 5.0 tpy limit was exceeded.

The records are incomplete and, based on the list of deficiencies, above, a violation notice will be issued to address these deficiencies. Evaluation of compliance will be redetermined using the data Spartan Fire submits in response to the Violation Notice.

D. Kellogg said that Spartan uses reclaimed cleaning solvents to wipe down aluminum vehicle bodies prior to the parts being welded. D. Kellogg said VOC emissions from these cleaning activities are included in the VOC emission calculations.

Process/Operational Restrictions

All waste coating materials are required to be stored in closed containers and disposed of in a manner in compliance with all state rules and federal regulations. All waste appeared to be stored in closed containers within their waste satellite area.

Spent filters are required to be disposed of in a manner which minimizes introduction of air contaminants to the outer air. Spent filters are disposed of inside Plant 8 in bins prior to being rolled outside to the garbage compactor for disposal. This practice appears to be acceptable for ensuring that particulate from the filters do not get re-entrained into the ambient air. I saw no signs of particulate outside the door of the building where the spent filters are transported, nor around the vicinity of the garbage compactor.

Design/Equipment Parameters

Paint booths 1-8 are also designed as natural gas-fired ovens for the curing of coated parts. Exhaust filters are required to be installed, maintained and operated in a satisfactory manner. All paint booths, except for those booths which had their ovens in use to cure surface coatings, were checked to ensure proper installation of the exhaust fabric filters.

All booths have floor filters (composed of a pre-filter at the surface and main fabric filter underneath) underneath the floor gratings. Checks on the filters included ensuring that they were installed to cover the entire opening on the exhaust (no gaps). Table 1 shows the status of each booth's filters. I did not observe any visible emissions from any of the stacks of Plant 8 during the inspection. During the previous inspection, filters on EU00050 (booth 10) and EU00051 (booth 11) were not installed properly.

The paint booth filters get changed out every week from the paint booths, according to Spartan's maintenance schedule.

Testing/Sampling

Spartan is required to determine the VOC content, water content and density of any coating material or solventcontaining liquid using Reference Test Method 24, unless they have approval from the Air Quality Division to use manufacturer's formulation data. On March 10, 2010 Spartan Motors received approval from the Air Quality Division to use manufacturer's formulation data. These are required to be used for determining VOC content used in calculating VOC emissions. AQD is unable to determine compliance with this requirement due to insufficient records. See Table 2 for remaining Plant 8 compliance discussions.

Table 1. Paint booth filter checks

Paint Booth #	Filters OK?	Compliance Status
1 (EU00041)	Paint booth in-use, undetermined	Compliance
2 (EU00042)	Yes	Compliance
3 (EU00043)	Oven in use, undetermined	Compliance
4 (EU00044)	Yes	Compliance
5 (EU00045)	Paint booth in-use, undetermined	Compliance
6 (EU00046)	Yes	Compliance
7 (EU00047)	Oven in use, undetermined	Compliance
8 (EU00048)	Yes	Compliance
9 (EU00049)	Yes	Compliance
10 (EU00050)	Yes	Compliance
11 (EU00051)	Yes	Compliance
12 (EU00052)	Yes	Compliance
13 (EU00053)	Yes	

Table 2. Plant 8 Equipment List

Equipment		Compliance Status

EUGUNWASHER1	There is one gun washer that is vented to the ambient air and is located in the paint repair kitchen.	PTI 112-09	Compliance
EURECYCLERB	6-gallon solvent recycler vented inside paint mix kitchen. This recycler unit is connected to one of the gun washers. Solvent recovery is tracked on a daily basis. The used solvent generated onsite is recycled in this unit.	PTI 112-09	Compliance
EURECYCLERSK	6-gallon, ventless, solvent recycler. Solvent recovery is tracked on a daily basis. This unit is located outside the paint mix room.	PTI 112-09	Compliance
EU00041	Paint Booth 1.	PTI 112-09	TBD – records needed
EU00042	Paint Booth 2.	PTI 112-09	TBD – records needed
EU00043	Paint Booth 3.	PTI 112-09	TBD – records needed
EU00044	Paint Booth 4.	PTI 112-09	TBD – records needed
EU00045	Paint Booth 5.	PTI 112-09	TBD – records needed
EU00046	Paint Booth 6.	PTI 112-09	TBD – records needed
EU00047	Paint Booth 7. Booth 7 uses multi-speck coating.	PTI 112-09	TBD – records needed
EU00048	Paint Booth 8. This booth applies Line-X coating for truck bed liners.	PTI 112-09	TBD – records needed
EU00049	Undercoat Bay Booth 9. There is one filter that covers the exhaust system on this booth.	PTI 112-09	TBD – records needed
EU00050 & EU00051	Paint Repair Booths 10 & 11 (Spartan's designation is repair booths 1 & 2). These booths can be combined to create 1 booth; they are separated by a vinyl curtain. These booths do not have baking/curing/oven capabilities.	PTI 112-09	TBD – records needed
EU00052	Paint Repair Booth 12 (Spartan designation repair booth 3).	PTI 112-09	TBD – records needed

EU00053	Paint Repair Booth 13 (Spartan designation repair booth 4).	PTI 112-09	TBD – records needed
Eurovac industrial vacuum	This unit is used to clean up bondo dust from sanding operations and may include aluminum shavings from the plant floors. The particulate from this system is captured outside in a Eurovac cyclone dust collector, which collects its particulate in a 55 gallon drum beneath the unit. Exhaust from the cyclone is vented horizontally to ambient air. I saw no signs of particulate being exhausted from this unit during the inspection.		Compliance
	Any remaining residual bondo or aluminum shavings are manually swept up and disposed of in the garbage compactor.		
	During the previous inspection, I small piles of the bondo particulate surrounding the compactor. During this inspection, there were no signs of particulate of any kind around the compactor. All areas surrounding the compactor appeared to be maintained well.		
	I inspected the surroundings of the Eurovac and noted some bondo dust and/or aluminum shavings on the ground underneath the unit. The 55 gallon collection drum was empty, and it appeared the dust on the ground was from transfer and removal of the collected dust. I pointed this area out to D. Kellogg and explained that collected particulate must be maintained in a way to prevent re- entrainment into ambient air and recommended the particulate be swept up as soon as possible. On 11/27/23, D. Kellogg sent confirmation that the particulate had been vacuumed up and that they are working on drafting a document outlining how changing out the drums should be conducted. He stated they would post these instructions at the collection system.		
	This response is considered satisfactory for the purposes of prevent re-entrainment of particulate into ambient air.		
2 metal cutting stations	These are used to customize the metal cab frames by cutting out doors and panels using templates.	Rule 285(2)(l) (vi)	Compliance
	Emissions are vented to the mechanical pre-cleaner along the walls of the station which collect the particulate in "drawers" before the air flow is directed to a Donaldson Torit baghouse (located outside) where the air flow deposits particulate from the air stream into the baghouse and eventually is collected into a 55-gallon drum; the air stream is then returned to in the in-plant environment, rather than exhausted to ambient air from the dust collector. This is the same baghouse that is used to control emissions from the grinding stations and sanding/buffing stations.		
	The larger particulate captured in the drawers is shoveled from the drawers into garbage bags that are placed into gondolas. This practice occurs inside the building.		

(housed in the	Emissions are vented to the mechanical pre-cleaner along the walls of the station which collect the particulate in "drawers" before the air flow is directed to a Donaldson Torit baghouse (Eurovac, located outside) where the air flow deposits particulate from the air stream into the baghouse and eventually is collected into a 55-gallon drum; the air stream is then returned to in the in-plant environment, rather than exhausted to ambient air from the dust collector. This is the same baghouse that is used to control emissions from the metal cutting stations and the sanding/buffing stations. The larger particulate captured in the drawers is shoveled from the drawers into garbage bags that are placed into gondolas. This practice occurs inside the building.	Rule 285(2)(l) (vi)	Compliance
2 sanding/buffing stations	For all sanding a buffing jobs not conducted with local particulate control (via the hand-held buffers/sanders), ventilation is provided in these 2 stations where aluminum particulate will hit a mechanical pre-cleaner along the walls of the station before being captured outside in a Donaldson Torit dust collector (Eurovac) which is connected to a 55 gallon drum. The captured particulate is then sent out as non-hazardous waste. This is the same dust collector that is used to control emissions from the grinding stations and the metal cutting stations. The larger particulate captured in the drawers is shoveled from the drawers into garbage bags that are placed into gondolas. This practice occurs inside the building.	Rule 285(2)(I) (vi)	Compliance
3 Buff & Sand booths	These 3 booths are separate from the other sanding/buffing stations. Each stands alone in its own box, similar in appearance to the 8 permitted paint booths. Each had ceiling and side filters which all appeared to be installed properly. Each booth is labeled with a "1," a "2," or a "3." Booths 1 and 3 are used to buff finished paint jobs to a shine. The air from these units is filtered through the ceiling and side face filters, and then sent to a cartridge filter housed inside the building before the air is vented outside to the ambient air. Booth 2 is a paint inspection booth.	(vi)(C)	Compliance
2 welding stations	2 Welding stations used to weld fire truck parts together. The use of a recycled solvent via rag and solvent application is used in this station to remove coating off of aluminum vehicle bodies prior to the parts being welded. D. Kellogg stated that this solvent is tracked in FGFACILITY VOC and HAP emissions recordkeeping	Rule 285(2)(i)	Compliance
Raytherm natural gas-fired boiler	Model WT2-940B; Serial No 0701261024 327,000 Btu/hr Used for warming the water in their truck wash station Exempt from Boiler MACT Subpart JJJJJJ (gas-fired boiler)	Rule 282(2)(b) (i)	Compliance

Plant 8 Stack Heights

C. Konen during the 2016 inspection said they physically measured the stack heights to come up with the following recorded heights. All stack heights exceed the minimum stack height requirement of 36 feet from ground level and are therefore in compliance.

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STACK ID	Permitted Stack Height minimum (ft)	Recorded Height above ground level (ft)	
SV00056 (paint booth 1)	36	38.5	
SV00057 (paint booth 2)	36	38.5	
SV00028 (paint booth 3)	36	38.5	
SV00029 (paint booth 4)	36	38.5	
SV00030 (paint booth 5)	36	38.5	
SV00031 (paint booth 6)	36	38.5	
SV00032 (paint booth 7)	36	38.5	
SV00033 (paint booth 8)	36	38.5	
SV00034 (undercoat paint booth 9)	36	38.5	
SV00035 (paint repair booth 10)	36	44	
SV00036 (paint repair booth 11)	36	44	
SV00037 (paint repair booth 12)	36	44	
SV00038 (paint repair booth 13)	36	44	

Plant 11

Research and development is conducted in this plant: prototyping, modifications, and maintenance on the vehicles they are producing and others. Research and development also includes dynamometer rolling chassis tests.

Equipment	Description/Inspection Notes	Permit Exemption/ PTI Number	Compliance Status
3 Welding stations	Exhaust is vented to local ventilation units.	Rule 285(2)(i)	Compliance
Chassis Rolling Dynamometer test stand	Bay area where roller dynamometer testing is conducted. Water-driven, water cooled dynamometer. Everything Spartan builds can be tested here, including research and development testing. Used for testing Fire truck engine/transmission packages, the exhaust systems are already equipped with emissions control systems that convert the diesel exhaust to nitrogen compounds. The units tested on these test stands are considered mobile sources, particularly since the emission control systems are already equipped prior to testing. The Air Quality Division does not regulate mobile sources of air pollutants and therefore emissions from this unit should not be incorporated into FGFACILITY emissions.		Compliance

FGFACILITY

There are currently no Material Limits, Design/Equipment Parameters, Reporting, or Stack/Vent Restrictions for FGFACILITY. Emissions reported for FGFACILITY include all VOC- and HAP-containing materials including coatings, reducers, solvents, and thinners.

Emission Limits, Testing/Sampling, & Monitoring/Recordkeeping.

Spartan is limited to <9.0 tpy for each individual HAP and a <22.5 tpy for all HAPs combined (aggregate HAP), both on a 12-month rolling basis. VOC's are limited to <90.0 tpy on a 12-month rolling basis. The HAP content and VOC content of any material is required to be determined using manufacturer's formulation data.

Spartan is required to track the gallons or pounds of each HAP-containing and VOC-containing material used (monthly and daily basis, respectively); the gallons or pounds of each VOC- and HAP-containing material reclaimed (if applicable) (monthly and daily basis, respectively); the HAP and VOC content of each material used; and the HAP (individual and aggregate) and VOC monthly and 12-month rolling emissions.

I requested the above records for January 2021 – September 2023 on November 15, 2023, asking that they be submitted by November 27, 2023. Records were not provided, and an extension of December 1, 2023 was granted. By December 4, 2023 the records were still not provided. On December 8, 2023, some of the requested manufacturer's formulation data was provided as well as spreadsheets containing what appeared to be total

monthly VOC and HAP tracking for January 2020 - September 2023. I was told that the remainder of the records would be provided by the end of December. An email and call was made to the company on January 3, 2024 noting the deficiencies in the provided recordkeeping. An additional call was made to the company on January 4, 2024. As of January 10, 2024 the AQD still had not received a response from the company.

The provided records did not include the following required records for January 2021 – September 2023:

- · The quantity, in gallons or pounds, of each HAP-containing material used on a monthly basis
- · The gallons or pounds of each HAP-containing material reclaimed
- The HAP content, in lb/gal or lb/lb, of each HAP-containing material used
- · The individual HAP emission calculations on a monthly and 12-month rolling basis
- The aggregate HAP emission calculations on a monthly and 12-month rolling basis
- · The quantity, in gallons or pounds of each VOC-containing material used on a daily basis
- The gallons or pounds of each VOC-containing material reclaimed on a daily basis
- · The VOC content, in lb/gal or lb/lb, of each VOC-containing material used
- VOC emission calculations on a monthly and 12-month rolling basis

The spreadsheets submitted (attached), contain 2021 – 2023 calendar-year HAP emissions as recorded on a monthly basis and calendar year total. The records suggest that aggregate HAPs are reported here; however, there are no other records to prove this and the company did not respond to my requests for clarification concerning this record. Assuming the HAP emissions are aggregate and include HAP emissions from all processes. facility-wide (which I cannot confirm due to lack of records), these records suggest the 12-month rolling highest HAP emissions total 0.88 tons for the 12-month rolling period of November 2022 – October 2023.

No HAPs were reported for calendar year 2021, which is suspect.

The records are incomplete and, based on the list of deficiencies, above, a violation notice will be issued to address these deficiencies. Evaluation of compliance will be redetermined using the data Spartan Fire submits in response to the Violation Notice.

Compliance statement: Spartan Fire is in non-compliance with PTI 112-09 at this time.

NAME Minh Lupbs DATE 1/11/24 SUPERVISOR RB