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

N250350233

FACILITY: Spartan Motors USA, Inc.		**SRN / ID:** N2503
LOCATION: 1541 Reynolds Rd, CHARLOTTE		**DISTRICT:** Lansing
CITY: CHARLOTTE		**COUNTY:** EATON
CONTACT: Brian Neumann , EHS Manager		**ACTIVITY DATE:** 07/25/2019
STAFF: Michelle Luplow	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled, unannounced inspection to determine compliance with PTI 112-09 for paint booths located in Plant 8 and HAPS/VOC opt-out limits.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow (AQD LDO inspector) and Andrea Munoz-Hernandez (DWEHD Specialist)
Personnel Present: Brian Neumann, EHS Manager (brian.neumann@spartanmotors.com)
Nick Ranville, EHS Coordinator (Nicholas.ranville@spartanmotors.com)
Ryan Lowe, EHS Extern (ryan.lowe@spartanmotors.com)

Purpose: Conduct an unannounced, scheduled, partial compliance evaluation (PCE) inspection by determining compliance with Spartan Motors' Opt-Out Permit No. 112-09, including verification that Spartan Motors stayed within the permit's emission limits to remain an opt-out source and not enter into Title V status. The inspection was also conducted because Spartan Motors had expanded their operations by building an additional plant. The previous inspection also briefly dealt with Spartan Motors dynamometers and this inspection aimed to classify these units and determine whether exemptions are being met and if these units would contribute to a potential to emit above major source thresholds for criteria pollutants. This inspection was done as part of a full compliance evaluation (FCE).

Facility Background/Regulatory Overview: Spartan Motors manufactures heavy truck chassis for fire department trucks, specialty vehicles (Isuzu trucks, REACH vehicles like FedEx, motor homes, government contract vehicles), and utility trucks. They also customize, finish, and install fire truck cabs on their respective chassis.

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

There are currently 11 plants located throughout Spartan's campus on Reynolds and Mikesell Roads (see attached map for plant locations and addresses). 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.

Plant 12 is a new plant that was constructed within the past 2 years. It is located where one of Spartan's old buildings was demolished.

Any racks that need to have coating buildup removed are shipped out to be sandblasted at a non-Spartan-Motors facility.

Spartan Motors has several dynamometer test stands throughout their campus, including DVT's in Plants 5 and 12 for vehicle testing/performance testing, and stationary rollers for engine and brake checks. The fire truck and motor home testing have diesel exhaust and the Isuzu vehicles (Plants 5 and 12) have gasoline exhaust emissions. These dynamometer units only test mobile sources and therefore are not regulated by the Air Quality Division.

Inspection: At approximately 8:30 a.m. on July 23, 2019, Andrea Munoz-Hernandez and I arrived at Spartan Motors (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. We met with EHS Manager, Brian Neumann, and EHS Coordinator, Nick Ranville in the lobby of Plant 2. Records review with Spartan was conducted on July 25, 2019 to complete this inspection.

I provided B. Neumann with the June 2019 Permit to Install Exemptions handbook and explained that if Spartan plans to install any equipment in the future, it is recommended that they review the handbook to determine if the equipment can be exempt from the need to obtain an air permit.

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 1

Plant 1 consists of a Service Center for damaged Spartan vehicles (RV's, firetrucks, etc), as well as a Training Center for RV Owners.

Equipment	Description/Inspection Notes	Permit Exemption	Compliance Status
One parts washer	Parts washer with a surface area less than 10 ft^2. Lid was closed, as required by Part 7 rules. Operating instructions were not present on the unit; I supplied B. Neumann with the EGLE orange operating stickers for parts washers. R. Lowe provided photographic evidence (attached) on 8/7/19 demonstrating that the operating instructions were posted on July 26, 2019. Crystal Clean Stoddard solvent is used in this unit and the unit is serviced by Crystal Clean.	Rule 281(2)(h)	Compliance

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
3 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. his 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 requirements under the RICE MACT Subpart ZZZZ, nor the NSPS Subpart JJJJ for	Rule 285(2)(g)	Compliance

Plant 3

Motorhome chassis are constructed in this building, as well as the "marriage" of the fire truck chassis to the fire truck cab, which includes adding the truck wheels to the chassis. The fire truck engines are also assembled and tested in this plant (bolting, wiring, hoses, adding engine fluids, radiator, etc). Assembly of the motor home control panels, and testing motorhome engine functions are also conducted in this building.

Equipment	Description/Inspection Notes	Permit Exemption	Compliance Status
Engine test stand dynamometer	Dynamometer is used to test motorhome engine functions, speedometer, ABS (breaks), the transmission program, etc. Exhaust pipe is hooked up to a ventilation system which 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	Diesel storage container is present in the engine testing bay areas.	Rule 284(2)(g)(iii)	Compliance
Welding equipment	Exempt emission units	Rule 285(2)(i)	Compliance
Plasma cutting equipment	Exempt emission units	Rule 285(2)(l)(vi)(A)	Compliance

Plant 4

Approximately ¼ of this plant is used for warehouse space, which is currently empty. The remaining part of the building is utilized for assembly of Fed Ex trucks and "Fire Truck Body Build 180," stock trucks built within a 180-day turnover. B. Neumann said that Spartan plans to utilize this plant for preassembled chassis – where the box is "married" with the chassis, and believed these operations would start in August 2019.

The undercoat spray booth was installed under exemption Rule 287(2)(c). During the last inspection I found that Spartan was not keeping monthly usage records. During the 2016 inspection (with Chris Konen) and again in follow up to this inspection, I reminded B. Neumann that even though the undercoat booth coating does not appear to have VOC or HAPs, they still must track coating usage on a monthly basis to operate the booth under the exemption. They did not have monthly records for this inspection, but were able to produce records within a reasonable amount of time based on number of units coated each month to generate coating usage on a monthly basis. Attached is their usage from June 2018 – July 2019. The highest monthly usage (without water) was 107.74 gallons in August 2018, demonstrating compliance with the 200 gallon minus water exemption limit. Failure to have monthly records at future inspections could result in a violation of Rules 201 and 287 (2)(c).

Equipment	Description/Inspection Notes	Permit Exemption/ PTI Number	Compliance Status
Undercoat spray booth	This unit, which was operational in 2016, was disassembled on 7/18/19; it was being used up until 6/27/19. This unit used Z-Guard 9902M. Spartan plans to build a larger booth in order to coat 18 – 30-foot trucks, which will replace this unit and also operate under Rule 287(2)(c).	Rule 287(2)(c)	Compliance
Two 1,000-gallon	Diesel storage	Rule 284(2)(d)	Compliance

Deisel tanks			
Welding Stations	Plant 4 is current undergoing changes and Spartan will be installing welding stations	Rule 285(2)(i)	Compliance
Drilling	Plant 4 is currently undergoing changes and Spartan will be installing drilling stations.	Rule 285(2)(l)(vi)	Compliance

Plant 5

This plant is strictly allocated for the Isuzu N-gas production which involves assembly of the truck via torque tools and air tools to marry the chassis to the cab of the truck.

Equipment	Description/Inspection Notes	Permit Exemption/ PTI Number	Compliance Status
Engine test stand dynamometer	Used for testing gasoline engine trucks, the exhaust systems are already equipped with catalytic converters when they go into this test stand. 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.	NA	NA
Gas-filling station	59-gallon capacity used to fill vehicles prior to testing	Rule 284(2)(g)(iii)	Compliance

Plant 6

This plant is currently not being used for production and the space is currently being used to house inventory.

Equipment	Description/Inspection Notes	Permit Exemption/ PTI Number	Compliance Status
NA	NA	NA	NA

Plant 7

This plant is composed of two plants: 7 North and 7 South. Plant 7 North contains various exempt equipment to fabricate metal, as well as after-market parts and sales. Plant 7 South is used as a warehouse but also contains a tire assembly area (assembling the wheel to the tire for motorhome and firetruck lines), an area for assembly of engines with accessories, and a welding station. Spartan has plans to fabricate Grand West busses in Plant 7 North as well.

Equipment	Description/Inspection Notes	Permit Exemption/ PTI Number	Compliance Status
1 welding station	Plant 7 South.	Rule 285(2)(i)	Compliance
1 welding station, plasma cutting	Plant 7 North, internally vented	Rule 285(2)(i)	Compliance

Mills, lathes, drill presses, metal shears, bandsaws	**Plant 7 North. Emissions are only vented to the general in-plant environment**	**Rule 285(2)(l)(vi)**	**Compliance**
Aluminum cutting station	**Plant 7 North. Emissions vented to general in-plant environment**	**Rule 285(2)(l)(vi)**	**Compliance**

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.

Slight paint odors were detected outside the backside of Plant 8.

Emission Limits & Monitoring/Recordkeeping

Each booth is limited to 5.0 tpy VOC. For each solvent-containing liquid and coating used, Spartan is required to track the number of coating 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. N. Ranville provided calculations of VOCs on a 12-month rolling basis for the time period for each paint booth from January 2018 – August 2019. To note is that booths 12 and 13 have combined emissions. For the 2017, 2018 and 2019 calendar years booths 12 and 13 were joined to create 1 booth to allow a large enough area to coat larger vehicles. Total emissions are still only limited to 5 tpy when the booths are combined to create one booth. All monthly and 12-month rolling periods from January 2017 – August 2019 for each paint booth were reviewed for and verified in compliance with the 5.0 tpy limit on each booth. Table 1 contains a summary of the 12-month rolling VOC emissions from July 2018 – June 2019.

Process/Operational Restrictions

Plant 8 is the only location across Spartan's campus that has waste collection and disposal. 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. B. Neumann showed us the 90-day hazardous waste storage and verified that all waste containers were closed.

Spent filters are required to be disposed of in a manner which minimizes introduction of air contaminants to the outer air. B. Neumann said that the spent paint filters are tested prior to disposal to ensure that the dried coatings contained on the filters do not contain any hazardous chemicals.

B. Neumann showed me that 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. However, in order to ensure that particulate from the spent filters is not being released during transport outside, B. Neumann is going to institute the practice of tarping the rolling bins containing the spent filters to prevent the potential of any release of paint particulate for entering the atmosphere.

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, although actual painting operations were not being conducted within any of Plant 8's paint booths during that time.

Spartan is required to determine the VOC content, water content and density of any coating material or solvent-containing 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. Manufacturer Technical Data Sheets were used to determine VOC contents.

Some of the coatings are 2-part coatings. Spartan Motors calculates the VOC content and density based on the 2-part coating formula, or "as applied." The "as applied" VOC content and density are provided in their "Product Information" spreadsheet which is attached.

See Table 2 for remaining Plant 8 compliance discussions.

Table 1. Paint booth filter checks and 12-month rolling VOC emissions (July 2018 – June 2019)

Paint Booth #	Filters OK?	VOC Emissions (tons)	Compliance Status
1	Yes	2.3	Compliance
2	Yes	2.3	Compliance
3	Oven in use	1.6	Compliance
4	Oven in use	1.7	Compliance
5	Oven in use	0.03	Compliance
6	Oven in use	1.4	Compliance
7	Yes	1.2	Compliance
8	Yes	0.1	Compliance
9	Yes	1.5	Compliance
10	Filters not in alignment	0.04	Compliance
11	Filters not in alignment	0.07	Compliance
12	Oven in use	0.4	Compliance
13	Oven in use		

Table 2. Plant 8 Equipment List

Equipment	Description/Inspection Notes	Permit Exemption/ PTI Number	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 room. This recycler unit is connected to one of the gun washers. Solvent recovery is tracked on a daily basis. This unit is located inside the paint mix kitchen. 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. All exhaust filters were properly installed	PTI 112-09	Compliance
EU00042	Paint Booth 2. All exhaust filters were properly installed	PTI 112-09	Compliance
EU00043	Paint Booth 3. Could not verify that exhaust filters were properly installed as booth was in use for oven-drying.	PTI 112-09	Compliance
EU00044	Paint Booth 4. Could not verify that exhaust filters were properly installed as booth was in use for oven-drying.	PTI 112-09	Compliance
EU00045	Paint Booth 5. Could not verify that exhaust filters were properly installed as booth was in use for oven-drying.	PTI 112-09	Compliance
EU00046	Paint Booth 6. Could not verify that exhaust filters were properly installed as booth was in use for oven-drying.	PTI 112-09	Compliance
EU00047	Paint Booth 7. Booth 7 uses multi-speck coating. During the last inspection the filters, while they all appeared to be installed properly, were baffling due to differences in air pressure within the booth which indicated improper operation of the air filters. This issue has since been corrected. All filters appeared to	PTI 112-09	Compliance

	be installed properly.		
EU00048	Paint Booth 8. This booth applies Line-X coating for truck bed liners. All exhaust filters were properly installed.	PTI 112-09	Compliance
EU00049	Undercoat Bay Booth 9. There is one filter that covers the exhaust system on this booth. During the previous inspection, the filter was not entirely installed in a satisfactory manner as there were sides of the filter not securely fastened down, allowing for paths of least resistance for paint particulate to travel through. A magnetic seal was installed as of 11/16/16 per C. Konen. The filters appeared to be installed properly during this inspection.	PTI 112-09	Compliance
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. Filters were not installed properly: filters were not flush with the corners of the exhaust ducts. I made B. Neumann aware of this, and indicated that the next time these booths are used, they must ensure that the filters are installed properly.	PTI 112-09	Compliance
EU00052	Paint Repair Booth 12 (Spartan designation repair booth 3). All exhaust filters were properly installed.	PTI 112-09	Compliance
EU00053	Paint Repair Booth 13 (Spartan designation repair booth 4). All exhaust filters were properly installed.	PTI 112-09	Compliance
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. Any remaining residual bondo or aluminum shavings are manually swept up and disposed of in the garbage compactor. We viewed the garbage compactor and found that bondo particulate is released from the equipment when it compacts the waste materials; We noted small piles of the bondo surrounding the compactor. This is an unacceptable practice as it allows for the potential of air contaminants to get entrained into the ambient air. B. Neumann said their new practice will be to drop all sweepings into a sealable 55-gal drum to dispose of as non-hazardous waste to ensure that the bondo dust and aluminum shavings particulate is not being released to the ambient air. AQD agrees this is acceptable.	Rule 281(2)(a)	Compliance
2 metal cutting stations	These are used to customize the metal cab frames by cutting out doors and panels using templates. 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	Rule 285(2)(l)(vi)	Compliance

	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.		
2 grinding stations (housed in the same booths as the welding stations)	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 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 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)(l)(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. None of these booths were in use during the inspection. Each booth is labeled with a "1," a "2," or a "3." These booths 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	Rule 285(2)(l)(vi)(C)	Compliance
2 welding stations	2 Welding stations used to weld fire truck parts together. The use of a paint thinner via rag and solvent application is used in this station to remove coating off of aluminum vehicle bodies prior to the parts being welded. B. Neumann stated that this solvent is tracked in FGFACILITY VOC and HAP emissions recordkeeping	Rule 285(2)(i)	Compliance
Aqueous parts washer (open tub)	Renegade Jet Wash Detergent is what is used in this unit, which contains no VOCs.	Rule 281(2)(e)	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.

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 9
Plant 9 is currently not being used for any purpose; there are no people in this building nor warehousing. There are no plans to use Plant 9 in the foreseeable future.

Equipment	Description/Inspection Notes	Permit Exemption/ PTI Number	Compliance Status
NA	NA	NA	NA

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
Welding stations	Exhaust is vented to local ventilation units.	Rule 285(2)(i)	Compliance
Plasma cutting stations	Vented to in-plant environment	Rule 285(2)(l)(vi)(B)	Compliance
Chassis Rolling Dynamometer test stand	Bay area where roller dynamometer testing is conducted. Water-driven, water cooled dynamometer. Everything Spartan Motors builds can be tested here, including research and development testing. Used for testing Fire truck engine/transmission	NA	Compliance

	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.**		

Plant 12

Plant 12 is dedicated entirely to the assembly of entire Isuzu trucks by marrying the chassis to the cabs, assembling the exhaust systems, and dynamometer testing on all the finished units.The building is owned by Spartan Motors, but all equipment, product, etc is owned by the Isuzu Japanese corporation. All Plant 12 installations were complete in January 2017, and production began in February 2017.

Equipment	Description/Inspection Notes	Permit Exemption/ PTI Number	Compliance Status
Chassis Rolling Dynamometer test stand	**Bay area where roller dynamometer testing is conducted.** **Used for testing of completed Isuzu diesel trucks; 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.**	**NA**	**Compliance**

FGFACILITY

There are currently no Material Limits, Design/Equipment Parameters, Reporting, or Stack/Vent Restrictions for FGFACILITY.

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

Spartan is limited to <9.0 tpy for each individual HAP on a 12-month rolling basis and a <22.5 tpy for all HAPs combined (aggregate HAP) on a 12-month rolling basis. VOC's are limited to <90.0 tpy on a 12-month rolling basis. The HAP content of any material is required to be determined using manufacturer's formulation data. At this time, only SDS have been used to determine the HAP content, but B. Neumann was able to obtain Environmental Data Sheets which contain HAP content information, and which I requested be used from here on out to complete HAP calculations. VOC content is also required to be determined by manufacturer's formulation data, which the current calculations are using.

Although SDS were used for HAP content determinations, Spartan Motors' HAPs emissions are much lower than the emission limits, and even with an increase of double the HAPs emissions they would still be in compliance with the FGFACILITY emission limits. Table 3 contains a summary of the 12-month rolling data. The data used for this table is attached to the report.

Table 3. FGFACILITY 12-month rolling VOC and HAP emissions

12-month Rolling Totals (tons) (July 2018 – June 2019)		
VOC	**Individual HAP**	**Aggregate HAP**

(including gun cleaning & solvent recovery)	(including gun cleaning & solvent recovery)	(including gun cleaning & solvent recovery)
15.8	All < 2 tpy (max individual HAP is 1.8 tons for toluene)	3.8

Compliance statement: Spartan Motors is in compliance at this time.

All recordkeeping discrepancies found during this inspection have been made known to Spartan Motors. Additionally, I have made Spartan Motors aware that it is their responsibility to ensure that all recordkeeping is kept accurately and appropriately. Failure to correct these discrepancies may result in a violation of recordkeeping requirements at future inspections. The following discrepancies have been pointed out to Spartan: 1) Gallons or pounds of each HAP material used needs to be recorded per coating on a monthly basis; 2) the HAP content for each coating needs to be listed in lb/gal or lb/lb, not wt%; 3) the HAP content for all coatings needs to be determined using manufacturer's formulation data, not SDS's; 4) all VOC and HAP emissions site-wide need to be reported under FGFACILITY and all associated recordkeeping needs to be kept for miscellaneous exempt sources (e.g. hand-wiping of parts with paint thinner, paint booth in Plant 4) as well as permitted sources (FGPAINTBOOTHS, solvent recovery, etc).

Image 1(Fire Truck Assembly) : Example of Fire truck assembly at Spartan Motors

Image 2(Dust Collector) : Dust collector that services the metal grinding, metal cutting, and sanding/buffing stations.

Image 3(Eurovac) : Eurovac Dust collector for clean up of bondo from sanding operations.

Image 4(Dynamometer) : One of several dynamometer test stands

Image 5(Plant 12) : Plant 12 Isuzu truck assembly

Image 6(Garbage Compactor) : Garbage compactor where bondo dust was seen on the ground. Remedy has been proposed. See inspection report.

NAME _____ DATE 9/17/19 SUPERVISOR _____