DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection FY2016 Insp

P042333460

FACILITY: STERLING PERFORMANCE, INC.		**SRN / ID:** P0423
LOCATION: 54420 PONTIAC TRAIL, MILFORD		**DISTRICT:** Southeast Michigan
CITY: MILFORD		**COUNTY:** OAKLAND
CONTACT: Mr. Michael J. D'Anniballe , President		**ACTIVITY DATE:** 02/17/2016
STAFF: Iranna Konanahalli	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: FY 2016 level 2 SM CMS self-initiated inspection of Sterling Performance, Inc.		
RESOLVED COMPLAINTS:		

P0423 - SAR - 2016 02 17

Sterling Performance, Inc. (P0423)
54420 Pontiac Trail
Milford, Michigan 48381-4344

www.sterlingpeformance.org

NAICS Code: 336399; SIC Code: 3519

VNs: Violation Notices dated February 13, 2013 (Rules 201 PTI & 707 Cold-cleaner) and October 24, 2013 (Rule 210 ROP).

Synthetic Minor (ROP, area MACT) PTI No. 43-13 dated July 17, 2013 (Rule 702 BACT – cost analysis $39,000 per ton VOC controlled). Prior to the permit, Sterling was subject to Major MACT, PSD (above threshold levels for CO and above significant level for VOC); PSD review was not performed. Potential lead (Pb) emissions were also high due to leaded gasoline use. One of two test cells is permanently shutdown.

Subject to: MAERS – annual reporting required due to synthetic minor permit.

Consent Order: AQD No. 38-2014 effective June 4, 2014, executed by G. Vinson Hellwig, AQD Chief. $10,000 settlement.

Not Subject to: NESHAP/ MACT T, area source National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T; NESHAP/ MACT T); Correction; 29484 Federal Register / Vol. 60, No. 107 / Monday, June 5, 1995 / Rules and Regulations; amended National Air Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T); Final Rule; Page 25138 Federal Register / Vol. 72, No. 85 / Thursday, May 3, 2007 / Rules and Regulations.

Not subject to NSPS (none for test cells / dynamometers)

Not Subject to: NESHAP/ MACT 5P, , Page 28774, Federal Register / Vol. 68, No. 101 / Tuesday, May 27, 2003 / Rules and Regulations / Final rule.

Prior to obtaining the synthetic minor permit PTI No. 43-13, Sterling was a major source for ROP, PSD, HAP (all). Although Sterling was a major MACT source (prior to PTI No. 43-13), the dynamometer / test cell, in spite of once-in-always-in policy, is not subject to MACT 5P because it was constructed before May 14, 2002 (built about 1991). Sterling is now an Area MACT source based upon legally, federally and practically enforceable limits

of the permit.

On February 17, 2016, I conducted a level 2 **SM CMS self-initiated** inspection of Sterling Performance, Inc. ("Sterling") located at 54420 Pontiac Trail, Milford, Michigan 48381-4344. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451; synthetic minor permit PTI No. 43-13; Consent Order AQD No. 38-2014; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) administrative rules; and Synthetic Minor (ROP, Area MACT) PTI No. 43-13.

During the inspection, Mr. Michael J. D'Anniballe (Phone: 248-684-5040; Fax: 248-684-0080; E-mail: mDanniballe@SterlingPerformance.org), President, assisted me.

Mr. Jeff Burrill (Phone: 248-684-5040; Fax: 248-684-0080; E-mail: jBurrill@SterlingPerformance.org), VP, did not participate. Mr. Burrill runs the dynamometer cell (no controls).

Sterling is in the business of manufacturing / assembling performance engines for pleasure / racing boating. Sterling also provides testing services for automotive industry such as evaporative testing of hoses, fittings, injection pumps, on-board vehicle carbon canisters, etc. Sterling started its operations in Milford about 1991. Engine building & assembly and testing operations are conducted in three buildings: 54474 (Building #1), 54420 (Building #2) & 54380 (Building #3) Pontiac Trail, Milford. Performance engine business is going down.

Building #1: 54474 Pontiac Trail

In this building fabrication and machining takes place. Lathe (1), mills (3) and surface grinders are present. All emissions are discharged into in-plant ambient air. The machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(l).

Building #2: 54420 Pontiac Trail

Sandblast machine

One sandblast machine (Trinco) equipped with its own dedicated capture device for particulate matter emissions and a dry filter system. Upon cleaning to remove particulate matter, exhaust gases are released to in-plant environment.

The machine is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(l).

Cold-cleaners

There are five (5) Gray Mills parts cold-cleaners with spray a brush and a solvent tank. The cold-cleaners are subject rule 336.611 or 336.1707 depending on if it is new or existing. A cold-cleaner is exempt from Rule 336.1201 pursuant to Rule 281(h) or Rule 285(r) (iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

All cold-cleaners are soaker type. Solvent is pumped over the part. Brush may be used to clean. All are equipped with mechanically assisted lid. All lids were open during the FY 2013 inspection; lids were kept open as a matter of practice. Work-practice procedures were not posted. Please refer to the violation notice.

After February 13, 2013, Violation Notice, based upon FY 2016 inspection, the procedures (DEQ Decals) are posted and mechanically-assisted lids are kept closed when access is not needed. The decals were soiled and I gave additional decals during the FY 2016 inspection.

Heritage Crystal Clean, Inc. (a competitor of Safetky-Kleen) supplies the solvents and services the cold-cleaners. Synthetic Isoparafinic Hydrocarbons (Exxon Chemical 800-424-9300) containing no halogenated solvents is used.

The Cold-cleaners are NOT Subject to: 40 CFR, Part 63, Subpart T, NESHAP/ MACT T, since solvents containing halogenated compounds are not used.

AQD issued February 13, 2013, Violation Notice and sent DEQ's decals for "cold-cleaner operating procedures" for posting and complying with work-practice rules. I asked the company to follow the common sense work practice in the procedures.

100% VOC solvent. Flash Point (FP) = NA °F TCC. Auto Ignition = NA °F. Boiling Point (BP) = 354-372 °F @ 760 mm Hg. Vapor Pressure (VP) = 1 mm Hg at 68 °F. Specific Gravity (SG, Water = 1.0) = 0.76. Density (ρ) @ 68 °F = 6.5 lbs. / gallon. Flammability range = NA %v (LEL) – NA %v (UEL).

Engine dynamometer

DESCRIPTION:

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUTESTCELL1	One marine/racing engine dynamometer. The engines tested will be fueled by unleaded and leaded gasoline. The cell is equipped with a single exhaust stack, SVTESTCELL1.	1/1/1991	N/A
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290. One of two dynamometer test cells is permanently removed.			

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. CO	68.0 tpy	12-month rolling time period as determined at the end of each calendar month.	EUTESTCELL1	SC VI.2	R 336.1205(1) (a) & (3)

2. Benzene	0.25 tpy	12-month rolling time period as determined at the end of each calendar month.	EUTESTCELL1	SC VI.2	R 336.1224, R 336.1225
Emission Factors: CO – 3,940 lb/1,000 gallons Benzene – 1.47E-2 lb/gallon No catalytic control at all for the dynamometer.					

Two engine dynamometers were installed about 1991. One of two dynamometers is permanently removed. Large engines (750 HP) are tested for specifications. Two pairs of mufflers are present outside the building; one for each dynamometer. No catalytic control at all for the dynamometer.

AQD issued February 13, 2013, Violation Notice of Rule 336.1201 for installing dynamometers (2) without obtaining a Permit-to-Install. In addition, AQD issued October 24, 2013, Violation Notice of Rule 336.1210 for operation of the plant without federal operating permit (ROP / Title V). Subsequently, Sterling obtained ROP and MACT synthetic minor permit (PTI No. 43-13).

Sterling is not performing the permit required calculations every month. Carbon monoxide (CO) and benzene calculations are not performed at all (Violation of PTI No. 43-13, EU-TESTCELL1, SC VI and PTI No. 43-13, FG-FACILITY, SC VI). I asked the company to perform these calculations in a timely manner. At this time, compliance with gasoline usage limits (PTI No. 43-13, EU-TESTCELL1, SC II.2 limit: 34,500 total, 900 leaded, gallons per year) is deemed to be compliance with emissions limits.

Based upon MAERS-2014, 103,839 pounds per year ≈ 52 tpy carbon monoxide (CY 2014) were emitted (PTI No. 43-13, EU-TESTCELL1, SC I.1 limit: 68 tpy CO). Benzene emissions are not calculated (PTI No. 43-13, EU-TESTCELL1, SC I.2 limit: 0.25 tpy benzene).

Based upon MAERS-2015, 50,427 pounds per year ≈ 25 tpy carbon monoxide (CY 2015) were emitted (PTI No. 43-13, EU-TESTCELL1, SC I.1 limit: 68 tpy CO). Benzene emissions are not calculated (PTI No. 43-13, EU-TESTCELL1, SC I.2 limit: 0.25 tpy benzene).

Only leaded gasoline, unleaded gasoline, gasohol (gasoline and alcohol blends) are used (PTI No. 43-13, EU-TESTCELL1, SC II.1 limit: only those listed are allowed).

CY 2015: 12,799 (Vs 27,235 in CY2014) gallons per year total, 880 gallons per year leaded, 8,929 (Vs 19,588 in CY2014) gallons per year unleaded, 2,996 (Vs 6,767 in CY 2014) gallons per year gasohol were used (PTI No. 43-13, EU-TESTCELL1, SC II.2 limit: 34,500 total, 900 leaded, gallons per year). Obviously, gasoline usage is come down compared to the previous year (CY 2014 Vs. CY2015).

Proper records are not kept and the calculations are not performed in a timely manner (PTI No. 43-13, EU-TESTCELL1, SC VI limit: 12-month rolling calculations by 15th of each month is required). The company is also required to keep lead (Pb) analysis for each fuel delivery. These are violation of both the permit and the consent order. The company is given an opportunity to fix this problem as soon as possible. However, the company has submitted

MAERS-2014 for the first time.

Exhaust gases are now (FY 2015) discharged vertically upwards. 90 ° L-shaped elbow was removed about June 2014, from about 30-ft stack (PTI No. 43-13, EU-TESTCELL1, SC VIII.1, SV-TESTCELL1).

EGR Cooler testing

Two EGR Cooler test stands are present. The test stands replaced one of two dynamometers; they occupy the same space. EGR cooler is thermo-cycled during the testing. Propane is used as fuel to generate heat. 200 gallons (liquid) propane is used per week. As of February 2016, EGR cooler is idled for past 18 months.

Rule 287(b) Paint Spray Booth

One paint spray booth (16 ft. x 6 ft.) with a back-draft dry filter system is present. Only spray cans (10 cans / month) are used; no paint spray gun.

I asked Mr. D'Anniballe to install and inspect the filters such that they fit, at all times, snugly without gaps and holes. Particulate and VOC are discharged to outside ambient air with a rain-cap on the tip of the stack. Any rain-cap (except no-pressure-loss [a.k.a. no-energy-loss] rain protection) is not allowed by AQD. However, due to negligible emissions from spray cans (10 cans / month), no action is necessary at this time pending odor nuisance complaints.

The booth is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.287(b) as only spray cans are used.

Machine shop

Honing, surface cutter, rod-hone, valve-seal cutter machines are present. The emissions are discharged to in-plant ambient air.
The machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285 (l).

Engine assembly area

Engines are assembled.

Building #3: 54380 Pontiac Trail

Building #3 is located across the street (Technical Drive).

Testing

Vibration, helium leak and salt fog tests are performed. Evaporative emission tests are performed. Evaporation from automotive parts is measured using instruments capable of detecting 0.5 ppm gasoline. The test may involve collecting sample in Tetlar plastic bag. Two sheds for evaporative testing are present.

Fuel pumps are tested for evaporative losses. The pumps are tested in a closed loop system with practically no gasoline vapor emissions.

On-board vehicle vapor recovery canisters are tested for gasoline load or capacity of carbon

to hold gasoline vapors via carbon adsorption. The test is performed by determining initial weight of empty canister and final weight of saturated (of gasoline vapor) canister. On a vehicle, canister desorption is via vacuum as gasoline tank empties creating partial vacuum.

During the above testing all emissions are released into in-plant ambient air. The testing processes are exempt from Rule 336.1201 (Permit-to-Install) pursuant to either Rule 336.1285 or Rule 336.1290 because gasoline vapor emissions are practically zero.

Consent Order AQD No. 38-2014: February 13, 2013, and October 24, 2013 VN

On February 21, 2013, AQD received a VN response letter dated February 19, 2013. The letter stated that Sterling would comply with Cold-cleaner work-practice rule. The letter included a copy of Rule 201 permit application. AQD never received VN response for October 2013 Violation Notice.

These violations were resolved with Consent Order AQD No. 38-2014 effective June 4, 2014, executed by Mr. G. Vinson Hellwig, AQD Chief. $10,000 is a settlement amount.

FG-FACILITY

FG-FACILITY restricts HAP emissions to NESHAP / MACT Synthetic Minor levels (PTI No. 43-13, I.1 9 tpy single HAP & I.2 22.5 Aggregate HAPs). Sterling is not performing monthly HAP calculations.

Mr. Michael J. D'Anniballe has agreed to perform all calculations. However, gasoline usage (total, leaded, regular unleaded, gasohol) shows compliance.

Conclusion

AQD issued February 13 and October 24, 2013, Violation Notices of Rules 336.1201 (PTI) and 336.1210 (ROP) for engine dynamometer and of Rule 336.1707 for cold-cleaners. AQD received a VN response letter dated February 19, 2013. These violations were resolved with Consent Order ($10,000 settlement). Not in compliance with PTI No. 43-13 (calculations and recordkeeping).

FYI:February 13 and October 24 2013, VN

NAME [signature] DATE 02/24/2016 SUPERVISOR CJE