File Man P0423

October 31, 2013

CJE

Mr. Iranna Konanahalli
Senior Environmental Engineer
Air Quality Division
MICHIGAN DEPT. OF ENVIRONMENTAL QUALITY
Southeast Michigan District Office
27700 Donald Ct.
Warren, MI 48092-2793

Subject: Response to Violation Notice dated October 24, 2013
Sterling Performance, Inc.; SRN P0423

Dear Mr. Konanahalli:

VN (Oct 24, 2013) Response letter

Sterling Performance, Inc. (Sterling) has prepared this correspondence in response to a Violation Notice dated October 24, 2013 issued by the Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD).

The MDEQ-AQD Violation Notice specifies that Sterling failed to obtain a Renewable Operating Permit (ROP) and failed to submit an administratively complete ROP application in a timely manner according to the schedule stated in Rules 336.1210 (4 and 5).

The Violation Notice requests that Sterling provide an explanation of the causes of the violation and a summary of corrective actions to have (or will be) implemented to correct the violation and prevent reoccurrence.

Fuel Use and Air Pollutant Emission Rates

Sterling operates a single engine dynamometer for testing high-performance marine engines using three different types of fuel. The facility has maintained fuel use and fuel purchase records and has calculated annual air pollutant emissions based on the recorded fuel use data and default emission factors. The MDEQ-AQD has requested that Sterling provide fuel use data for the most recent five-year period.

Attachment I provides annual fuel use data and emission calculations for year-to-date 2013 and the previous four (4) calendar years (2009-2012).

Attachments II and III provide fuel use data and fuel purchase records for year-to-date 2013 and the previous four (4) calendar years (2009-2012).

Based on the fuel use data and calculations presented in the Attachment I tables, Sterling has emitted a maximum of 69.1 tons of carbon monoxide (CO) per year and less 2.0 tons per year for all other regulated air pollutants.

For an engine testing facility it is neither feasible nor realistic that its dynamometer test cell would operate continuously. A typical marine engine test is approximately 3 hours in duration and Sterling runs a maximum of 100 test periods per year. In between these test periods Sterling performs many other physical inspections and evaluations for the engines (the dynamometer testing is not the only function in the engine evaluation process). The emissions that occurred in calendar year 2011 (69.1 tons/yr CO), represent our approximate maximum emission rate under a realistic operating and business scenario.

Causes of the Violation

Our calculated annual emissions have not exceeded 100 tons per year for any regulated air pollutant. Based on conversations with the MDEQ-AQD and other air quality professionals, we have learned that the regulatory agency evaluates a facility's permitting requirement based on its 'potential to emit', which in general, is defined as its calculated worst-case emissions for continuous operation of the emission source.

Prior to the February 7, 2013 MDEQ-AQD inspection, we were unaware of the State's air permitting system and unaware of a requirement that would classify the Sterling facility as a major source of air emissions (based on continuous operation of our dynamometer test cell), which would require the facility to obtain a major source air permit under Rule 210. Had Sterling been aware of these permitting requirements, the company would have certainly obtained a Synthetic Minor Air Permit to limit its potential to emit to below major source levels since we do not anticipate that we would ever require greater than 100 tons per year of air pollutant emissions to operate our business. Sterling realized no economic benefit in operating its facility without an air permit; the failure to obtain a Synthetic Minor Air Permit was due solely to our lack of knowledge relative to the air permitting program.

Corrective Action Schedule

Upon becoming aware of the permitting requirements for the facility, Sterling promptly submitted an application to the regulatory agency to obtain a Synthetic Minor Permit to Install that would correct the permitting deficiency and limit the facility's potential to emit. The permit application was sent to the MDEQ-AQD on March 13, 2013, which was 34 days following the MDEQ-AQD inspection on February 7. Additionally, at the request of the MDEQ-AQD, a Michigan Air Emissions Reporting System (MAERS) filing was completed on April 4, 2013 to report calendar year 2012 emissions.

The requested Synthetic Minor Permit to Install was issued to Sterling on July 17, 2013. We are operating the facility in compliance with the issued permit. If the facility were to expand or need to modify its process in the future, we are now aware of the air permitting requirements and will apply for permit modifications as appropriate.

If you have any questions or require additional information please contact us at (248) 684-5040.

Sincerely,

STERLING PERFORMANCE, INC.

Mike D'Anniballe
President

ATTACHMENT I

FUEL USAGE AND EMISSION CALCULATIONS

Derenzo and Associates, Inc.

Table 1. 2009 Annual Emissions from Sterling Performance, Inc.

Annual Throughput: 825 gallons spark ignited 110 Octane Leaded Fuel
Annual Throughput: 495 gallons spark ignited E-85 Unleaded Fuel
Annual Throughput: 26,151 gallons spark ignited Regular Unleaded Fuel

	Regulated Air Pollutants[1]					
Activity Code	CO	NO_X	SO_2	PM_{10}	VOC	Lead
110 Octane Leaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	15.26	148	9.06
Annual Emissions[2] (lbs./yr.)	3,251	84	4	13	122	7
E-85 Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	1,950	50	3	3	73	0
Regular Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	103,033	2,667	139	162	3,870	0
Subtotal Emissions (TPY)	***54.1***	***1.4***	***0.1***	***0.1***	***2.0***	***0.004***

1. MAERS emission factors CY 2009

2. Annual emissions (lbs./yr.) = [Emission factor, lbs./1000 gal.] x [Gasoline used, gal./yr.] / 1000

Derenzo and Associates, Inc.

Table 2. 2010 Annual Emissions from Sterling Performance, Inc.

Annual Throughput: 825 gallons spark ignited 110 Octane Leaded Fuel
Annual Throughput: 5,785 gallons spark ignited E-85 Unleaded Fuel
Annual Throughput: 14,325 gallons spark ignited Regular Unleaded Fuel

	Regulated Air Pollutants[1]					
Activity Code	CO	NO_X	SO_2	PM_{10}	VOC	Lead
110 Octane Leaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	15.26	148	9.06
Annual Emissions[2] (lbs./yr.)	3,251	84	4	13	122	7
E-85 Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	22,793	590	31	36	856	0
Regular Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	56,441	1,461	76	89	2,120	0
Subtotal Emissions (TPY)	***41.2***	***1.1***	***0.1***	***0.1***	***1.5***	***0.004***

1. MAERS emission factors CY 2010

2. Annual emissions (lbs./yr.) = [Emission factor, lbs./1000 gal.] x [Gasoline used, gal./yr.] / 1000

Derenzo and Associates, Inc.

Table 3. 2011 Annual Emissions from Sterling Performance, Inc.

Annual Throughput: 935 gallons spark ignited 110 Octane Leaded Fuel
Annual Throughput: 15,530 gallons spark ignited E-85 Unleaded Fuel
Annual Throughput: 18,620 gallons spark ignited Regular Unleaded Fuel

	Regulated Air Pollutants[1]					
Activity Code	CO	NO_X	SO_2	PM_{10}	VOC	Lead
110 Octane Leaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	15.26	148	9.06
Annual Emissions[2] (lbs./yr.)	3,684	95	5	14	138	8
E-85 Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	61,188	1,584	82	96	2,298	0
Regular Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	73,363	1,899	99	115	2,756	0
Subtotal Emissions (TPY)	***69.1***	***1.8***	***0.1***	***0.1***	***2.6***	***0.004***

1. MAERS emission factors CY2011
2. Annual emissions (lbs./yr.) = [Emission factor, lbs./1000 gal.] x [Gasoline used, gal./yr.] / 1000

Derenzo and Associates, Inc.

Table 4. 2012 Annual Emissions from Sterling Performance, Inc.

Annual Throughput: 605 gallons spark ignited 110 Octane Leaded Fuel
Annual Throughput: 4,150 gallons spark ignited E-85 Unleaded Fuel
Annual Throughput: 14,125 gallons spark ignited Regular Unleaded Fuel

	Regulated Air Pollutants[1]					
Activity Code	CO	NO_X	SO_2	PM_{10}	VOC	Lead
110 Octane Leaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	15.26	148	9.06
Annual Emissions[2] (lbs./yr.)	2,384	62	3	9	90	5
E-85 Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	16,351	423	22	26	614	0
Regular Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	55,653	1,441	75	88	2,091	0
Subtotal Emissions (TPY)	***37.2***	***1.0***	***0.1***	***0.1***	***1.4***	***0.003***

1. MAERS emission factors CY 2012

2. Annual emissions (lbs./yr.) = [Emission factor, lbs./1000 gal.] x [Gasoline used, gal./yr.] / 1000

Derenzo and Associates, Inc.

Table 5. 2013 Annual Emissions from Sterling Performance, Inc.

Annual Throughput: 880 gallons spark ignited 110 Octane Leaded Fuel
Annual Throughput: 2,030 gallons spark ignited E-85 Unleaded Fuel
Annual Throughput: 13,615 gallons spark ignited Regular Unleaded Fuel

	Regulated Air Pollutants[1]					
Activity Code	CO	NO_X	SO_2	PM_{10}	VOC	Lead
110 Octane Leaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	15.26	148	9.06
Annual Emissions[2] (lbs./yr.)	3,467	90	5	13	130	8
E-85 Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	7,998	207	11	13	300	0
Regular Unleaded Fuel SCC 2-04-004-01						
Emission Factors (lb./1000 gal.)	3,940	102	5.31	6.20	148	0.0
Annual Emissions[2] (lbs./yr.)	53,643	1,389	72	84	2,015	0
Subtotal Emissions (TPY)	***32.6***	***0.8***	***0.0***	***0.1***	***1.2***	***0.004***

1. MAERS emission factors CY 2013

2. Annual emissions (lbs./yr.) = [Emission factor, lbs./1000 gal.] x [Gasoline used, gal./yr.] / 1000

ATTACHMENT II

RAW FUEL USAGE DATA

2009

GAGE

E85 TEST FUEL	E10	E20	E22	E24	E25	CARB I	CARBII	CARB III	M15	Unleaded REGULAR	FUEL GRADE ETHANOL	Brazilian Ethanol	EEE
	55		110				55		55	110	55	330	55
	55		220				165		55	110			55
	110		110				220			165			165
	165		110				110			110			110
	55						55			275			110
	110						110			275			165
							220			275			55
							55			110			220
							55						55
	550		550				1045		110	1430	55	330	990

24,600 of unleaded gasoline per year
900 of lead gasoline per year
9,000 of alcohol fuel blends per year

	26150.5
	825
	495

HALTERMANN

TIER II EEE

CORRIGAN

SUNOCO	93 Gas	87 Gas	Indolene EEE
220	385	899.9	110
110	275	892.5	220
110	550	900	110
110		889	110
275		892	220
		900	
		890.1	
		900	
		900	
		865.2	
		890	
		894.1	
		890.4	
		900	
		797.7	
		901.2	
		900	
		901	
		900	
		900.5	
		901.9	
		900	
825	1210	19605.5	770

2010

GAGE														HALTERMANN		CORRIGAN	
E85 TEST FUEL	E10	E20	E22	E24	E25	E30	E50	CARB I	CARBII	CARB III	M15	Unleaded REGULAR	Fuel grade ethanol	Brazil Aggressive	EEE	TIER II EEE	Regular grade E10	SUNOCO	93 GAS
110	220	330	55			55	5		165		220	55	55	55	165	1000	10	165	275
55	55	220	55						275		55	55			55	950		110	275
220	55	550	5						165		55	275			165	1000		275	110
5	55	550							55		55				220	950		275	
330	55	550							55		55				55	950			
55	5	550							55							950			
330	55								165							950			
55	165								55							900			
550	55								385										
165																			
550																			
550																			
330																			
770																			
1100																			
5175	720	2750	115			55	5		1375		440	385	55	55	660	7650	10	825	660

24,600 of unleaded gasoline per year	14325
900 of lead gasoline per year	825
9,000 of alcohol fuel blends per year	5785

2011

GAGE													HALTERMANN	CORRIGAN	
E85 TEST FUEL	E10	E20	E22	E30	E93	CARB I	CARBII	CARB III	M15	Unleaded REGULAR	BRAZILIAN ETHANOL	Fuel Grade Ethanol	EEE	TIER II EEE	SUNOCO	93-GASOLINE
1000	55	550	5	55	55		55		165	220	330	5	330	1000	110	220
220	55	880	55				110		110	110	330		275	1000	220	165
330	55	660	165				55		55	220	330			1000	275	
950	55	330	55				110		165	220				1000	330	
1100	55	330	550				220		55	330				1000		
1000		330	330				165		55	165				1000		
950		660	660							275				1000		
1000		55	440											1000		
1000		550	55													
1000		440														
385																
55																
1000																
110																
330																
1000																
1000																
165																
110																
5																
1000																
55																
55																
13820	275	4785	2315	55	55		715		605	1540	990	5	605	8000	935	385

24,600 of unleaded gasoline per year	18620
900 of lead gasoline per year	935
9,000 of alcohol fuel blends per year	15530

2012

GAGE

HALTERMANN

CORRIGAN

E85 TEST FUEL	E5	E10	E20	E22	E24	E25	E61	CARB I	CARB II	CARB III	M15	Unleaded REGULAR	Brazil Hydrous Fuel Ethanol	Fuel Grade Ethanol	TIER II EEE	SUNOCO
110	55	55	900	330	55	55	55		165		110	110	55	55	1000	55
1400		440	900	1000	770				110		110	165	770		1000	275
		330	275	165	275				220			165	55		1000	275
		110		110	275				220			220			1000	
		55		55								165			1000	
		55		1200								165			1000	
		110		110								110				
												55				
1510	55	1155	2075	2970	1375	55	55		715		220	1155	880	55	6000	605

24,600 of unleaded gasoline per year	14125
900 of lead gasoline per year	605
9,000 of alcohol fuel blends per year	4150

2013

GAGE											HALTERMANN		CORRIGAN
E85 TEST FUEL	E10	E20	E22	E24	E25	CARB I	CARB II	CARB III	M15	Unleaded REGULAR	TIER II EEE	XE-M4CX401-C	SUNOCO
55	55	500	55	55	275		110	110	55	110	1000	55	275
110	55	330	330	600			220	220	110	110	1000		275
110	55	1000	110				220	220	55	165	1000		330
55	55	1000	500				220	55	220	110			
55	165	165	110						55	55			
		500	165						55	110			
		275	500						55	110			
			500						110	165			
			55							55			
			110							55			
			550										
			1000										
385	385	3770	3985	655	275		770	605	715	1045	3000	55	880

24,600 of unleaded gasoline per year	13615
900 of lead gasoline per year	880
9,000 of alcohol fuel blends per year	2030

ATTACHMENT III

FUEL PURCHASE RECORDS