

COMMONWEALTH OF VIRGINIA  
Department of Environmental Quality  
Piedmont Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Chaparral (Virginia) Inc  
Dinwiddie County, Virginia  
Permit No. 51264

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Chaparral (Virginia) Inc. has applied for a Title V Operating Permit for its Dinwiddie County facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

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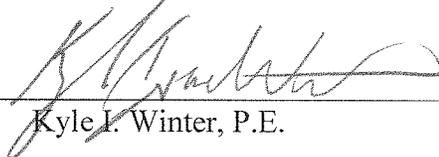
Date: 4/11/2014

Air Permit Manager:

  
James E. Kyle, P.E.

Date: 4/3/2014

Deputy Regional Director:

  
Kyle I. Winter, P.E.

Date: 4/4/14

## **FACILITY INFORMATION**

### Permittee

Chaparral Steel Company  
25801 Hofheimer Way  
Petersburg, Virginia 23803

### Responsible Official

Yan Chang  
Vice President and General Manager

### Facility

Chaparral (Virginia) Inc.  
Church Road and Squirrel Level Road  
Dinwiddie County, Virginia

### Contact Person

John Skelley  
(563) 554-7007

County-Plant Identification Number: 51-053-0104

## **SOURCE DESCRIPTION**

NAICS Code: NAICS 331110 - The facility is a steel scrap mini-mill. The primary steel production operations include an auto shredder, an electric arc furnace (EAF), a ladle refining furnace (LRF), two continuous casters, preheat and reheat furnaces, and a rolling mill. Steel scrap and alloying materials are received by truck. Scrap received by truck is unloaded in the scrap yard. Steel is produced by melting the scrap in the EAF and is then tapped into a refractory lined ladle and taken to the LRF where the molten steel is analyzed to determine the correct amount of heat and alloy materials needed to adjust the steel to the desired chemistry and temperature for casting. After LRF refining, the ladle is transferred to the continuous caster where the steel is poured into a tundish. The tundish then distributes the liquid steel into multiple water-cooled copper molds. The remaining steps to produce steel include reheating in natural gas-fired furnaces and rolling.

The facility is a Title V major source of Nitrogen Oxides (NOx), Sulfur Dioxide (SO<sub>2</sub>), Carbon Monoxide (CO), Particulate Matter (PM) and Volatile Organic Compounds (VOC). This source is located in an attainment area for all pollutants, and is a PSD major source. The facility is currently permitted under a PSD Permit issued on December 17, 2010. This permitting action is for the initial Title V permit issuance for the facility. The application was submitted on June 5, 2000 and deemed administratively complete on August 5, 2000.

## **COMPLIANCE STATUS**

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

The last full compliance evaluation of the facility was conducted on June 12, 2012. The facility was found to be in compliance with all permit conditions.

**EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION**

The emissions units at this facility consist of the following:

<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Emission Unit Description</b>	<b>Size/Rated Capacity*</b>	<b>Pollution Control Device (PCD) Description</b>	<b>PCD ID</b>	<b>Pollutant Controlled</b>	<b>Applicable Permit Date</b>
ES1	EP1	Electric Arc Furnace	215 tons/hr	Positive Pressure Baghouse Post Combustion Shaft Burners	CD1 N/A	Particulate CO	12/17/2010
ES2	EP1	Ladle Refining Furnace	215 tons/hr	Positive Pressure Baghouse	CD1	Particulate	12/17/2010
ES3	EP2	Stein Heurty preheat furnace	109 MMBtu/hr	Low NOx burners	N/A	NOx	12/17/2010
ES4	EP2	Stein Heurty reheat furnace	186 MMBtu/hr	Low NOx burners	N/A	NOx	12/17/2010
ES5	-	Scrap shredder/cascade separator	235 tons/hr	N/A	N/A	N/A	12/17/2010
ES8	EP6	Ladle and Tundish Preheaters and dryers	81.1 MMBtu/hr (total)	Low-NOx burners	N/A	NOx	12/17/2010
ES11	Fugitive	Paved/Unpaved Road and Surfaces	N/A	Dust Control Program	N/A	Particulate	12/17/2010

<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Emission Unit Description</b>	<b>Size/Rated Capacity*</b>	<b>Pollution Control Device (PCD) Description</b>	<b>PCD ID</b>	<b>Pollutant Controlled</b>	<b>Applicable Permit Date</b>
ES15	Fugitive	Contact Cooling Tower	8,900 gpm	N/A	N/A	N/A	12/17/2010
ES16	Fugitive	Non-contact cooling Tower	44,463 gpm	N/A	N/A	N/A	12/17/2010
ES17	EP17	Lime Silos #1-3	85,000 tons/yr	Bin vent filters	N/A	Particulate	12/17/2010
ES18	EP18	Carbon Silo	36,000 tons/yr	Bin vent filters	N/A	Particulate	12/17/2010
ES19	EP19	Alloy Unloading and Alloy/Lime/Carbon Transfer System	60,000 tons/yr	Fabric Filters	N/A	Particulate	12/17/2010
ES22	EP22	Diesel-fired Emergency Pump at Contact Cooling Tower	358 Hp	N/A	N/A	N/A	N/A
ES23	EP23	Diesel-fired Emergency Pump #1 at Non-Contact Cooling Tower	358 Hp	N/A	N/A	N/A	N/A
ES24	EP24	Diesel-fired Emergency Pump	358 Hp	N/A	N/A	N/A	N/A

<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Emission Unit Description</b>	<b>Size/Rated Capacity*</b>	<b>Pollution Control Device (PCD) Description</b>	<b>PCD ID</b>	<b>Pollutant Controlled</b>	<b>Applicable Permit Date</b>
		#2 at Non-Contact Cooling Tower					
ES25	EP25	Diesel-fired Emergency Pump near preheat/reheat furnace stack	80 Hp	N/A	N/A	N/A	N/A
ES33	EP33	Diesel-fired Emergency Back-up Generator Engine (West side, Mill Building)	250 Hp	N/A	N/A	N/A	N/A
ES34	EP34	Natural Gas-fired Emergency Back-up Engine (Server Room)	149 Hp	N/A	N/A	N/A	N/A
ES35	EP35	Emergency Back-up Engine (propane) (Communications Building)	32 Hp	N/A	N/A	N/A	N/A

**EMISSIONS INVENTORY**

A copy of the 2012 annual emission update is attached. Emissions are summarized in the following tables.

2012 Actual Emissions

	2012 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO <sub>2</sub>	PM <sub>10</sub>	NO <sub>x</sub>
Total	53.74	2,134.46	18.95	26.93	274.58

2012 Facility Hazardous Air Pollutant Emissions

Pollutant	2012 Hazardous Air Pollutant Emission in Tons/Yr
Arsenic Compounds	0.001
Cadmium Compounds	0.008
Chromium Compounds	0.038
Mercury Compounds	0.344
Manganese Compounds	0.309
Nickel Compounds	0.106

For reporting year 2011 the company reported to EPA Greenhouse Gas (GHG) emissions of 99,418 tons of CO<sub>2</sub>e, which is below major source thresholds for GHG permitting applicability.

**EMISSION UNIT APPLICABLE REQUIREMENTS – Electric Arc Furnace and Ladle Refining Furnace; (ID# ES1-ES2)**

**Limitations**

1. Condition #1 of the Title V permit states particulate emissions (PM and PM10) from the Electric Arc Furnace (ES1) shall be controlled by a furnace shaft evacuation and common positive pressure baghouse (CD1). The baghouse will have a design flow rate of 1,100,000 dry standard cubic feet per minute and a control efficiency of 99.5%.
2. Particulate emissions from the ladle refining furnace (ES2) are controlled by a close fitting ladle roof evacuating to the common positive pressure baghouse (CD1) as stated in Condition #2.
3. Fugitive particulate emissions from the tapping, slagging and melting operations are controlled by meltshop design and a building evacuation system as stated in Condition #3. Condition #3 requires the meltshop to be designed with a building partition and moveable crane to isolate ES1. The evacuation system will exhaust fugitive particulate emissions to CD1.
4. Condition #4 requires the use of low nitrogen oxide (NOx) burners to control NOx emissions from the electric arc furnace (ES1), the preheat furnace (ES3), the reheat furnace (ES4) and the ladle tundish preheaters and dryers (ES8).
5. Volatile organic compound (VOC) emissions from ES1 are controlled through the development and implementation of a scrap handling, management and inspections (HMI) plan, as stated in Condition #5. The HMI plan addresses scrap specifications designed to control inappropriate items and hazardous materials in the scrap; the name and telephone number of on-site plant personal who implement the HMI and the staff responsible for executing the plans along with individual responsibilities for staff.
6. Condition #6 requires Carbon Monoxide (CO) emissions from ES1 to be controlled by the use of ducting to capture emissions, the optimization of the operation of ES1 to minimize CO formation and the use of post-combustion shaft burners.
7. Fugitive emissions of PM and PM-10 from the baghouse dust handling system are to be controlled by enclosure of the equipment in Condition #7.
8. Condition #8 of the Title V permit limits the annual production of molten steel from the steel recycling facility to no more than 1,700,000 tons, calculated as the sum of each consecutive 12 month period.

9. Emissions of CO and NO<sub>x</sub> from meltshop operations (ES1 and ES2), which are exhausted to the common positive pressure baghouse (CD1), are limited to not exceed the 24 hour, 30 day, 12 month rolling average (for CO only) and consecutive 12 month period limits in Condition #9.
10. Emissions from the operation of the meltshop (ES1 and ES2) exhausting from the common positive pressure baghouse (CD1) for PM, PM10, SO<sub>2</sub>, VOC and Lead are set by Condition #10.
11. Condition #11 establishes hourly and annual limits for particulate matter emissions through the roof monitor.
12. Condition #12 limits visible emissions from CD1 to less than 3% opacity as determined by EPA Method 9.
13. Visible emissions from the meltshop building, regardless of which equipment is operating, are set to not exceed 10% opacity as determined by using EPA Method 9 in Condition #13.
14. Visible emissions from the meltshop building due solely to the operation of ES1 are set to not exceed 6% as set by 40 CFR Subpart YYYYYY in Condition #14.
15. Visible emissions from the meltshop building are not to exceed 10 % opacity as determined by EPA Method 9 in Condition #15.
16. Condition # 16 establishes a limit on PM emissions from ES1 which exit through CD1 as set by 40 CFR Subpart YYYYYY.
17. Condition #17 requires ES1 to be operated in compliance with all applicable requirements from 40 CFR Subpart A and YYYYYY unless the comparable permit conditions in the Title V permit are more restrictive.

### **Monitoring**

1. To ensure compliance with the emissions limits established in Condition # 9 for NO<sub>x</sub> and CO a Continuous Emission Rate Monitoring System (CERMS) is required to be installed by Condition #18. The CERMS is to be installed, operated and maintained in accordance with 40 CFR 60.13.

2. Excess emissions reports for each CERMS are required by Condition #19. The condition language requires that excess emissions reports for each CERMS are to be submitted to the Director, Piedmont Regional Office within 30 days after the end of each calendar quarter.
3. Semi-annual reports for each CERMS unit are required to be submitted within 30 days after the end of each semi-annual period by Condition #20 to ensure compliance with the emissions limits for NOx and CO.
4. Condition #21 requires a Pollution Prevention Plan (PP Plan) be developed to minimize the amount of chlorinated plastics, lead and free organic liquids which is charged to ES1 for the production of non-leaded steel in accordance with 40 CFR 63 Subpart YYYYYY. If the facility would like to produce leaded steel, the facility must develop a PP Plan which minimizes the amount of chlorinated plastics and free organic liquids in the scrap which is charged to ES1. The pollution plan shall include the information in 40 CFR 63.10685, paragraphs (a)(1)(i) through (iii).
5. Condition #22 requires that scrap metal containing motor vehicle scrap must be procured pursuant to either Condition #23 or Condition #24 for each scrap provider, contract or shipment. For scrap metal which does not contain motor vehicle scrap, the permittee shall procure the scrap pursuant to the requirements of Condition #25. As of the date of this permit, the permittee has submitted a Notification of Compliance Status certifying compliance with the mercury requirements of 40 CFR 63 Subpart YYYYYY by use of the option specified in Condition #23.
6. Condition #24 states as of the date of this permit, the permittee has certified in its Notification of Compliance Status that it participates in and purchases motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on criteria in paragraphs (b)(2)(i) through (iii) of 40 CFR 63.10685. Condition #24 also requires that any motor vehicle scrap the permittee purchases through a broker must be certified to have been received from scrap providers who participate in a program for the removal of mercury switches which has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of 40 CFR 63 Subpart YYYYYY.
7. A Notification of Compliance Status shall be submitted and certified by the permittee if the permittee decides to comply with Condition #22 using Condition #24. Condition #24 requires that the submitted Notification of Compliance Status will certify that the only materials from motor vehicles in the scrap are materials recovered for their specialty alloy (including, but not limited to, chromium, nickel, molybdenum, or other alloys) content (such as certain exhaust systems) and, based on the nature of the scrap and purchase specifications, that the type of scrap is not reasonably expected to contain mercury switches.

8. Scrap not subject to the requirements in Conditions #23 and #24 is required by Condition #25 to be certified by the permittee in its notification of compliance status that the scrap does not contain motor vehicle scrap. Condition #25 also requires the permittee maintain records of the submitted notification of compliance status certifying the status of the scrap as not containing motor vehicle scrap.
9. Condition #26 requires the permittee to develop and implement a written startup, shutdown and malfunction (SSM) plan as specified in 40 CFR 63.6(e)(3) The plan will detail the procedures for operating and maintaining the ES1 during periods of SSM and a program for corrective action for malfunctioning process and air pollution control equipment used to comply with 40 CFR 63 Subpart YYYYYY.

Note: Conditions #27 through #36 collectively establish the CAM requirements for CD1 as the control device for ES1-ES2. No CAM requirements apply to the other ES1-ES2 control device (the Post Combustion Shaft Burners for CO control) since a CERM system is required.

10. Monthly operational status checks of the equipment important to the total capture system are required to be performed by Condition # 27.
11. Visible emissions observations, in accordance with EPA Method 9, are required to be conducted on CD1 at least once per day while ES1 is in operation by Condition #28.
12. The control system for the fan motor amperes and damper position are to be checked and recorded on a once-per-shift basis in Condition #29.
13. Condition #30 requires the facility to conduct the monitoring and fulfill the other obligations specified in 40 CFR 64.7 through 40 CFR 64.9.
14. Maintenance of the monitoring equipment, including, but not limited to, maintaining necessary parts for repair of the monitoring equipment is required at all times in Condition #31.
15. Condition #32 requires the facility to conduct monitoring at all times ES1 and ES2 are in operation.
16. Upon detecting an excursion or exceedance of monitoring values the facility is required to restore operation of ES1-ES2 to the normal or usual manner of operation in Condition #33.
17. Condition #34 outlines some of the information which will be used to determine if acceptable procedures were used in response to an excursion or exceedance.
18. A permit modification will be required to be submitted if the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data in Condition #35.

19. Condition #36 requires a Quality Implementation Plan to be submitted if the number of exceedances or excursions exceeds 5 percent duration of the operating time for ES1-ES2.

### **Recordkeeping**

1. Records of all emissions data and operating parameters necessary to demonstrate compliance with the requirements of 40 CFR 63 Subpart YYYYYY are required to be maintained by the permittee by Condition #37. The records shall be made available for inspection by the DEQ and shall be current for the most recent five years.
2. Records to demonstrate compliance with Conditions #22 through #24 are required to be maintained, in addition to the records required by 40 CFR 63.10, by Condition #38. The permittee will maintain records which identify each scrap providers and document each scrap provider's participation in an approved mercury switch removal program. The permittee will also submit a semiannual compliance report which identifies and deviation from the requirements in Conditions #21 through #25.
3. Condition #39 requires the permittee to maintain records of all emissions data and operating parameters necessary to demonstrate compliance with this permit.
4. Maintain records documenting compliance with Condition #25 for scrap that does not contain motor vehicle scrap as described in 40 CFR 63.10685(b)(4).

### **Reporting**

1. The permittee is required by Condition #40 to submit an applicable Notification of Compliance (NOC) containing the information specified in 40 CFR 63.9(h)(2)(i) and the applicable certifications specified in 40 CFR 63.10690(b). to the Director, Piedmont Regional office The NOC must be submitted within 60 days following completion of the relevant compliance demonstration.
2. The permittee is required by Condition #41 to submit written notification to the Director, Piedmont Regional office a Periodic Start-up, Shutdown and Malfunction report, which contains the information specified in 40 CFR 63.10(d)5(i), anytime an exceedance of the particulate matter emission limit from ES1 during start-up, shutdown or malfunction are consistent with the procedures of the SSM plan. The report must be submitted 30 days after the end of each semi-annual reporting period.

In addition Condition #41 also requires the permittee to submit written notification to the Director, Piedmont Regional office an Immediate Start-up, Shutdown and Malfunction report anytime the particulate matter emissions standard in Condition #16, or the opacity emission standard in Condition #14, is exceeded by ES1 during a start-up, shutdown or malfunction is not consistent with the SSM plan. The report is required to be sent to DEQ within 2 working days after the start of the actions inconsistent with the SSM.

3. Condition #42 requires the permittee to submit semi-annual reports on all exceedances of the opacity standard established in Condition #12.

### **EMISSION UNIT APPLICABLE REQUIREMENTS – Preheat Furnace and Reheat Furnace; (ID# ES3-ES4)**

#### **Limitations**

1. Emissions of PM, PM10, CO, NO<sub>x</sub>, SO<sub>2</sub> and VOC from the preheat furnace (ES3) and the reheat furnace (ES4), based on the use of natural gas only, are limited in Condition #43. There are hourly and annual limits given for each pollutant listed.
2. Condition #44 limits the approved fuel for the preheat furnace (ES3) and the reheat furnace (ES4) to natural gas only.
3. The annual natural gas throughput to ES3 and ES4 is limited to not exceed 1,934 million cubic feet per year by Condition #45.
4. Condition #82 established a visible emissions limit of 20 percent opacity for ES3-ES4.

#### **Monitoring**

1. The visible emissions limit for ES3-ES4 established by Condition #82 is required to be monitored on a monthly basis by Condition #88.

#### **Recordkeeping**

1. Condition #46 requires the permittee must maintain records of the annual throughput of natural gas to ES3 and ES4, calculated monthly as the sum of each consecutive 12 month period, to demonstrate compliance with Condition #45. The records must be maintained on-site for the most current five year period.
2. Condition #85 requires the permittee to keep records of all visible emissions monitoring performed on ES3-ES4 pursuant to Condition #83.

### **EMISSION UNIT APPLICABLE REQUIREMENTS – Scrap Shredder/Cascade Separator ; (ID# ES5)**

#### **Limitations**

1. Use of a water deluge system to control fugitive particulate matter emissions from the scrap shredder/cascade separator (ES5) is required by Condition #47.
2. Fugitive emissions of particulate matter from the ES5 are limited by Condition #48.
3. Condition #82 established a visible emissions limit of 20 percent opacity for ES5.

Compliance with Condition #82 will demonstrate the water deluge system required by Condition #47 is operational.

### **Monitoring**

1. The visible emissions limit for ES5 established by Condition #82 is required to be monitored on a monthly basis by Condition #83.

### **Recordkeeping**

1. Condition #85 requires the permittee to keep records of all visible emissions monitoring performed on ES5 pursuant to Condition #83.

## **EMISSION UNIT APPLICABLE REQUIREMENTS – Ladle and Tundish Preheaters and Dryers; (ID# ES8)**

### **Limitations**

1. Fugitive emissions of PM, PM10, CO, NOx, SO2 and VOC from the ladle and tundish preheaters and dryers (ES8) are limited by Condition #49.
2. Condition #82 established a visible emissions limit of 20 percent opacity for ES8.

### **Monitoring**

1. The visible emissions limit for ES8 established by Condition #82 is required to be monitored on a monthly basis by Condition #83.

### **Recordkeeping**

1. Condition #85 requires the permittee to keep records of all visible emissions monitoring performed on ES8 pursuant to Condition #83.

## **EMISSION UNIT APPLICABLE REQUIREMENTS – Paved/Unpaved Roads and Surfaces; (ID# ES11)**

### **Limitations**

1. Condition #50 requires the fugitive particulate emissions from traffic and storage piles be controlled by the implementation of a dust management plan. The dust management plan will include:
  - a. The name and telephone number of the on-site plant personnel who are responsible for the implementation of the plan;
  - b. The frequency of street cleaning for paved roads and paved parking lots;

- c. The frequency of wetting for dust suppression on unpaved roads and storage piles;
  - d. The frequency of the application of binders to inhibit dust emissions from unpaved roads and storage piles; and
  - e. The enforcement of vehicular traffic speed limitations to prevent airborne dust.
2. Fugitive emissions of particulate matter are not to exceed the limits set by Condition #51.

### **Recordkeeping**

1. Records of operating parameters necessary to demonstrate compliance with Conditions #50-51 are required by Condition #52.

### **EMISSION UNIT APPLICABLE REQUIREMENTS –Contact and Non-Contact Cooling Towers; (ID# ES15-ES16)**

#### **Limitations**

1. Condition #53 prohibits the use of chromium based water treatment chemicals in the contact and non-contact cooling towers (ES15-ES16).
2. Fugitive particulate emissions from ES15 are not to exceed the limits established by Condition #54.
3. Fugitive particulate emissions from ES16 are not to exceed the limits established by Condition #55.
4. Condition #82 established a visible emissions limit of 20 percent opacity for ES15-ES16.

#### **Monitoring**

1. The visible emissions limit for ES15-ES16 established by Condition #82 is required to be monitored on a monthly basis by Condition #83.

#### **Recordkeeping**

1. Records of the total dissolved solids test results from the cooling tower water and the Material Safety Data Sheets for all water treatment chemicals used in the water cooling towers are required by Condition #56 to be used to demonstrate compliance with Conditions #54 and #55. The records shall be maintained on-site at the facility and shall be kept current for the most recent 5 years.
2. Condition #85 requires the permittee to keep records of all visible emissions monitoring performed on ES15-ES16 pursuant to Condition #83.

**EMISSION UNIT APPLICABLE REQUIREMENTS – Lime Silos #1-3, Carbon Silo and Alloy Unloading and Alloy/Lime/Carbon Transfer System; (ID# ES17-ES19)**

**Limitations**

1. Bin vent filters are required by Condition #57 to control particulate emissions from the common vent from lime silos #1, #2 and from the vent from lime silo #3.
2. The combined annual throughput of lime to ES17 is limited by Condition #58 to not exceed 85,000 tons per year as calculated as the sum of each consecutive 12 month period.
3. Bin vent filters are required by Condition #59 to control particulate emissions from the vent from the carbon silo (ES18).
4. The annual throughput of carbon to ES18 is limited by Condition #60 to not exceed 36,000 tons per year as calculated as the sum of each consecutive 12 month period.
5. Fabric filters, partial enclosures or their equivalent are required by Condition #61 to control particulate emissions from the alloy unloading and alloy/lime/carbon transfer system (ES19).
6. The annual throughput of alloy to ES19 is limited by Condition #62 to not exceed 60,000 tons per year as calculated as the sum of each consecutive 12 month period.
7. Particulate emissions from ES17-ES19 are limited to not exceed the values given in Condition #63.
8. Condition #64 limits the visible emissions from each fabric filter and bin vent filter required by Conditions #57, #59 and #61 to not exceed 5 percent opacity as determined by EPA Method 9.

**Monitoring**

1. Weekly visual observation of each fabric filter and bin vent filter required by Conditions #57, #59 and #61 during normal operation is required by Condition #65. For the bin vent filters, the weekly observation will be performed during the silo loading process.

## **Recordkeeping**

1. Records of the yearly throughput of lime, carbon and alloys, in tons, to the lime silos (ES17), carbon silo (ES18) and alloy unloading and alloy/lime/carbon transfer system (ES19), are required by Condition #66 to ensure compliance with Conditions #58, #60 and #62. Records of the visible emissions log are also required by Condition #66 to ensure compliance with Condition #64. The records will be maintained on-site by the facility to be available for inspection by the DEQ and kept current for the most recent five years.

## **Emission Unit Applicable Requirements - Emergency Diesel, Natural Gas and Propane Fired Engines; (ID# ES22-ES25, ES33-ES35)**

### **Limitations**

1. Condition #67 requires the facility to perform specific maintenance procedures on the diesel-fired emergency engines (ES22-ES25, ES33) required by the applicable requirements of 40 CFR Part 63 Subpart ZZZZ. The condition also requires the facility to limit startup time to a period of no more than 30 minutes and minimize the engine's time spent in idle during startup.
2. Condition #68 requires the facility to demonstrate compliance with all of the applicable work practice, and management practice, standards found in National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. A non-resettable hour meter is also required to be installed on each diesel-fired emergency engine by Condition #68.
3. Condition #69 requires the facility to limit non-emergency operation of the generators subject to 40 CFR 63 Subpart ZZZZ to 50 hours per year.
4. Condition #70 requires the permittee to operate in compliance with all applicable requirements of 40 CFR 63 Subparts A and ZZZZ.
5. Condition #71 details how the facility will demonstrate and maintain compliance with the applicable requirements of 40 CFR Part 60 Subpart JJJJ for the natural gas and propane fired emergency engines.
6. A non-resettable hour meter is required to be installed on both of the natural gas and propane fired emergency engines by Condition #72.
7. Condition #73 requires the facility to limit non-emergency operation of the generators subject to 40 CFR 60 Subpart JJJJ to 50 hours per year.
8. Condition #74 requires the permittee to operate in compliance with all applicable requirements of 40 CFR 60 Subparts A and JJJJ.

9. Visible emissions from the emergency generators are limited by Condition #75.

### **Monitoring**

1. Condition #76 requires the emergency diesel generators, ES22-ES25 and ES33, subject to the visible emissions limit under Condition #75 to be monitored for visible emissions at least once per month. Condition #76 requires the emergency natural gas and propane generators, ES34-ES35, subject to the visible emissions limit under Condition #75 to be monitored for visible emissions at least once per six month calendar period. The Condition requires the facility to perform a Method 9 visible emissions evaluation for units with above-normal visible emissions.

### **Recordkeeping**

1. Condition #77 requires the facility to keep records of all visible emissions surveys required in Condition #71 and detail what corrective actions were taken as a result of the inspections.
2. Condition #78 requires the facility to maintain all records necessary to demonstrate compliance with 40 CFR Part 63 Subpart ZZZZ for the diesel-fired emergency engines.
3. Condition #79 requires the facility to maintain all records necessary to demonstrate compliance with 40 CFR Part 60 Subpart JJJJ for the natural gas and propane-fired emergency engines.

### **Reporting**

1. Condition #80 requires the facility to submit reports of any Method 9 opacity tests performed as a result of Condition #76.

### **Facility Wide Conditions**

#### **Limitations**

1. Condition #81 limits the emissions of PM, PM10, SO2, NOx, CO, VOC and Lead, regardless of the limits given in Conditions #9-11, #43, #48-49, #51, #54 and #55.
2. Visible emissions from ES3-ES5, ES8 and ES15-16 are limited to below 20 percent opacity by Condition #82.

## **Monitoring**

1. Condition #83 requires the emissions units subject to Conditions #13-15 and Condition #82 have monthly visible emissions tests performed to ensure compliance with the visible emissions limits set by the applicable conditions.
2. Condition #84 requires the facility to be constructed to allow for emissions testing and monitoring upon reasonable notice at any time using appropriate methods.

## **Recordkeeping**

1. Records of, continuous monitoring system calibrations and calibration checks, percent operating time and excess emissions, adjustments and maintenance performed on continuous monitoring systems and devices and information required in each excess emission report, continuous monitoring system semi-annual report and the result of the monthly visible emissions surveys are required by Condition #85. The records will be maintained on-site by the facility and made available to the DEQ for inspection. The records will be kept current for the most recent five years.

## **Reporting**

1. Condition #86 requires the results of any Method 9 opacity tests performed pursuant to Condition #83 are required to be reported within 7 days of the opacity test being performed.

## **GENERAL CONDITIONS**

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

### **Comments on General Conditions**

### **Permit Expiration**

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the "Department of Environmental Quality Agency Policy Statement No. 2-09".

### **Failure/Malfunction Reporting**

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

### **Malfunction as an Affirmative Defense**

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Conditions #127-130 and General Conditions #106-109. For further explanation see the Comments General Conditions Failure/Malfunction Reporting section.

### **Asbestos Requirements**

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

### **INAPPLICABLE REQUIREMENTS**

For reporting year 2011 the company reported to EPA Greenhouse Gas (GHG) emissions of 99,418 tons of CO<sub>2</sub>e, which is below major source thresholds for GHG permitting applicability. The facility has also not made any modifications to the PSD permit which resulted in an increase of 75,000 tons per year of CO<sub>2</sub>e.

## INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation <sup>1</sup>	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
ES12	Shredder Conveyors Transfer points, and storage piles	9 VAC 5-80-720 B	TSP/PM10	N/A
ES20	Solvent degreasing operations	9 VAC 5-80-720 B	VOC	80 gallon
ES21	Miscellaneous natural gas fired combustion units	9 VAC 5-80-720 C	PM, SO <sub>x</sub> , NO <sub>x</sub> , CO, VOC	< 10 MMBtu/hr each
ES26, ES27, ES28	Above ground Fuel and Oil storage tanks	9 VAC 5-80-720 B	VOC	N/A
ES30	Continuous Caster		TSP/PM10	N/A
ES31	Rolling Mill		TSP/PM10	N/A
ES32	Lancing Station		TSP/PM10	N/A
INSIG1	Product Marking		VOC	N/A
INSIG2	Miscellaneous Painting		TSP/PM10 VOC	N/A
INSIG3	Miscellaneous Scrap loading/unloading		TSP/PM10	N/A
INSIG4	Metal Cutting		TSP/PM10	N/A
INSIG5	Mill Scale Processing		TSP/PM10	N/A

<sup>1</sup>The citation criteria for insignificant activities are as follows:

- 9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
- 9 VAC 5-80-720 B - Insignificant due to emission levels
- 9 VAC 5-80-720 C - Insignificant due to size or production rate

## CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

**PUBLIC PARTICIPATION**

The proposed permit will be placed on public notice in the Progress-Index from February 7<sup>th</sup>, 2014 to March 10<sup>th</sup>, 2014.

The Progress Index (Under act P.L. 877 No 160. July 9,1976)  
Commonwealth of Virginia, City of Petersburg

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PUBLIC NOTICE ENVIRONMENT

Diane Ange

Being duly sworn according to law deposes and says that (s)he is Billing clerk for The Progress Index, owner and publisher of The Progress Index, a newspaper of general circulation, established in 1865, published in the city of Petersburg , county and state aforesaid, and that the printed notice or publication hereto attached is exactly as printed in the regular editions of the said newspaper on the following dates:

02/07/2014

Affiant further deposes and says that neither the affiant nor The Progress Index is interested in the subject matter of the aforesaid notice or advertisement and that all allegations in the foregoing statement as time, place and character or publication are true Diane Ange

Sworn and subscribed to before me  
this 7th day of February A.D., 2014

Carmen Hardy  
(Notary Public)



Carmen C. Hardy  
Commonwealth of Virginia  
Notary Public  
Commission No. 7030357  
My Commission Expires 5/31/2014



MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY  
*Piedmont Regional Office*

4949-A Cox Road Glen Allen, VA 23060-6296

804/527-5020

SUBJECT: Response to Comments – Initial Title V  
SOURCE: 51264 – Chaparral (Virginia) Inc.  
TO: File  
FROM: Ashby Scott, Senior Environmental Engineer  
DATE: March 31, 2014

Chaparral (Virginia) Inc. submitted a complete and timely application on June 5, 2000. The initial Title V permit was processed with public comment and concurrent US EPA review beginning February 7, 2014. No comments from the general public were received during the thirty day comment period that ended March 10, 2012. The following comments were received by electronic mail from EPA Region III. Comments from EPA Region III were received in one electronic mailings dated March 20, 2014. The response to the comments received and the proposed revisions follows:

**EPA Region III Comments on the Draft Permit from Ms. Cathleen Von Osten, dated March 20, 2014:**

1. Please include averaging times for emissions limits throughout the permit. For example, Condition #9 includes specific detail that lbs/hr limits are on a 24-hour rolling average, etc but these specifics are lacking in other conditions that include emissions limits.
2. The Statement of Basis for the Scrap Shredder/Cascade Separator (ID#ES5), Ladle and Tundish Pre-heaters and Dryers (ID#ES8), and the Cooling Towers (ID#ES15-16)) refer to Condition #88, #89, #91 for visible emissions monitoring/recordkeeping. These condition #s in the permit do not appear to match these intended requirements. Please clarify or correct, as it is important to reflect sufficient monitoring/recordkeeping to assure compliance with the emissions limits (in conditions #49 and #50, in particular).

Response to Comment 1:

The averaging times included in Condition #9 are part of the requirement to have the CERMS installed on the EAF to ensure compliance with the limits for NOx and CO given in Condition #9. Compliance with the other emission limits in the permit is determined by compliance with either an annual fuel throughput limit, for fuel burning equipment, or the annual production limit for recycled steel in Condition #8, for process equipment, which are calculated as the sum of each consecutive 12 month period.

Response to Comment 2:

The statement of basis document has been revised according to the submitted comment and the permit condition citations have been corrected in the document.