

**ALLEGHENY COUNTY HEALTH DEPARTMENT
AIR QUALITY PROGRAM**

November 15, 2011

SUBJECT: Standard Forged Products, LLC - McKees Rocks Forgings, Plant 112
75 Nichol Avenue
McKees Rocks, PA 15136

Operating Permit: No. 0353

TO: Sandra L. Etzel
Chief Engineer

FROM: Ron Huffman
Air Quality Engineer

FACILITY DESCRIPTION:

Standard Forged Products, LLC - McKees Rocks Forgings, Plant 112 manufactures railcar axles and wheels by forging, stamping, cutting, forming, heat treating, lathing, and machining steel. Although there are numerous buildings located at this facility, most buildings are used as storage. The main operations are either located in Building A (axles) or Building B (wheels). This facility operates thirty-two (32) lathing machines (located throughout both the axle and wheel making process). Lathe operations involve shaving, chipping, and smoothing the steel through the use of dry and/or lubricated sanding/cutting operations. Most of the lathe machines located at this facility do not use lubricate (aka dry lathing); however, the steel shavings/chips are typically large enough to fall to the ground and are collected in large vats. Some of the lathe operations in the axle making process become very hot because the steel heats up (due to friction) and there are six (6) large vats that actually have water in them to cool the steel shavings/chips. The lathe operations that are involved in the wheel making process utilize Vertical Lathe Machines (VLTs) that have chip pits, but these pits are not considered "baths" because that they do not have water in them to cool the steel shavings/chips. The source operates one (1) abrasive blasting unit located in Building B which is used to blast forged wheels to improve the quality of the wheels; this operation occurs prior to putting the wheels into the VLTs. The abrasive blaster uses small steel shot beads for a blasting medium. Standard Forged Products, LLC - McKees Rocks Forgings, Plant 112 also consists of seven (7) natural gas fired furnaces that are used to heat steel in various stages of the axle and wheel manufacturing process; each of these furnaces exhaust through an individual stack. The source operates one (1) baghouse that controls steel dust emissions from the axle end burn-off operation; this is where railcar axles are formed into shape using heat and force. The source also operates one (1) emergency generator used as a back up for water pumps. There are two cooling water towers located at this facility. Water is used as a cooling medium for the facility quench, axle end burn-off, and lathe operations.

Standard Forged Products, LLC - McKees Rocks Forgings, Plant 112 is a minor source for particulate matter (PM), particulate matter of 10 microns or less in diameter (PM₁₀), sulfur dioxide (SO₂), volatile organic compounds (VOCs), carbon monoxide (CO) and Hazardous Air Pollutants (HAPs), as defined in section 2101.20 of Article XXI. Standard Forged Products, LLC - McKees Rocks Forgings, Plant 112 is a Synthetic Minor source for nitrogen oxides (NO_x) by limiting the maximum natural gas firing rate to 80% of the maximum potential natural gas needed for the seven (7) natural gas furnaces.

EMISSION SOURCES:

ID	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK ID
B-001	Axle Reheat Furnace	Uncontrolled	68.0 MMBtu/hr	Natural Gas	S-001
B-002	Axle Heat Treating Furnace 1	Uncontrolled	22.6 MMBtu/hr	Natural Gas	S-002
B-003	Axle Heat Treating Furnace 2	Uncontrolled	22.6 MMBtu/hr	Natural Gas	S-002
B-004	Axle Heat Treating Furnace 3	Uncontrolled	22.1 MMBtu/hr	Natural Gas	S-002
B-005	Wheel Reheat Furnace	Uncontrolled	36.0 MMBtu/hr	Natural Gas	S-003
B-006	Wheel Q&T Furnace 1	Uncontrolled	10.0 MMBtu/hr	Natural Gas	S-004
B-007	Wheel Q&T Furnace 2	Uncontrolled	10.0 MMBtu/hr	Natural Gas	S-005
B-008	Sixty-Seven (67) Space Heaters	Uncontrolled	3.54 MMBtu/hr	Natural Gas	N/A
P-001a	Axle Billet Nick & Break	Uncontrolled	73.55 tons/hr	Metal Processed	N/A
P-001b	Axle Billet Nick & Break Torch	Uncontrolled	5.0 MMBtu/hr	Natural Gas	N/A
P-002a	Axle End Burn Off	Baghouse	8.69 tons/hr	Metal Processed	S-006
P-002b	Axle End Burn Off Torch	Baghouse	7.5 MMBtu/hr	Natural Gas	S-006
P-003	Wheel Quench	Uncontrolled	1543 gallons/yr	Quench Oil	S-007
P-004	Lathe Machines	Uncontrolled	N/A	N/A	N/A
P-005	Abrasive Blasting	Totally Enclosed	2.50 lbs/hr	Steel Shot Abrasive	N/A
P-006	Maintenance Welding	Uncontrolled	N/A	N/A	N/A
P-007	Two (2) Cooling Water Towers	Uncontrolled	1200 gallons/hr	Cooling Water	N/A
EG-001	Emergency Generator	Uncontrolled	365 hp	No. 2 Fuel Oil	S-008

Miscellaneous Emission Sources:

Fugitive dust emissions from traffic on paved roads were calculated using U.S. EPA AP-42, Chapter 13.2.1 - Paved Roads, published January 2011. Appendix A includes detailed emission calculations for paved roads; it is estimated that 0.15 tons per year of PM and 0.03 tons per year of PM₁₀ are emitted from these operations.

The source operates a small woodcutting operation located in Building S used to make boxes out of 3x3 blocks of wood (consists of two (2) 10" chop/circular saws); emissions are expected to be negligible.

The source operates a 60” Goff 60TB table blaster with a dedicated Goff 1216 dust collector that vents inside the building.

The facility has one (1) 2,000 gallon waste oil aboveground storage tank and one (1) 3,300 gallon No.2 fuel oil aboveground storage tank.

Emission Controls:

The source operates one (1) baghouse that controls steel dust emissions from the axle end burn-off operation; this is where railcar axles are formed into shape using heat and force.

EMISSION CALCULATIONS:

Furnaces (B-001 through B-007):

The seven (7) furnaces are natural gas fired. Potential to Emit calculations are based on U.S. EPA AP-42 Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1 through 1.4-4, published July 1998. A 15% adjustment factor was added to all emissions calculated using AP-42 factors to account for operational variability of equipment. The combustion emissions from the furnaces (B-001 through B-007) are limited to an actual maximum firing rate 80% of theoretical maximum firing rate. The source will monitor each furnace’s fuel gas use monthly to ensure that the firing rate does not exceed the 80% of the theoretical maximum. Individual gas meters are required for furnaces B-001 and B-005. The remaining five (5) furnaces can have their combined fuel use measured monthly. Stack emissions will be determined initially upon issuance of the permit and every five years thereafter to ensure that the maximum potential emissions for each furnace are not exceeded... Appendix A includes detailed emission calculations for the furnaces. The following tables show the maximum potential and limited emissions from each furnace.

Maximum Potential Emissions (lb/hr) for Each Furnace

ID	PM⁽¹⁾	PM₁₀⁽¹⁾	SO₂	NO_x	VOC	CO
B-001	0.54	0.54	0.05	7.67	0.42	6.44
B-002	0.18	0.18	0.02	2.55	0.14	2.14
B-003	0.18	0.18	0.02	2.55	0.14	2.14
B-004	0.18	0.18	0.01	2.49	0.14	2.09
B-005	0.29	0.29	0.02	4.06	0.22	3.41
B-006	0.08	0.08	0.01	1.13	0.06	0.95
B-007	0.08	0.08	0.01	1.13	0.06	0.95
Total	1.53	1.53	0.14	21.58	1.18	18.12

¹ PM and PM₁₀ emissions based on §2104.02.a.1 limits.

Maximum Potential Emissions (tons/year¹) for Each Furnace

ID	PM ⁽²⁾	PM ₁₀ ⁽²⁾	SO ₂	NO _x	VOC	CO
B-001	2.38	2.38	0.20	33.6	1.85	28.2
B-002	0.79	0.79	0.07	11.2	0.61	9.37
B-003	0.79	0.79	0.07	11.2	0.61	9.37
B-004	0.77	0.77	0.07	10.9	0.60	9.17
B-005	1.26	1.26	0.11	17.8	0.98	14.9
B-006	0.35	0.35	0.03	4.94	0.27	4.15
B-007	0.35	0.35	0.03	4.94	0.27	4.15
Total	6.69	6.69	0.58	94.58	5.19	79.31

¹ A year is defined as any consecutive 12-month period.

² PM and PM₁₀ emissions based on §2104.02.a.1 limits.

Limited Emissions (lb/hr) for Each Furnace

ID	PM ⁽¹⁾	PM ₁₀ ⁽¹⁾	SO ₂	NO _x	VOC	CO
B-001	0.44	0.44	0.04	6.13	0.34	5.15
B-002	0.14	0.14	0.01	2.04	0.11	1.71
B-003	0.14	0.14	0.01	2.04	0.11	1.71
B-004	0.14	0.14	0.01	1.99	0.11	1.67
B-005	0.23	0.23	0.02	3.25	0.18	2.73
B-006	0.06	0.06	0.01	0.90	0.05	0.76
B-007	0.06	0.06	0.01	0.90	0.05	0.76
Total	1.22	1.22	0.10	17.25	0.95	14.49

¹ PM and PM₁₀ emissions based on §2104.02.a.1 limits.

Limited Emissions (tons/year¹) for Each Furnace

ID	PM ⁽²⁾	PM ₁₀ ⁽²⁾	SO ₂	NO _x	VOC	CO
B-001	1.91	1.91	0.16	26.86	1.48	22.57
B-002	0.63	0.63	0.05	8.93	0.49	7.50
B-003	0.63	0.63	0.05	8.93	0.49	7.50
B-004	0.62	0.62	0.05	8.73	0.48	7.33
B-005	1.01	1.01	0.09	14.22	0.78	11.95
B-006	0.28	0.28	0.02	3.95	0.22	3.32
B-007	0.28	0.28	0.02	3.95	0.22	3.32
Total	5.36	5.36	0.45	75.57	4.16	63.48

¹ A year is defined as any consecutive 12-month period.

² PM and PM₁₀ emissions based on §2104.02.a.1 limits.

Space Heaters (B-008):

The sixty-seven (67) space heaters are each natural gas fired. Potential to Emit calculations are based on U.S. EPA AP-42 Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1 through 1.4-4, published July 1998. A 15% adjustment factor was added to all emissions calculated using AP-42 factors to account for operational variability of equipment. Appendix A includes detailed emission calculations for the space heaters. The following table reflects the maximum potential emissions from the space heaters.

Maximum Potential Emissions Combined for All Space Heaters

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year)¹
PM	0.03	0.13
PM ₁₀	0.03	0.13
SO ₂	2.39E-03	0.01
NO _x	0.40	1.75
VOC	0.02	0.10
CO	0.34	1.47

¹ A year is defined as any consecutive 12-month period.

Axle Billet Nick & Break (P-001a and P-001b):

During the axle billet nick and break operation, large steel poles (called billets) are heated to high temperatures using a natural gas fired torch and then cut into specific lengths. This process releases fugitive PM/PM₁₀ emissions. PM/PM₁₀ process emission calculations were based on an emission factor of 0.1% of the uncontrolled cleaning and finishing emission factor from U.S. EPA AP-42 Chapter 12.10 - Gray Iron Foundries Section 12.10, Table 12.10-7, published May 2003. This estimation is based on source estimation that 0.1% of the metal processed is cut and released to the air. In addition to these process emissions, combustion emissions (to account for the natural gas fired torch) are based on U.S. EPA AP-42 Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1 through 1.4-4, published July 1998. Appendix A includes detailed emission calculations for the axle billet nick & break operation. A 15% adjustment factor was added to all emissions calculated using AP-42 factors to account for operational variability of equipment. The following table shows the maximum potential and limited emissions from the axle billet nick & break operation.

Maximum Potential Emissions for the Axle Billet Nick & Break Operation

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year)¹
PM	1.48	6.48
PM ₁₀	1.48	6.48
SO ₂	3.38E-03	0.01
NO _x	0.56	2.47
VOC	0.03	0.14
CO	0.47	2.07

¹ A year is defined as any consecutive 12-month period.

Axle End Burn Off (P-002a and P-002b):

During the axle end burn off operation, railcar axles are formed into shape using heat (via a natural gas fired torch) and force (via large hydraulic machines). PM/PM₁₀ process emission calculations were based on an emission factor of 1.5% of the uncontrolled cleaning and finishing emission factor from U.S. EPA AP-42 Chapter 12.10 - Gray Iron Foundries Section 12.10, Table 12.10-7, published May 2003. This estimation is based on source estimation that 1.5% of the metal processed is removed from the axles and released to the air. Note: a capture efficiency of 99% and control efficiency of 97.5% were assumed for the baghouse controlling this axle end burn-off operation. In addition to these process emissions, combustion emissions (to account for the natural gas fired torch) are based on U.S. EPA AP-42 Chapter 1.4 - Natural Gas Combustion, Tables 1.4-1 through 1.4-4, published July 1998. Appendix A includes detailed emission calculations for the axle end burn off operation. A 15% adjustment factor was added to all emissions calculated using AP-42 factors to account for operational variability of equipment. The following tables shows the maximum potential emissions and the limited emissions from the axle end burn off operation.

Maximum Potential Emissions for the Axle End Burn Off Operation

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year)¹
PM	0.12	0.54
PM ₁₀	0.12	0.54
SO ₂	5.07E-03	0.02
NO _x	0.85	3.70
VOC	0.05	0.20
CO	0.71	3.11

¹ A year is defined as any consecutive 12-month period.

Wheel Quench (P-003):

The source uses a quench oil bath to cool processed railcar wheels. PM/PM₁₀ process emission calculations were based on a mass balance calculation. Note: the quench oil in this process does not contain any VOC or HAP. Appendix A includes detailed PM/PM₁₀ emission calculations for the wheel quench operation. There is a possibility of malodors being generated by the quench oil bath. Fenceline odor observations are needed to detect and correct any malodor problem(s) from the operation of the quench oil bath. The following table shows the maximum potential emissions from the wheel quench operation.

Maximum Potential Emissions for the Wheel Quench Operation

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year)¹
PM	0.09	0.41
PM ₁₀	0.09	0.41

¹ A year is defined as any consecutive 12-month period.

Lathe Machines (P-004):

Although the majority of the lathe machines located at this facility do not use lubricate (aka dry lathing), the steel shavings/chips created by these operations are large enough to fall to the ground and are collected in large

vats. Therefore, PM/PM₁₀ emissions are expected to be negligible from the lathing operations.

Abrasive Blasting (P-005):

The permittee operates one (1) abrasive blasting unit. PM/PM₁₀ emissions from the abrasive blasting unit were calculated using emission factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition). A 15% adjustment factor was added to all emissions calculated using AP-42 factors to account for operational variability of equipment. Appendix A includes detailed emission calculations for the abrasive blasting unit. The following table shows the maximum potential emissions from the abrasive blasting unit.

Maximum Potential Emissions for Abrasive Blasting Unit

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year) ¹
PM	1.15E-04	5.04E-04
PM ₁₀	9.78E-05	4.28E-04

¹ A year is defined as any consecutive 12-month period.

Cooling Water Towers (P-007):

The permittee operates two (2) cooling water towers. Potential PM/PM₁₀ emissions from the cooling towers were calculated with a mass balance approach as presented in AP-42, Section 13.4: Wet Cooling Towers (1/95), using data on water circulation rate, TDS concentration, and cooling tower drift losses. This method assumes that the TDS present in water evaporated at the cooling tower produce PM/PM₁₀ emissions. Appendix A includes detailed emission calculations for the cooling water towers. The following table shows the maximum potential emissions from all cooling water towers combined.

Maximum Potential Emissions for All Cooling Water Towers

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year) ¹
PM	0.23	1.00
PM ₁₀	0.23	1.00

¹ A year is defined as any consecutive 12-month period.

Emergency Generator (EG-001):

The emergency generator is fuel oil fired. In order to stay below major source thresholds for NO_x, the generator shall not exceed 500 hours per year in operation. The generator has a maximum rated capacity less than 600 HP; therefore, emission calculations were based on U.S. EPA AP-42 Chapter 3.3 - Gasoline and Diesel Industrial Engines, Tables 3.3-1, published October 1996. A 15% adjustment factor was added to all emissions calculated using AP-42 factors to account for operational variability of equipment. Appendix A includes detailed emission calculations for the emergency generator. The following tables show the maximum potential emissions from the emergency generator.

Maximum Potential Emissions for the Emergency Generator

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year)¹
PM	0.84	0.21
PM ₁₀	0.84	0.21
SO ₂	1.02	0.25
NO _x	15.37	3.84
VOC	1.24	0.31
CO ²	2.85	0.71

¹ A year is defined as any consecutive 12-month period.

² CO emissions based on 0.00575 lb/hp-hr as limited by 40 CFR Subpart IIII.

EMISSIONS SUMMARY (entire facility):

Maximum Limited Potential Emissions for Entire Facility

POLLUTANT	ANNUAL EMISSION LIMIT (tons/year) ^{1,2}
PM	26.5
PM ₁₀	26.4
SO ₂	0.87
NO _x	106.2
VOC	5.94
CO	86.7
HAPs	1.94

¹ A year is defined as any consecutive 12-month period.

² In order to keep NOx emissions below 100 tpy, sourcewide natural gas usage shall not exceed 1,600 MMCF per any twelve (12) consecutive month period.

Limited Emissions for Entire Facility

POLLUTANT	ANNUAL EMISSION LIMIT (tons/year) ^{1,2}
PM	14.3
PM ₁₀	14.2
SO ₂	0.34
NO _x	87.3
VOC	4.90
CO	70.8
HAPs	1.58

¹ A year is defined as any consecutive 12-month period.

² In order to keep NOx emissions below 100 tpy, the source will not operate the seven furnaces (B-001 through B-007) at a maximum firing rate greater than 80% of the maximum theoretical heat input..

OPERATING PERMIT APPLICATION COMPONENTS:

1. Permit Application No. 0353, dated May 15, 2008.
2. Supplemental information collected during a site visit August 4, 2008.
3. Various email correspondence dated October 29, 2008 and November 11, 2008.
4. Request for Determination request dated September 4, 2007 for Goff table blaster and dedicated dust collector.

REGULATORY APPLICABILITY:

1. **Article XXI Requirements for Issuance:**

The following Article XXI requirements apply to this facility:

§2103.12.a.2.B (Standards for Issuance): Existing sources, where no limits have been established under Article XXI, are subject to Reasonably Available Control Technology (RACT) requirements.

- (a) The Department has determined that RACT for the existing furnaces is the potential to emit as shown in Appendix A, page 2 and 3. Particulate and sulfur oxide limitations have been established by §2104.02.a.1 and §2104.03.a.2.A, respectively.
- (b) The Department has determined that RACT for the space heaters is that each shall burn natural gas only.
- (c) The Department has determined that RACT for the axle billet nick & break (P-001), axle end burn off (P-002), and wheel quench (P-003) operations is the potential to emit as shown in Appendix A, pages 5 through 8. Particulate limitations for the axle billet nick & break (P-001), axle end burn off (P-002), and wheel quench (P-003) operations have been established by §2104.02.a.1 and §2104.02.b. In addition, the axle end burn off operation (P-002) shall be controlled by a baghouse. Sulfur oxide limitations for the torches associated with the axle billet nick & break (P-001b) and axle end burn off (P-002b) operations have been established by §2104.03.a.2.A.
- (d) The Department has determined that RACT for the existing cooling water towers is the potential to emit as shown in Appendix A, page 10. In addition, the total dissolved solids (TDS) in the cooling tower water shall not exceed 1,900 ppm at any time and the cooling tower shall use municipal water at all times.
- (e) The Department has determined that RACT for the existing emergency generator is the potential to emit as shown in Appendix A, page 9. Particulate and sulfur oxide limitations have been established by §2104.02.a.1 and §2104.03.a.2.A, respectively. The emergency generator is limited to 500 hours per year of operation. In addition, the sulfur content of the fuel oil is limited to 0.5%.

§2103.20.b.4 (Synthetic Minors): This rule applies because in order to stay below major source thresholds for NO_x:

- (a) In order to keep sourcewide NO_x emissions below 100 tpy, the source will operate the seven furnaces (B-001 through B-007) at a maximum firing rate not to exceed 80% of the maximum theoretical heat input; and
- (b) The generator shall not exceed 500 hours of operation per twelve (12) consecutive month period. In addition, the sulfur content of the fuel oil is limited to 0.5%.

§2104.02.a.1 (Particulate Mass Emissions): This rule applies to fuel burning or combustion equipment where the actual heat input to such equipment is greater than 0.50 MMBtu per hour. This rule limits particulate matter emissions as follows:

- (a) Pursuant to this rule, particulate emissions from each furnace shall not exceed 0.008

- lbs/MMBtu of actual heat input at any time while combusting natural gas.
- (b) Pursuant to this rule, particulate emissions from the torches associated with the axle billet nick & break (P-001b) and axle end burn off (P-002b) operations shall not exceed 0.008 lbs/MMBtu of actual heat input at any time while combusting natural gas.
 - (c) Pursuant to this rule, particulate emissions from the emergency generator shall not exceed 0.28 lb/MMBtu of actual heat input at any time while combusting grade No. 2 fuel oil.
 - (d) The space heaters (B-008) are not subject to this rule because none of them have a capacity greater than 0.50 MMBtu per hour.

§2104.02.b (Particulate Mass Emissions): This rule applies to processes that have the potential to emit particulate matter that are not listed in Subsection c, d, e, f, g, or h and for which there is no standard established under Part E of Article XXI. Pursuant to this rule, particulate matter emissions from the axle billet nick & break (P-001a), axle end burn off (P-002a), and wheel quench (P-003) operations shall not exceed seven (7) pounds in any 60 minute period or 100 pounds in any 24-hour period. As shown in Appendix A, pages 5 through 7, the potential to emit of these operations are in compliance with this limit.

§2104.03 (Sulfur Oxide Emissions): This rule applies to fuel burning or combustion equipment.

- (a) Pursuant to this rule, sulfur oxide emissions from each furnace, space heater, as well as the torches associated with the axle billet nick & break (P-001b) and axle end burn off (P-002b) operations, shall not exceed the potential to emit because each of these units burn only natural gas.
- (b) Pursuant to this rule, sulfur oxide emissions from the emergency generator shall not exceed 1.0 pound per million BTU of actual heat input because it burns fuel oil and has an actual heat input capacity greater than 0.50 million BTUs per hour, but less than 50 million BTUs per hour.

§2105.12.a (Volatile Organic Compound Storage Tanks): The requirements of §2105.12.a for Volatile Organic Compound Storage Tanks are not applicable to the existing waste oil and No.2 fuel oil storage tanks. These liquids have a maximum vapor pressure of 0.008 psia which is less than the vapor pressure threshold defined in §2105.12.a.

§2105.51a (Abrasive Blasting): The requirements of §2105.51a for abrasive blasting are not applicable to the existing abrasive blasting unit (P-005) because the unit does not have a total area greater than 1,000 square feet.

2. **Testing Requirements:**

Testing is required for the seven furnaces. Testing for NO_x and CO is required for the initial stack testing. Subsequent testing for NO_x is required for furnaces B001-B005.

The Department reserves the right to require additional testing in the future to assure compliance with the terms and conditions of Operating Permit No. 0353.

3. **New Source Review (NSR) and Prevention of Significant Deterioration (PSD):**
NSR and PSD do not apply. The facility is a minor source for all criteria pollutants.

4. **New Source Performance Standards**

40 CFR 60, Subpart Kb for Volatile Organic Liquid Storage Vessels: This rule does not apply to the existing storage tanks because the capacity of each tank is less than 75 cubic meters (19,813 gallons).

40 CFR 60, Subpart IIII for Stationary Compression Ignition Internal Combustion Engines: The emergency generator, identified as EG-001, commenced construction after July 11, 2005 and was manufactured after April 1, 2006. Therefore, this generator is subject to this rule. EG-001 is considered a 2007 model year emergency generator that has a displacement of less than 10 liters per cylinder; therefore, pursuant to 40 CFR 60.4205(b), this unit must comply with the emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007. Pursuant to 40 CFR 60.4207(a), the generator EG-001 must use diesel fuel that meets the requirements of 40 CFR 80.510(a). Beginning October 1, 2010, the emergency generator EG-001 must use diesel fuel that meets the requirements of 40 CFR 80.510(b). In addition, pursuant to 40 CFR 60.4209(a), a non-resettable hour meter must be installed on the engine prior to startup. Pursuant to 40 CFR 60.4214(b), the Permittee is not required to submit an initial notification for the emergency generator, identified as EG-001.

5. **National Emission Standards For Hazardous Air Pollutants**

40 CFR 63, Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines: This rule applies to the emergency generator, identified as EG-001; however, pursuant to 40 CFR 63.6590(c), the emergency generator is located at an area source. Therefore, it must meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR Part 60 Subpart IIII.

40 CFR 63, Subpart XXXXXX for Nine Metal Fabrication and Finishing Source Categories: This rule applies because the source is considered an area source primarily engaged in iron and steel forging, and performs abrasive blasting, dry machining, dry grinding and polishing using MFHAP (defined to be the use of materials that contain cadmium, chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (of the metal), and materials that contain manganese in amounts greater than or equal to 1.0 percent by weight (of the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material). Pursuant to 40 CFR 63.11515(a), the source is required to comply with this rule by July 25, 2011.

The abrasive blasting operation located at this source qualifies as a nonvented, completely enclosed abrasive blasting operation as defined in 40 CFR 63.11522. Therefore, pursuant to 40 CFR 63.11516(a)(1), the Permittee must minimize dust generation during emptying of the abrasive blasting enclosure to reduce MFHAP emissions, as practicable; and operate all equipment associated with dry abrasive blasting operations according to the manufacturer's instructions.

The lathe machines located at this source qualify as machining as defined in 40 CFR 63.11522. Therefore, pursuant to 40 CFR 63.11516(b), for each lathe machining operation that uses materials that contain MFHAP, the permittee must take measures necessary to minimize excess dust in the

surrounding area to reduce MFHAP emissions, as practicable; and operate all equipment associated with machining according to manufacturer's instructions.

This source performs only facility maintenance welding as exempted in 40 CFR 63.11514(f) and is not subject to this rule.

6. **Risk Management Plan; CAA Section 112(r):**

The source is not required to have a risk management plan at this time because none of the regulated chemicals exceed the thresholds on the regulation.

METHOD OF DEMONSTRATING COMPLIANCE:

Compliance with the emission standards set in this permit will be demonstrated by:

- (a) Install non-resettable natural gas flow meters on furnaces B-001 and B-005;
- (b) recording the individual natural gas firing rates monthly for furnaces B-001 and B-005 and the total for furnaces B-002, B-003, B-004, B-006 and B-007;
- (c) recording monthly sourcewide natural gas consumption and the name of the natural gas supplier; and providing written notice to the Department semiannually;
- (d) weekly notation of the pressure drop across the baghouse controlling particulate emissions from the axle end burn off operations;
- (e) maintaining manufacturer's instructions for the lathe machines and abrasive blasting operation;
- (f) monthly recording quench oil used and removed and providing written notice to the Department semiannually;
- (g) making daily fenceline odor observations when the quench oil bath is operating;
- (h) recording quarterly TDS measurements from the cooling water towers; and
- (i) recording emergency generator fuel consumption, cold starts, operating hours, and maintenance activities, maintaining fuel oil certifications from fuel suppliers, and providing written notice to the Department semiannually.

See Operating Permit No. 0353, for the specific conditions for determining compliance with the applicable requirements.

RECOMMENDATION:

All applicable Federal, State and County regulations have been addressed in the permit application. The operating permit application for Standard Forged Products, LLC - McKees Rocks Forgings, Plant 112 should be approved with the emission limitations and terms and conditions in Operating Permit No. 0353.