

217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NESHAP SOURCE -- RENEWAL

PERMITTEE

Mueller Company
Attn: Julie Smock
500 W. Eldorado
Decatur, Illinois 62525

Application No.: 04070077

I.D. No.: 115015AGL

Applicant's Designation:

Date Received: December 14, 2011

Subject: Brass Foundry

Date Issued: December 4, 2013

Expiration Date: December 4, 2023

Location: 1226 East Garfield Avenue, Decatur, Macon County

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Fiberglass Mold Making;
Three (3) Natural Gas-Fired Core Ovens (#1, #2, and #3);
Ten (10) Brass Melting Electric Induction Furnaces with Dust Collectors;
Casting Operations (Consisting of Pouring/Casting, Casting Cooling, and Shakeout Areas) with dust collection;
Two (2) Sand Silos with Dust Collection;
One (1) Bond Silo with Dust Collection;
Core Sand Muller Operations and Oil, Shell, and Hot Box Machines;
One (1) 2.4 mmBtu/hour Natural Gas-Fired Boiler; and
Natural Gas-Fired Comfort Heaters

pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions from the foundry plant to less than major source thresholds (i.e., less than 100 tons/year for Particulate Matter less than 10 microns (PM₁₀), 10 tons/year for any single Hazardous Air Pollutant (HAP) and 25 tons/year for any combination of such HAPs). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to initial issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) for this location.

- 2a. This source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, 40 CFR 63 Subparts A and ZZZZZZ. Pursuant to 40 CFR 63.11544(a), you are subject to 40 CFR 63 Subpart ZZZZZZ if you own or operate an aluminum foundry, copper foundry, or other nonferrous foundry as defined in 40 CFR 63.11556, "What definitions apply to this subpart?" that is an area source of hazardous air pollutant (HAP) emissions as defined in 40 CFR 63.2 and meets the criteria specified in 40 CFR 63.11544(a)(1) through (4). Once you are subject to 40 CFR 63 Subpart ZZZZZZ, you must remain subject to 40 CFR 63 Subpart ZZZZZZ even if you subsequently do not meet the criteria in 40 CFR 63.11544(a)(1) through (4).
- i. Your other nonferrous foundry uses material containing other nonferrous foundry HAP, as defined in 40 CFR 63.11556, "What definitions apply to this subpart?".
 - ii. Your aluminum foundry, copper foundry, or other nonferrous foundry has an annual metal melt production (for existing affected sources) or an annual metal melt capacity (for new affected sources) of at least 600 tons per year (tpy) of aluminum, copper, and other nonferrous metals, including all associated alloys. You must determine the annual metal melt production and capacity for the time period as described in 40 CFR 63.11544(a)(4)(i) through (iv). The quantity of ferrous metals melted in iron or steel melting operations and the quantity of nonferrous metal melted in non-foundry melting operations are not included in determining the annual metal melt production for existing affected sources or the annual metal melt capacity for new affected sources
- b. Pursuant to 40 CFR 63.11544(b), 40 CFR 63 Subpart ZZZZZZ applies to each new or existing affected source located at an aluminum, copper or other nonferrous foundry that is an area source as defined by 40 CFR 63.2. The affected source is the collection of all melting operations located at an aluminum, copper, or other nonferrous foundry.
- c. Pursuant to 40 CFR 63.11544(c), an affected source is an existing source if you commenced construction or reconstruction of the affected source on or before February 9, 2009.
- d. Pursuant to 40 CFR 63.11545(a), if you own or operate an existing affected source (the collection of affected non-ferrous foundry melting operations), you must achieve compliance with the applicable provisions of 40 CFR 63 Subpart ZZZZZZ no later than June 27, 2011.
- e. Pursuant to 40 CFR 63.11550(b)(1), if you own or operate a new or existing affected source (the collection of affected non-ferrous foundry melting operations) that is located at a large foundry as defined in 40 CFR 63.11556, you must comply with the additional requirements in 40 CFR 63.11550(b)(1) and (2). For existing affected sources located at a large foundry, you must achieve a particulate

matter (PM) control efficiency of at least 95.0 percent or emit no more than an outlet PM concentration limit of 0.034 grams per dry standard cubic meter (g/dscm) (0.015 grains per dry standard cubic feet (gr/dscf)).

- f. Pursuant to 40 CFR 63.11550(d), (for the collection of affected non-ferrous foundry melting operations) these standards apply at all times.
- 3a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.
- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 meter (1000 foot) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
- d. Pursuant to 35 Ill. Adm. Code 212.321(a), except as further provided in 35 Ill. Adm. Code Part 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- 4. Pursuant to 35 Ill. Adm. Code 214.301, except as further provided by 35 Ill. Adm. Code Part 214, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm.
- 5. This permit is issued based upon the source not being subject to the New Source Performance Standards (NSPS) for Secondary Brass and Bronze Production Plants, 40 CFR Part 60, Subpart M. Pursuant to 40 CFR 60.130(a), furnaces from which molten brass or bronze are cast into the shape of finished products, such as foundry furnaces, are not considered to be affected facilities that would be subject to the provisions of 40 CFR 60 Subpart M.

6. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Nonferrous Metals Processing Area Sources, 40 CFR 63 Subpart TTTTTT, because this source is not a secondary nonferrous metals processing facility as defined in 40 CFR 63.11472.
- 7a. Pursuant to 35 Ill. Adm. Code 212.314, 35 Ill. Adm. Code 212.301 shall not apply and spraying pursuant to 35 Ill. Adm. Code 212.304 through 212.310 and 35 Ill. Adm. Code 212.312 shall not be required when the wind speed is greater than 40.2 km/hour (25 mph). Determination of wind speed for the purposes of this rule shall be by a one-hour average or hourly recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site. In cases where the duration of operations subject to this rule is less than one hour, wind speed may be averaged over the duration of the operations on the basis of on-site wind speed instrument measurements.
- b. Pursuant to 35 Ill. Adm. Code 212.681, 35 Ill. Adm. Code 212.321 and 212.322 shall not apply to the following industries, which shall be subject to 35 Ill. Adm. Code 212 Subpart K (Fugitive Particulate Matter):
 - i. Grinding;
 - ii. Sandblasting or shotblasting.
- 8a. Pursuant to 40 CFR 63.11550(a), if you own or operate new or existing affected sources (the collection of affected non-ferrous foundry melting operations) at an aluminum foundry, copper foundry, or other nonferrous foundry that is subject to 40 CFR 63 Subpart ZZZZZZ, you must comply with the requirements in 40 CFR 63.11550(a)(1) through (3).
 - i. Cover or enclose each melting furnace that is equipped with a cover or enclosure during the melting operation to the extent practicable (e.g., except when access is needed; including, but not limited to charging, alloy addition, and tapping).
 - ii. Purchase only metal scrap that has been depleted (to the extent practicable) of aluminum foundry HAP, copper foundry HAP, or other nonferrous foundry HAP (as applicable) in the materials charged to the melting furnace, except metal scrap that is purchased specifically for its HAP metal content for use in alloying or to meet specifications for the casting. This requirement does not apply to material that is not scrap (e.g., ingots, alloys, sows) or to materials that are not purchased (e.g., internal scrap, customer returns).
 - iii. Prepare and operate pursuant to a written management practices plan. The management practices plan must include the required management practices in 40 CFR 63.11550(a)(1) and (2) and may include any other management practices that are implemented at

the facility to minimize emissions from melting furnaces. You must inform your appropriate employees of the management practices that they must follow. You may use your standard operating procedures as the management practices plan provided the standard operating procedures include the required management practices in 40 CFR 63.11550(a)(1) and (2).

- b. Pursuant to 40 CFR 63.11555, (for the collection of affected non-ferrous foundry melting operations) Table 1 to 40 CFR 63 Subpart ZZZZZZ (see Attachment B) shows which parts of the General Provisions in 40 CFR 63.1 through 63.16 applies to you.
- 9a. Pursuant to 35 Ill. Adm. Code 212.306, all normal traffic pattern access areas surrounding storage piles specified in 35 Ill. Adm. Code 212.304 and all normal traffic pattern roads and parking facilities which are located on mining or manufacturing property shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program required by 35 Ill. Adm. Code 212.309, 212.310 and 212.312.
- b. Pursuant to 35 Ill. Adm. Code 212.307, all unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods.
- c. Pursuant to 35 Ill. Adm. Code 212.308, crushers, grinding mills, screening operations, bucket elevators, conveyor transfer points, conveyors, bagging operations, storage bins and fine product truck and railcar loading operations shall be sprayed with water or a surfactant solution, utilize choke-feeding or be treated by an equivalent method in accordance with an operating program.
- d. Pursuant to 35 Ill. Adm. Code 212.309(a), the emission units described in 35 Ill. Adm. Code 212.304 through 212.308 and 35 Ill. Adm. Code 212.316 shall be operated under the provisions of an operating program, consistent with the requirements set forth in 35 Ill. Adm. Code 212.310 and 212.312, and prepared by the owner or operator and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions.
- e. Pursuant to 35 Ill. Adm. Code 212.310, as a minimum the operating program shall include the following:
 - i. The name and address of the source;
 - ii. The name and address of the owner or operator responsible for execution of the operating program;
 - iii. A map or diagram of the source showing approximate locations of storage piles, conveyor loading operations, normal traffic

pattern access areas surrounding storage piles and all normal traffic patterns within the source;

- iv. Location of unloading and transporting operations with pollution control equipment;
 - v. A detailed description of the best management practices utilized to achieve compliance with 35 Ill. Adm. Code 212 Subpart K, including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals and dust suppressants utilized and equivalent methods utilized;
 - vi. Estimated frequency of application of dust suppressants by location of materials; and
 - vii. Such other information as may be necessary to facilitate the Illinois EPA's review of the operating program.
- f. Pursuant to 35 Ill. Adm. Code 212.312, the operating program shall be amended from time to time by the owner or operator so that the operating program is current. Such amendments shall be consistent with 35 Ill. Adm. Code 212 Subpart K and shall be submitted to the Illinois EPA for its review.
- 10a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- b. The baghouse and dust collectors shall be in operation at all times when the associated emission units are in operation and emitting air contaminants.
 - c. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the baghouse and dust collectors such that the baghouse and dust collectors are kept in proper working condition and not causes a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
 - d. The comfort/process heat units shall only be operated with natural gas as the fuel. The use of any other fuel in the comfort/process heat units requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- 11a. Emissions and operation of metal foundry operations shall not exceed the following limits:

<u>Equipment</u>	<u>Metal Throughput</u>		<u>Pollutant</u>	<u>Emission Factor (lb/Ton)</u>	<u>Emissions</u>	
	<u>(T/Mo)</u>	<u>(T/Yr)</u>			<u>(lb/Mo)</u>	<u>(T/Yr)</u>
Brass Melting w/ Dust Collection	3,668	36,680	PM	7.00	2,570.0	12.83
			PM ₁₀	0.70	256.0	1.28
			Pb	0.35	128.0	0.64
			Se	0.070	24.0	0.12
Pouring/Casting w/ Dust Collection (Site Wide)	3,403	34,039	NO _x	0.01	34.0	0.17
			PM	4.20	1,429.3	7.15
			PM ₁₀	2.06	701.0	3.51
			SO ₂	0.02	68.1	0.34
			VOM	0.14	476.4	2.38
			Pb	0.21	71.5	0.36
			Se	0.04	13.6	0.07
Casting Cooling w/ Dust Collection	3,403	34,039	PM	2.80	952.8	4.77
			PM ₁₀	1.40	476.4	2.38
			Pb	0.14	47.6	0.24
			Se	0.02	6.8	0.03
Casting Shakeout w/ Dust Collection	3,668	36,680	PM	3.20	1,172.0	5.86
			PM ₁₀	3.20	1,172.0	5.86
			VOM	1.20	4,400.0	22.00
			Pb	0.16	58.0	0.29
			Se	0.03	10.0	0.05
Sand System with Dust Collection	3,669	36,690	PM	12.00	4,402.0	22.01
			PM ₁₀	6.00	2,200.0	11.00
			Pb	0.60	220.0	1.10
			Se	0.12	44.0	0.22
Shell Core Machines	134	1,346	NO _x	0.50	66.0	0.33
			SO _x	0.32	42.0	0.21
Core Sand Muller	235	2,355	NO _x	0.50	116.0	0.58
			PM	2.71	638.0	3.19
			PM ₁₀	2.22	522.0	2.61
Fiberglass Mold Making	1.1	11	PM	1.10	1.0	0.003
			PM ₁₀	0.60	1.0	0.001
			VOM	35.00	38.4	0.192
			Styrene	35.00	38.4	0.192
Bond Silo Hours of Operations	120	1,202	PM	3.00	36.0	0.18
			PM ₁₀	1.50	18.0	0.09

<u>Equipment</u>	<u>Hours of Operations</u>		<u>Pollutant</u>	<u>Emission Factor (lb/Ton)</u>	<u>Emissions</u>	
	<u>Hrs/Mo</u>	<u>Hrs/Yr</u>			<u>(lb/Mo)</u>	<u>(T/Yr)</u>
System Sand Silos	293	2,938	PM	3.00	88.0	0.44
			PM ₁₀	1.50	44.0	0.22
Core Sand Silos	355	3,557	PM	3.00	106.0	0.53
			PM ₁₀	1.50	52.0	0.26
<u>Natural Gas Usage</u>						
	<u>mmscf/Mo</u>	<u>mmscf/Yr</u>	<u>Pollutant</u>	<u>lbs/mmscft</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
Comfort/Process Heat	27.614	220.912	CO	84.00	1.16	9.28
			NO _x	100.00	1.38	11.05
			PM	7.60	0.11	0.84
			PM ₁₀	7.60	0.11	0.84
			SO ₂	0.60	0.01	0.07
			VOM	5.50	0.08	0.61
			HAPs	1.88	0.03	0.21
	<u>Ton/Mo</u>	<u>Ton/Yr</u>	<u>Pollutant</u>	<u>(lb/Ton)</u>	<u>(lb/Mo)</u>	<u>(T/Yr)</u>
Concentrator Mill w/ Dust Collection	264	2,641	PM	1.13	28.0	0.14
			PM ₁₀	0.56	14.0	0.07
			Pb	0.05	1.4	0.007
			Se	0.01	1.0	0.001
	<u>Ton/Mo</u>	<u>Ton/Yr</u>	<u>Pollutant</u>	<u>(lb/Ton)</u>	<u>(lb/Mo)</u>	<u>(T/Yr)</u>
Abrasive Cut-Off Saw w/Dust Collection	1,834	18,340	PM	1.13	206.0	1.03
			PM ₁₀	0.56	102.0	0.51
			Pb	0.05	10.0	0.05
			Se	0.01	2.0	0.01
	<u>Ton/Mo</u>	<u>Ton/Yr</u>	<u>Pollutant</u>	<u>(lb/Ton)</u>	<u>(lb/Mo)</u>	<u>(T/Yr)</u>
Grinding w/Duct Collection	1,467	14,672	PM	1.13	166.0	0.83
			PM ₁₀	0.56	82.0	0.41
			Pb	0.05	8.0	0.04
			Se	0.11	1.6	0.008
	<u>Ton/Mo</u>	<u>Ton/Yr</u>	<u>Pollutant</u>	<u>(lb/Ton)</u>	<u>(lb/Mo)</u>	<u>(T/Yr)</u>
Tumble Blast Machine w/Dust Collection	3,668	36,680	PM	1.13	414.0	2.07
			PM ₁₀	0.56	206.0	1.03
			Pb	0.05	20.0	0.10
			Se	0.01	4.0	0.02

Total Emissions (Tons/Year)									Combined
<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>PM₁₀</u>	<u>SO_x</u>	<u>Pb</u>	<u>Se</u>	<u>VOM</u>	<u>Styrene</u>	<u>HAPs</u>
9.28	12.13	61.87	30.07	0.62	2.83	0.53	25.18	0.19	3.76

These limits are based on representations of the maximum production rates, the use of standard emission factors (Factor Information Retrieval (FIRE), Version 6.25, September 2004), and manufacturer's control efficiencies for the dust collectors.

- b. This permit is issued based on negligible emissions of particulate matter (PM) from 1 bond and 2 sand silos with dust collection. For this purpose emissions from each emission source, shall not exceed nominal emission rates of 0.1 lbs/hour and 0.44 tons/year.
 - c. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 12a. Pursuant to 40 CFR 63.11551(b), if you own or operate an existing affected source (the collection of affected non-ferrous foundry melting operations) at a large copper or other nonferrous foundry that is subject to 40 CFR 63.11550(b), you are not required to conduct a performance test if a prior performance test was conducted within the past 5 years of the compliance date using the same methods specified in 40 CFR 63.11551(c) and you meet either of the following two conditions:
- i. No process changes have been made since the test; or
 - ii. You demonstrate to the satisfaction of the permitting authority that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.
- b. Pursuant to 40 CFR 63.11551(c), (for the collection of affected non-ferrous foundry melting operations) you must conduct each performance test according to the requirements in 40 CFR 63.7 and the requirements in 40 CFR 63.11551(c)(1) and (2).
- i. You must determine the concentration of PM (for the concentration standard) or the mass rate of PM in pounds per hour at the inlet and outlet of the control device (for the percent reduction standard) according to the following test methods:
 - A. Method 1 or 1A (40 CFR Part 60, Appendix A-1) to select sampling port locations and the number of traverse points in each stack or duct. If you are complying with the concentration provision in 40 CFR 63.11550(b), sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere. If you are complying with the percent reduction provision in 40 CFR

63.11550(b), sampling sites must be located at the inlet and outlet of the control device and prior to any releases to the atmosphere.

- B. Method 2, 2A, 2C, 2D, 2F (40 CFR Part 60, Appendix A-1), or Method 2G (40 CFR Part 60, Appendix A-2) to determine the volumetric flow rate of the stack gas.
 - C. Method 3, 3A, or 3B (40 CFR Part 60, Appendix A-2) to determine the dry molecular weight of the stack gas. You may use ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses" as an alternative to EPA Method 3B.
 - D. Method 4 (40 CFR Part 60, Appendix A-3) to determine the moisture content of the stack gas.
 - E. Method 5 or 5D (40 CFR Part 60, Appendix A-3) or Method 17 (40 CFR Part 60, Appendix A-6) to determine the concentration of PM or mass rate of PM (front half filterable catch only). If you choose to comply with the percent reduction PM standard, you must determine the mass rate of PM at the inlet and outlet in pounds per hour and calculate the percent reduction in PM.
- ii. Three valid test runs are needed to comprise a performance test. Each run must cover at least one production cycle (charging, melting, and tapping).
 - iii. For a source with a single control device exhausted through multiple stacks, you must ensure that three runs are performed by a representative sampling of the stacks satisfactory to the Administrator or his or her delegated representative. You must provide data or an adequate explanation why the stack(s) chosen for testing are representative.
- 13a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
- i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA

Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.

- ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Condition 14 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
- 14. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
- 15a. Pursuant to 40 CFR 63.11552(a), (for the collection of affected non-ferrous foundry melting operations) you must record the information specified in 40 CFR 63.11553(c)(2) to document conformance with the management practices plan required in 40 CFR 63.11550(a).
- b. Pursuant to 40 CFR 63.11552(b), (for the collection of affected non-ferrous foundry melting operations) except as specified in 40 CFR 63.11552(b)(3), if you own or operate an existing affected source at a large foundry, you must conduct visible emissions monitoring according to the requirements in 40 CFR 63.11552(b)(1) and (2).
 - i. You must conduct visual monitoring of the fabric filter discharge point(s) (outlets) for any VE according to the schedule specified in 40 CFR 63.11552(b)(1)(i) and (ii).
 - A. You must perform a visual determination of emissions once per day, on each day the process is in operation, during melting operations.
 - B. If no VE are detected in consecutive daily visual monitoring performed in accordance with 40 CFR 63.11552(b)(1)(i) for 30 consecutive days or more of operation of the process, you may decrease the frequency of visual monitoring to once per calendar week of time the process is in operation, during melting operations. If VE

are detected during these inspections, you must resume daily visual monitoring of that operation during each day that the process is in operation, in accordance with 40 CFR 63.11552(b)(1)(i) until you satisfy the criteria of 40 CFR 63.11552 to resume conducting weekly visual monitoring.

- ii. If the visual monitoring reveals the presence of any VE, you must initiate procedures to determine the cause of the emissions within 1 hour of the initial observation and alleviate the cause of the emissions within 3 hours of initial observation by taking whatever corrective action(s) are necessary. You may take more than 3 hours to alleviate a specific condition that causes VE if you identify in the monitoring plan this specific condition as one that could lead to VE in advance, you adequately explain why it is not feasible to alleviate this condition within 3 hours of the time the VE occurs, and you demonstrate that the requested time will ensure alleviation of this condition as expeditiously as practicable.
 - iii. As an alternative to the monitoring requirements for an existing affected source in 40 CFR 63.11552(b)(1) and (2), you may install, operate, and maintain a bag leak detection system for each fabric filter according to the requirements in 40 CFR 63.11552(c).
- c. Pursuant to 40 CFR 63.11552(c), if you own or operate a new affected source (the collection of affected non-ferrous foundry melting operations) located at a large foundry subject to the PM requirements in 40 CFR 63.11550(b)(2) that is equipped with a fabric filter, you must install, operate, and maintain a bag leak detection system for each fabric filter according to 40 CFR 63.11552(c)(1) through (4).
- i. Each bag leak detection system must meet the specifications and requirements in 40 CFR 63.11552(c)(1)(i) through (viii).
 - A. The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.
 - B. The bag leak detection system sensor must provide output of relative PM loadings. You must continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger).
 - C. The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to 40 CFR 63.11552(c)(1)(iv), and the alarm must be located such that it can be heard by the appropriate plant personnel.

- D. In the initial adjustment of the bag leak detection system, you must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.
 - E. Following initial adjustment, you must not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority, except as provided in 40 CFR 63.11552(c)(1)(vi).
 - F. Once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by 40 CFR 63.11552(c)(2).
 - G. You must install the bag leak detection sensor downstream of the fabric filter.
 - H. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- ii. You must prepare a site-specific monitoring plan for each bag leak detection system. You must operate and maintain each bag leak detection system according to the plan at all times. Each monitoring plan must describe the items in 40 CFR 63.11552(c)(2)(i) through (vi).
- A. Installation of the bag leak detection system;
 - B. Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point and alarm delay time will be established;
 - C. Operation of the bag leak detection system, including quality assurance procedures;
 - D. How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;
 - E. on the bag leak detection system output will be recorded and stored; and
 - F. Corrective action procedures as specified in 40 CFR 63.11552(c)(3).
- iii. Except as provided in 40 CFR 63.11552(c)(4), you must initiate procedures to determine the cause of every alarm from a bag leak detection system within 1 hour of the alarm and alleviate the

cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to, the following:

- A. Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;
 - B. Sealing off defective bags or filter media;
 - C. Replacing defective bags or filter media, or otherwise repairing the control device;
 - D. Sealing off a defective fabric filter compartment;
 - E. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; or
- iv. You may take more than 3 hours to alleviate a specific condition that causes an alarm if you identify in the monitoring plan this specific condition as one that could lead to an alarm, adequately explain why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrate that the requested time will ensure alleviation of this condition as expeditiously as practicable.
16. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR

63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

17a. Pursuant to 40 CFR 63.11553(c), (for the collection of affected non-ferrous foundry melting operations) you must keep the records specified in 40 CFR 63.11553(c)(1) through (5).

i. As required in 40 CFR 63.10(b)(2)(xiv), you must keep a copy of each notification that you submitted to comply with 40 CFR 63 Subpart ZZZZZZ and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.

ii. You must keep records to document conformance with the management practices plan required by 40 CFR 63.11550 as specified in 40 CFR 63.11553(c)(2)(i) and (ii).

A. For melting furnaces equipped with a cover or enclosure, records must identify each melting furnace equipped with a cover or enclosure and document that the procedures in the management practices plan were followed during the monthly inspections. These records may be in the form of a checklist.

B. Records documenting that you purchased only metal scrap that has been depleted of HAP metals (to the extent practicable) charged to the melting furnace. If you purchase scrap metal specifically for the HAP metal content for use in alloying or to meet specifications for the casting, you must keep records to document that the HAP metal is included in the material specifications for the cast metal product.

iii. You must keep the records of all performance tests, inspections and monitoring data required by 40 CFR 63.11551 and 63.11552, and the information identified in 40 CFR 63.11553(c)(3)(i) through (vi) for each required inspection or monitoring.

A. The date, place, and time of the monitoring event;

B. Person conducting the monitoring;

C. Technique or method used;

D. Operating conditions during the activity;

E. Results, including the date, time, and duration of the period from the time the monitoring indicated a problem (e.g., VE) to the time that monitoring indicated proper operation; and

- F. Maintenance or corrective action taken (if applicable).
- iv. If you use a bag leak detection system, you must keep the records specified in 40 CFR 63.11553(c)(5)(i) through (iii).
 - A. Records of the bag leak detection system output.
 - B. Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings.
 - C. The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.
- b. Pursuant to 40 CFR 63.11553(d), (for the collection of affected non-ferrous foundry melting operations) your records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). As specified in 40 CFR 63.10(b)(1), you must keep each record for 5 years following the date of each recorded action. For records of annual metal melt production, you must keep the records for 5 years from the end of the calendar year. You must keep each record onsite for at least 2 years after the date of each recorded action according to 40 CFR 63.10(b)(1). You may keep the records offsite for the remaining 3 years.
- 18. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 IAC Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 19a. The Permittee shall maintain records of the following items, and such other items as may be appropriate to allow the Illinois EPA to review compliance with the limits in this permit.
 - i. Records addressing the application of control measures taken pursuant to the operating program required by Condition 9(d) which are used to reduce fugitive particulate matter emissions.
 - ii. Records addressing use of good operating practices for the dust collectors:
 - A. Operating logs for the dust collectors, including operating data (pressure drop or stack condition), daily upon startup;
 - B. Records for periodic inspection of the dust collectors with date, individual performing the inspection, and nature of inspection; and

- C. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
 - iii. Brass casting production (tons/month and tons/year);
 - iv. Copper Based Alloy production (tons/month and tons/year);
 - v. Amount of bond and sand used (tons/month and tons/year);
 - vi. Natural gas usage for the source (mmscf/month and mmscf/year); and
 - vii. Monthly and annual CO, NO_x, NH₃, PM, PM₁₀, SO₂, VOM, and HAPs (e.g., Pb, Se, Styrene, etc) from the source, with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years after the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to the Illinois EPA or USEPA request for records during the course of a source inspection.
- 20a. Pursuant to 40 CFR 63.11553(b), (for the collection of affected non-ferrous foundry melting operations) you must submit the Notification of Compliance Status required by 40 CFR 63.9(h) no later than 120 days after the applicable compliance date specified in 40 CFR 63.11545 unless you must conduct a performance test. If you must conduct a performance test, you must submit the Notification of Compliance Status within 60 days of completing the performance test. Your Notification of Compliance Status must indicate if you are a small or large foundry as defined in 40 CFR 63.11556, the production amounts as the basis for the determination, and if you are a large foundry, whether you elect to comply with the control efficiency requirement or PM concentration limit in 40 CFR 63.11550(b). In addition to the information required in 40 CFR 63.9(h)(2) and 40 CFR 63.11551, your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:
- i. "This facility will operate in a manner that minimizes HAP emissions from the melting operations to the extent possible. This includes at a minimum that the owners and/or operators of the affected source will cover or enclose each melting furnace that is equipped with a cover or enclosure during melting operations to the extent practicable as required in 40 CFR 63.11550(a)(1)."
 - ii. "This facility agrees to purchase only metal scrap that has been depleted (to the extent practicable) of aluminum foundry HAP, copper foundry HAP, or other nonferrous foundries HAP (as

applicable) in the materials charged to the melting furnace, except for metal scrap that is purchased specifically for its HAP metal content for use in alloying or to meet specifications for the casting as required by 40 CFR 63.11550(a)(2)."

- iii. "This facility has prepared and will operate by a written management practices plan according to 40 CFR 63.11550(a)(3)."
 - iv. If the owner or operator of an existing affected source at a large foundry is certifying compliance based on the results of a previous performance test: "This facility complies with 40 CFR 63.11550(b) based on a previous performance test in accordance with 40 CFR 63.11551(b)."
 - v. This certification of compliance is required by the owner or operator that installs bag leak detection systems: "This facility has installed a bag leak detection system in accordance with 40 CFR 63.11552(b)(3) or (c), has prepared a bag leak detection system monitoring plan in accordance with 40 CFR 63.11552(c), and will operate each bag leak detection system according to the plan."
- b. Pursuant to 40 CFR 63.11553(e), (for the collection of affected non-ferrous foundry melting operations) if a deviation occurs during a semiannual reporting period, you must submit a compliance report to your permitting authority according to the requirements in 40 CFR 63.11553(e)(1) and (2).
- i. The first reporting period covers the period beginning on the compliance date specified in 40 CFR 63.11545 and ending on June 30 or December 31, whichever date comes first after your compliance date. Each subsequent reporting period covers the semiannual period from January 1 through June 30 or from July 1 through December 31. Your compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.
 - ii. A compliance report must include the information in 40 CFR 63.11553(e)(2)(i) through (iv).
 - A. Company name and address.
 - B. Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy and completeness of the content of the report.
 - C. Date of the report and beginning and ending dates of the reporting period.
 - D. Identification of the affected source, the pollutant being monitored, applicable requirement, description of deviation, and corrective action taken.

21. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 22a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.
- b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control - Region 3
2009 Mall Street
Collinsville, Illinois 62234

It should be noted that this permit has been revised to incorporate the operation of the equipment in Construction Permits 12070045 and 13030023.

If you have any questions on this, please call German Barria at 217/785-1705.

Raymond E. Pilapil
Acting Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

REP:GB:psj

cc: Illinois EPA, FOS Region 3
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the brass foundry operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels, (e.g., 100 tons per year for PM₁₀, 10 tons/year for any single HAP, and 25 tons/year for any combination of HAPs) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)						Single	Combined
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>VOM</u>	<u>HAP</u>	<u>HAPs</u>
Brass Melting w/ Dust Collector			12.83	1.28			0.64 ¹	0.76
Pouring/Casting w/ Dust Collection		0.17	7.15	3.51	0.34	2.38	0.36 ¹	0.43
Casting Cooling w/ Dust Collection			4.77	2.38			0.24 ¹	0.27
Casting Shakeout w/ Dust Collection			5.86	5.86		22.00	0.29 ¹	0.34
Sand System with Dust Collection			22.01	11.00			1.10 ¹	1.32
Shell Core Machines		0.33			0.21			
Core Ovens with Core Sand Muller		0.58	3.19	2.61				
Fiberglass Mold Making			0.003	0.001		0.192	0.19 ²	0.19
Bond Silo			0.18	0.09				
System Sand Silos			0.44	0.22				
Core Sand Silos			0.53	0.26				
Comfort/Process Heat	9.28	11.05	0.84	0.84	0.07	0.61		0.21
Concentrator Mill w/Dust Collection			0.14	0.07			0.01 ¹	0.01
Abrasive Cut-Off Saw w/Dust Collection			1.03	0.51			0.05 ¹	0.06
Grinding w/Duct Collection			0.83	0.41			0.04 ¹	0.05
Tumble Blast Machine w/Dust Collection			2.07	1.03			0.10 ¹	0.12
Totals	9.28	12.13	61.87	30.07	0.62	25.18	2.83 ¹	3.76

¹ Lead (Pb).

² Styrene.

GB:psj

Attachment B - Table 1 to Subpart ZZZZZZ of Part 63-Applicability of General Provisions to Aluminum, Copper, and Other Nonferrous Foundries Area Sources

As required in 40 CFR 63.11555, "What General Provisions apply to this subpart?," you must comply with each requirement in the following table that applies to you.

Citation	Subject	Applies to subpart ZZZZZZ?	Explanation
§63.1(a)(1), (a)(2), (a)(3), (a)(4), (a)(6), (a)(10)-(a)(12), (b)(1), (b)(3), (c)(1), (c)(2), (c)(5), (e)	Applicability	Yes	40 CFR 63.11544(f) exempts affected sources from the obligation to obtain a Title V operating permit.
§63.1(a)(5), (a)(7)-(a)(9), (b)(2), (c)(3), (c)(4), (d)	Reserved	No	
§63.2	Definitions	Yes	
§63.3	Units and Abbreviations	Yes	
§63.4	Prohibited Activities and Circumvention	Yes	
§63.5	Preconstruction Review and Notification Requirements	Yes	
§63.6(a), (b)(1)-(b)(5), (b)(7), (c)(1), (c)(2), (c)(5), (e)(1), (e)(3)(i), (e)(3)(iii)-(e)(3)(ix), (f)(2), (f)(3), (g), (i), (j)	Compliance with Standards and Maintenance Requirements	Yes	
§63.6(f)(1)	Compliance with Nonopacity Emission Standards	No	Subpart ZZZZZZ requires continuous compliance with all requirements in this subpart.
§63.6(h)(1), (h)(2), (h)(5)-(h)(9)	Compliance with Opacity and Visible Emission Limits	No	Subpart ZZZZZZ does not contain opacity or visible emission limits.
§63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv)	Reserved	No	
§63.7	Applicability and Performance Test Dates	Yes	

Citation	Subject	Applies to subpart ZZZZZZ?	Explanation
§63.8(a)(1), (b)(1), (f)(1)-(5), (g)	Monitoring Requirements	Yes	
§63.8(a)(2), (a)(4), (b)(2)-(3), (c), (d), (e), (f)(6), (g)	Continuous Monitoring Systems	No	Subpart ZZZZZZ does not require a flare or CPMS, COMS or CEMS.
§63.8(a)(3)	[Reserved]	No	
§63.9(a), (b)(1), (b)(2)(i)-(iii), (b)(5), (c), (d), (e), (h)(1)-(h)(3), (h)(5), (h)(6), (j)	Notification Requirements	Yes	Subpart ZZZZZZ requires submission of Notification of Compliance Status within 120 days of compliance date unless a performance test is required.
§63.9(b)(2)(iv)-(v), (b)(4), (f), (g), (i)	No		
§63.9(b)(3), (h)(4)	Reserved	No	
§63.10(a), (b)(1), (b)(2)(i)-(v), (vii), (vii)(C), (viii), (ix), (b)(3), (d)(1)-(2), (d)(4), (d)(5), (f)	Recordkeeping and Reporting Requirements	Yes	
§63.10(b)(2)(vi), (b)(2)(vii)(A)-(B), (c), (d)(3), (e)	No	Subpart ZZZZZZ does not require a CPMS, COMS, CEMS, or opacity or visible emissions limit.	
§63.10(c)(2)-(c)(4), (c)(9)	Reserved	No	
§63.11	Control Device Requirements	No	
§63.12	State Authority and Delegations	Yes	
§§63.13-63.16	Addresses, Incorporations by Reference, Availability of Information, Performance Track Provisions	Yes	