



- ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source excluded from the requirements of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits for this location.
- 2a. The three electric induction furnaces (ROSIE, BLANCH and PHYLIS) are subject to the New Source Performance Standard (NSPS) for Secondary Brass and Bronze Production Plants, 40 CFR 60, Subparts A and M. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Pursuant to 40 CFR 60.132(a), on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60 Subpart M shall discharge or cause the discharge into the atmosphere from a reverberatory furnace any gases which:
  - i. Contain particulate matter in excess of 50 mg/dscm (0.022 gr/dscf).
  - ii. Exhibit 20 percent opacity or greater.
- c. Pursuant to 40 CFR 60.132(b), on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60 Subpart M shall discharge or cause the discharge into the atmosphere from any blast (cupola) or electric furnace any gases which exhibit 10 percent opacity or greater.
- 3a. The brass and bronze ingot furnace melting operations at this source are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Nonferrous Metals Processing Area Sources, 40 CFR 63 Subparts A and TTTTTT. The Illinois EPA is administering the NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.
- b. Pursuant to 40 CFR 63.11465(a), you must route the emissions from each existing affected source through a fabric filter or baghouse that achieves a particulate matter (PM) control efficiency of at least 99.0 percent or 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)).
- 4a. 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 m (1000 ft) 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 212.306, 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.
- e. 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.
- f. Pursuant to 35 Ill. Adm. Code 212.309(a), the emission units described in 35 Ill. Adm. Code 212.304 through 212.308 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.
- g. 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.
- h. Pursuant to 35 Ill. Adm. Code 212.321(a), 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).
5. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to excess 2000 ppm.
6. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart G shall only apply to photochemically reactive material.
7. This is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Copper Smelting Area Sources, 40 CFR 63 Subpart FFFFFFFF. Pursuant to 40 CFR 63.11153(b), 40 CFR 63 Subpart FFFFFFFF applies to each new affected source. The affected source is each secondary copper smelter. a secondary copper smelter is a new affected source if you commenced construction or reconstruction of the affected source on or after October 6, 2006.
8. 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/hr (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.

9. This permit is issued based on the source not being subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units). This is a result of the federally enforceable production and operating limitations, which restrict the potential to emit for VOM to less than 25 tons per year.
10. Pursuant to 40 CFR 60.11(d), at all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- 11a.
  - i. Pursuant to 40 CFR 63.6(e)(1)(i), at all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Illinois EPA or USEPA which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in 40 CFR 63.6(e)(3)), review of operation and maintenance records, and inspection of the source.
  - ii. Pursuant to 40 CFR 63.6(e)(1)(ii), malfunctions must be corrected as soon as practicable after their occurrence. To the extent

that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

- b. Pursuant to 40 CFR 63.6(f)(1), the non-opacity emission standards set forth in 40 CFR Part 63 shall apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the non-opacity emission standards set forth in 40 CFR Part 63, then that emission point must still be required to comply with the non-opacity emission standards and other applicable requirements.
- 12a. 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 Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the baghouses and afterburners such that the baghouses and afterburners are kept in proper working condition and not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
  - c. The afterburner's combustion chamber shall be preheated to at least the manufacturer's recommended temperature but no less than the temperature at which compliance was demonstrated in the most recent compliance test, or 1400°F in the absence of a compliance test. This temperature shall be maintained during operation.
- 13a. Emissions and operation of the furnaces at this source shall not exceed the following limits:
- i. The raw material throughput of all furnaces at the plant shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Process Rate</u>	
	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
2 Rotary Furnaces (Total)	4,000	37,700
Reverberatory Furnace	950	9,500
3 Induction Furnaces (Total)	1,600	16,200
6 Crucibles (Total)	200	2,000
Roaster/Dryer	300	3,000

- ii. Emissions of all furnaces at the plant shall not exceed the following limits:

	Operating Hours (Hr/Yr)	E M I S S I O N S									
		CO		NO <sub>x</sub>		PM		SO <sub>2</sub>		VOM	
		(T/Mo)	(T/Yr)	(T/Mo)	(T/Yr)	(T/Mo)	(T/Yr)	(T/Mo)	(T/Yr)	(T/Mo)	(T/Yr)
Furnaces											
2 Rotary	12,000	0.7	6.4	0.8	7.8	1.4	13.7	0.72	0.72	1.0	9.6
Reverberatory	7,560	--	--	--	--	1.3	12.4	--	--	--	--
6 Crucibles	6,000*	0.6	5.7	0.09	0.9	0.05	0.5	0.02	0.22	0.3	2.8
Blanch											
Induction	3,840	0.06	0.6	--	--	0.05	0.5	--	--	0.2	1.73
Phyllis/Rosie											
Induction	6,000	0.4	4.2	--	--	0.05	0.5	--	--	0.3	2.7
Roasting/Drying	7,800	--	--	--	--	1.0	<u>10.0</u>	0.04	<u>0.34</u>	0.13	<u>1.3</u>
Totals			16.9		8.7		37.6		1.28		18.13

\* The Permittee may operate a bank of one to four crucibles for up to 6,000 hr/yr.

These limits are based on the maximum production rates, the maximum operating hours, emission factors derived from stack test data, and standard emission factors (Factor Information Retrieval (FIRE) version 6.25, September 2004, and Table 12.9-2, AP 42, Fifth Edition, Volume I, January 1995).

- b. This permit is issued based on negligible emissions of particulate matter from two mills and shot blaster. For this purpose, emissions from each emission source shall not exceed nominal emission rate of 0.1 lb/hour and 0.44 ton/year.
- c. Natural gas combustion shall not exceed the following limits:
  - i. Total Firing Rate: 51.5 mmBtu/hour.
  - ii. Emissions from the combustion of natural gas:

Pollutant	Emission Factor		Emissions	
	(lbs/mmscf)	(Tons/Mo)	(Tons/Mo)	(Tons/Yr)
Carbon Monoxide (CO)	84.0	1.89	1.89	18.95
Nitrogen Oxides (NO <sub>x</sub> )	100.0	2.26	2.26	22.56
Particulate Matter (PM)	7.6	0.17	0.17	1.71
Sulfur Dioxide (SO <sub>2</sub> )	0.6	0.01	0.01	0.14
Volatile Organic Material (VOM)	5.5	0.12	0.12	1.24

These limits are based on the total maximum firing rate, 8,760 hours/year of operation, and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- d. 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).
- 14a. Pursuant to 40 CFR 60.8(a), at such other times as may be required by the Illinois EPA or USEPA under section 114 of the Clean Air Act, the

owner or operator of such facility shall conduct performance test(s) and furnish the Illinois EPA or USEPA a written report of the results of such performance test(s).

- b. Pursuant to 40 CFR 60.8(b), performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart of 40 CFR Part 60 unless the Illinois EPA or USEPA:
  - i. Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;
  - ii. Approves the use of an equivalent method;
  - iii. Approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance;
  - iv. Waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Illinois EPA's or USEPA's satisfaction that the affected facility is in compliance with the standard; or
  - v. Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Illinois EPA's or USEPA's authority to require testing under section 114 of the Clean Air Act.
- c. Pursuant to 40 CFR 60.8(c), performance tests shall be conducted under such conditions as the Illinois EPA or USEPA shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Illinois EPA or USEPA such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
- d. Pursuant to 40 CFR 60.8(d), the owner or operator of an affected facility shall provide the Illinois EPA or USEPA at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Illinois EPA or USEPA the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Illinois EPA or USEPA as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled

date of the performance test, or by arranging a rescheduled date with the Illinois EPA or USEPA by mutual agreement.

- e. Pursuant to 40 CFR 60.8(e), the owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
  - i. Sampling ports adequate for test methods applicable to such facility. This includes:
    - A. Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and
    - B. Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
  - ii. Safe sampling platform(s).
  - iii. Safe access to sampling platform(s).
  - iv. Utilities for sampling and testing equipment.
- f. Pursuant to 40 CFR 60.8(f), unless otherwise specified in the applicable subpart of 40 CFR Part 60, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard under 40 CFR Part 60. For the purpose of determining compliance with an applicable standard under 40 CFR Part 60, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Illinois EPA's or USEPA's approval, be determined using the arithmetic mean of the results of the two other runs.
- 15a. Pursuant to 40 CFR 60.133(a), in conducting the performance tests required in 40 CFR 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of 40 CFR Part 60 or other methods and procedures as specified in 40 CFR 60.132, except as provided in 40 CFR 60.8(b).
- b. Pursuant to 40 CFR 60.133(b), the owner or operator shall determine compliance with the particulate matter standards in 40 CFR 60.132 as follows:
  - i. Method 5 shall be used to determine the particulate matter concentration during representative periods of charging and

refining, but not during pouring of part of the production cycle. The sampling time and sample volume for each run shall be at least 120 minutes and 1.80 dscm (63.6 dscf)

- ii. Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.
- 16a. Pursuant to 40 CFR 63.7(a)(2), except as provided in 40 CFR 63.7(a)(4), if required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under 40 CFR 63.7 or the conditions of 40 CFR 63.7(c)(3)(ii)(B) apply, the owner or operator of the affected source must perform such tests within 180 days of the compliance date for such source.
- b. i. Pursuant to 40 CFR 63.7(b)(1), the owner or operator of an affected source must notify the Illinois EPA or USEPA in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Illinois EPA or USEPA, upon request, to review and approve the site-specific test plan required under 40 CFR 63.7(c) and to have an observer present during the test.
  - ii. Pursuant to 40 CFR 63.7(b)(2), in the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in 40 CFR 63.7(b)(1) due to unforeseeable circumstances beyond his or her control, the owner or operator must notify the Illinois EPA or USEPA as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. This notification of delay in conducting the performance test shall not relieve the owner or operator of legal responsibility for compliance with any other applicable provisions of 40 CFR Part 63 or with any other applicable Federal, State, or local requirement, nor will it prevent the Illinois EPA or USEPA from implementing or enforcing 40 CFR Part 63 or taking any other action under the Clean Air Act.
- c. i. Pursuant to 40 CFR 63.7(c)(2)(i), before conducting a required performance test, the owner or operator of an affected source shall develop and, if requested by the Illinois EPA or USEPA, shall submit a site-specific test plan to the Illinois EPA or USEPA for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. Data quality objectives are the pretest expectations of precision, accuracy, and completeness of data.
  - ii. Pursuant to 40 CFR 63.7(c)(2)(ii), the internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision; an example of internal QA is the sampling and analysis of replicate samples.

- iii. Pursuant to 40 CFR 63.7(c)(2)(iii), the external QA program shall include, at a minimum, application of plans for a test method performance audit (PA) during the performance test. The PA's consist of blind audit samples provided by the Illinois EPA or USEPA and analyzed during the performance test in order to provide a measure of test data bias. The external QA program may also include systems audits that include the opportunity for on-site evaluation by the Illinois EPA or USEPA of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.
  - iv. Pursuant to 40 CFR 63.7(c)(2)(iv), the owner or operator of an affected source shall submit the site-specific test plan to the Illinois EPA or USEPA upon the Illinois EPA's or USEPA's request at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under 40 CFR 63.7(b), or on a mutually agreed upon date.
  - v. Pursuant to 40 CFR 63.7(c)(2)(v), the Illinois EPA or USEPA may request additional relevant information after the submittal of a site-specific test plan.
- d. Pursuant to 40 CFR 63.7(c)(4)(i), the owner or operator must analyze performance audit (PA) samples during each performance test. The owner or operator must request performance audit materials 30 days prior to the test date. Audit materials including cylinder audit gases may be obtained by contacting the appropriate EPA Regional Office or the responsible enforcement authority.
  - e. Pursuant to 40 CFR 63.7(d), if required to do performance testing, the owner or operator of each new source and, at the request of the Illinois EPA or USEPA, the owner or operator of each existing source, shall provide performance testing facilities as follows:
    - i. Sampling ports adequate for test methods applicable to such source. This includes:
      - A. Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and
      - B. Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;
    - ii. Safe sampling platform(s);
    - iii. Safe access to sampling platform(s);

- iv. Utilities for sampling and testing equipment; and
- v. Any other facilities that the Illinois EPA or USEPA deems necessary for safe and adequate testing of a source.
- f.
  - i. Pursuant to 40 CFR 63.7(e)(1), performance tests shall be conducted under such conditions as the Illinois EPA or USEPA specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, and malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under 40 CFR 63.6(e). Upon request, the owner or operator shall make available to the Illinois EPA or USEPA such records as may be necessary to determine the conditions of performance tests.
  - ii. Pursuant to 40 CFR 63.7(e)(2), performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in 40 CFR 63.7, in each relevant standard, and, if required, in applicable appendices of 40 CFR Parts 51, 60, 61, and 63 unless the Illinois EPA or USEPA—
    - A. Specifies or approves, in specific cases, the use of a test method with minor changes in methodology (see definition in 40 CFR 63.90(a)). Such changes may be approved in conjunction with approval of the site-specific test plan (see 40 CFR 63.7(c)); or
    - B. Approves the use of an intermediate or major change or alternative to a test method (see definitions in 40 CFR 63.90(a)), the results of which the Illinois EPA or USEPA has determined to be adequate for indicating whether a specific affected source is in compliance; or
    - C. Approves shorter sampling times or smaller sample volumes when necessitated by process variables or other factors; or
    - D. Waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Illinois EPA's or USEPA's satisfaction that the affected source is in compliance with the relevant standard.
  - iii. Pursuant to 40 CFR 63.7(e)(3), unless otherwise specified in a relevant standard or test method, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions

specified in the relevant standard. For the purpose of determining compliance with a relevant standard, the arithmetic mean of the results of the three runs shall apply. Upon receiving approval from the Illinois EPA or USEPA, results of a test run may be replaced with results of an additional test run in the event that—

- A. A sample is accidentally lost after the testing team leaves the site; or
  - B. Conditions occur in which one of the three runs must be discontinued because of forced shutdown; or
  - C. Extreme meteorological conditions occur; or
  - D. Other circumstances occur that are beyond the owner or operator's control.
- iv. Pursuant to 40 CFR 63.7(e)(4), nothing in 40 CFR 63.7(e)(1) through (e)(3) shall be construed to abrogate the Illinois EPA's or USEPA's authority to require testing under Section 114 of the Clean Air Act.
- g. i. Pursuant to 40 CFR 63.7(g)(1), unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Illinois EPA or USEPA in writing, results of a performance test shall include the analysis of samples, determination of emissions, and raw data. A performance test is "completed" when field sample collection is terminated. The owner or operator of an affected source shall report the results of the performance test to the Illinois EPA or USEPA before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Illinois EPA or USEPA (see 40 CFR 63.9(i)). The results of the performance test shall be submitted as part of the notification of compliance status required under 40 CFR 63.9(h). Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the Illinois EPA or USEPA. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the appropriate permitting authority.
- ii. Pursuant to 40 CFR 63.7(g)(3), for a minimum of 5 years after a performance test is conducted, the owner or operator shall retain and make available, upon request, for inspection by the Illinois EPA or USEPA the records or results of such performance test and other data needed to determine emissions from an affected source.
- 17a. Pursuant to 40 CFR 63.11466(a), except as specified in 40 CFR 63.11466(b), if you own or operate an existing or new affected source,

you must conduct a performance test for each affected source within 180 days of your compliance date and report the results in your notification of compliance status.

- b. Pursuant to 40 CFR 63.11466(b), if you own or operate an existing affected source, 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 63.11466(c) and you meet either of the following two conditions:
  - i. No process changes have been made since the test; or
  - ii. You demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.
- c. Pursuant to 40 CFR 63.11466(c), you must conduct each performance test according to the requirements in 40 CFR 63.7 and 40 CFR 63.11466(c)(1) and (2).
  - i. Determine the concentration of PM according to the following test methods in 40 CFR part 60, appendices:
    - A. Method 1 or 1A (Appendix A-1) to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere.
    - B. Method 2, 2A, 2C, 2F, or 2G (Appendices A-1 and A-2) to determine the volumetric flow rate of the stack gas.
    - C. Method 3, 3A, or 3B (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 (Appendix A-3) to determine the moisture content of the stack gas.
    - E. Method 5 or 17 (Appendix A-3) to determine the concentration of particulate matter (front half filterable catch only). Three valid test runs are needed to comprise a performance test.
  - ii. During the test, you must operate each emissions source within  $\pm 10$  percent of its normal process rate. You must monitor and record the process rate during the test.
- 18a. 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 19 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
19. 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.
- 20a. Pursuant to 40 CFR 63.8(a)(2), for the purposes of 40 CFR Part 63, all CMS required under relevant standards shall be subject to the provisions of 40 CFR 63.8 upon promulgation of performance specifications for CMS as specified in the relevant standard or otherwise by the Illinois EPA or USEPA.
- b. Pursuant to 40 CFR 63.8(b)(1), monitoring shall be conducted as set forth in 40 CFR 63.8 and the relevant standard(s) unless the Illinois EPA or USEPA—

- i. Specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures (see 40 CFR 63.90(a) for definition); or
  - ii. Approves the use of an intermediate or major change or alternative to any monitoring requirements or procedures (see 40 CFR 63.90(a) for definition).
- 21a. Pursuant to 40 CFR 63.11467(c), for each existing and new affected source, you must conduct an initial inspection of each baghouse. You must visually inspect the system ductwork and baghouse unit for leaks. Except as specified in 40 CFR 63.11467(e), you must also inspect the inside of each baghouse for structural integrity and fabric filter condition. You must record the results of the inspection and any maintenance action as required in 40 CFR 63.11470.
  - b. Pursuant to 40 CFR 63.11467(d), for each installed baghouse that is in operation during the 60 days after the applicable compliance date, you must conduct the inspection specified in 40 CFR 63.11467(c) no later than 60 days after your applicable compliance date. For an installed baghouse that is not in operation during the 60 days after the applicable compliance date, you must conduct an initial inspection prior to startup of the baghouse.
  - c. Pursuant to 40 CFR 63.11467(e), an initial inspection of the internal components of a baghouse is not required if an inspection has been performed within the past 12 months.
- 22a. Pursuant to 40 CFR 63.11468(a), for an existing affected source, you must demonstrate compliance by conducting the monitoring activities in 40 CFR 63.11468(a)(1) or (a)(2):
  - i. You must perform periodic inspections and maintenance of each baghouse according to the requirements in 40 CFR 63.11468(a)(1)(i) and (ii).
    - A. You must conduct weekly visual inspections of the system ductwork for leaks.
    - B. You must conduct inspections of the interior of the baghouse for structural integrity and to determine the condition of the fabric filter every 12 months.
  - ii. As an alternative to the monitoring requirements in 40 CFR 63.11468(a)(1), you may demonstrate compliance by conducting a daily 30-minute visible emissions (VE) test (i.e., no visible emissions) using EPA Method 22 (40 CFR Part 60, appendix A-7).
- b. Pursuant to 40 CFR 63.11468(b), if the results of the visual inspection or VE test conducted under 40 CFR 63.11468(a) indicate a problem with the operation of the baghouse, including but not limited to air leaks, torn or broken bags or filter media, or any other condition that may

cause an increase in PM emissions, you must take immediate corrective action to return the baghouse to normal operation according to the equipment manufacturer's specifications or instructions and record the corrective action taken.

- 23a. Pursuant to 35 Ill. Adm. Code 218.105(d)(2)(A)(i), an owner or operator that uses an afterburner or carbon adsorber to comply with any Section of 35 Ill. Adm. Code Part 218 shall use Illinois EPA and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use except as provided in 35 Ill. Adm. Code 218.105(d)(3). The continuous monitoring equipment must monitor for each afterburner which does not have a catalyst bed, the combustion chamber temperature of each afterburner.
- b. Pursuant to 35 Ill. Adm. Code 218.105(d)(2)(B), an owner or operator must install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring device, such as a strip chart, recorder or computer, having an accuracy of  $\pm 1$  percent of the temperature measured in degrees Celsius or  $\pm 0.5^\circ$  C, whichever is greater.
- 24a. Pursuant to 40 CFR 63.10(b)(1), the owner or operator of an affected source subject to the provisions of 40 CFR Part 63 shall maintain files of all information (including all reports and notifications) required by 40 CFR Part 63 recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.
- b. Pursuant to 40 CFR 63.10(b)(2)(xiv), the owner or operator of an affected source subject to the provisions of 40 CFR Part 63 shall maintain relevant records for such source of all documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.
- c. 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.

- 25a. Pursuant to 40 CFR 63.11470(a), you must keep the records specified in 40 CFR 63.11470(a)(1) and (2).
- 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 TTTTTT and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.
  - ii. You must keep the records of all inspection and monitoring data required by 40 CFR 63.11467 and 63.11468, and the information identified in 40 CFR 63.11470(a)(2)(i) through (a)(2)(v) for each required inspection or monitoring.
    - A. The date, place, and time;
    - B. Person conducting the activity;
    - C. Technique or method used;
    - D. Operating conditions during the activity; and
    - E. Results.
- b. Pursuant to 40 CFR 63.11470(b), your records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1).
- c. Pursuant to 40 CFR 63.11470(c), as specified in 40 CFR 63.10(b)(1), you must keep each record for 5 years following the date of each recorded action.
- d. Pursuant to 40 CFR 63.11470(d), 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 three years.

26. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code 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.
- 27a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
  - i. Records addressing use of good operating practices for each baghouse and afterburner:
    - A. Operating logs for each baghouse, including operating data (pressure drop or stack condition), daily upon startup;
    - B. Records for periodic inspection of each baghouse and baghouse 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.
  - ii. Amount of materials charged to each furnaces (tons/month and tons/year);
  - iii. Description of the materials charged to each furnace (VOM and HAP content, wt. % of precious metals, etc.);
  - iv. Natural gas usage (mmscf/mo and mmscf/year); and
  - v. Monthly and annual CO, NO<sub>x</sub>, PM, PM<sub>10</sub>, SO<sub>2</sub>, VOM, and HAP emissions from the source with supporting calculations (tons/months, 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 from the date of entry (except as provided pursuant to 40 CFR 63.10(b)(1) or 40 CFR 63.11470(d)) 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 an Illinois EPA or USEPA request for records during the course of a source inspection.
- 28a. Pursuant to 40 CFR 63.9(h)(1), the requirements of 40 CFR 63.9(h)(2) through (h)(4) apply when an affected source becomes subject to a relevant standard.

- b. i. Pursuant to 40 CFR 63.9(h)(2)(i), before a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under 40 CFR Part 63, the owner or operator of such source shall submit to the Illinois EPA or USEPA a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list—
- A. The methods that were used to determine compliance;
  - B. The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;
  - C. The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods;
  - D. The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard;
  - E. If the relevant standard applies to both major and area sources, an analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification);
  - F. A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and
  - F. A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements.
- ii. Pursuant to 40 CFR 63.9(h)(2)(ii), the notification must be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard (unless a different reporting period is specified in the standard, in which case the letter must be sent before the close of business on the day the report of the relevant testing or monitoring results is required to be delivered or postmarked). For example, the notification shall be sent before close of business on the 60th (or other required) day following completion of the initial performance test and again before the close of business on the 60th (or other required) day following the

completion of any subsequent required performance test. If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with an opacity or visible emission standard under 40 CFR Part 63, the notification of compliance status shall be sent before close of business on the 30th day following the completion of opacity or visible emission observations. Notifications may be combined as long as the due date requirement for each notification is met.

- c. Pursuant to 40 CFR 63.9(j), any change in the information already provided under 40 CFR 63.9 shall be provided to the Illinois EPA or USEPA in writing within 15 calendar days after the change.
- 29. 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.
- 30. Pursuant to 35 Ill. Adm. Code 218.990, upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 Ill. Adm. Code 218 Subparts PP, QQ, RR, TT or 35 Ill. Adm. Code 218.208(b) shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that the emission unit is exempt from those requirements.
- 31a. 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 exceedances 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  
9511 West Harrison  
Des Plaines, Illinois 60016

If you have any questions on this, please call German Barria at 217/782-2113.

Edwin C. Bakowski, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

Date Signed: \_\_\_\_\_

ECB:GB:jws

cc: Illinois EPA, FOS Region 1  
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emission from the Precious Metals Recovering Facility operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Agency used the annual operating scenario which results in maximum emissions from such a plant. This is processing of 68,400 tons of the materials per year. The resulting maximum emissions are well below the levels (e.g., 100 tons per year of PM<sub>10</sub>, VOM, 10 tons per year for a single HAP, and 25 tons per year for any combination of such HAP) 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 material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	EMISSIONS (Tons/Year)					<u>Single HAP</u>	<u>Total HAPs</u>
	<u>CO</u>	<u>NO<sub>x</sub></u>	<u>PM</u>	<u>SO<sub>2</sub></u>	<u>VOM</u>		
2 Rotary Furnaces	6.4	7.8	13.70	0.72	9.6		
Reverberatory Furnace			12.40				
6 Crucibles			0.50	0.22	2.8		
Blanch Induction	5.7	0.9	0.50		1.73		
Phyllis/Rosie Induction	0.60		0.50		2.7		
Roasting/Drying	4.2		10.00	0.34	1.3		
2 mills			0.88				
Shot Blaster			0.44				
Natural Gas Combustion	<u>18.95</u>	<u>22.56</u>	<u>1.71</u>	<u>0.14</u>	<u>1.24</u>	--	--
Totals	<u>35.85</u>	<u>31.26</u>	<u>40.63</u>	<u>1.42</u>	<u>19.37</u>	<u>9.0</u>	<u>22.5</u>