

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for Nitrogen Oxides (NO_x) and Particulate Matter with an aerodynamic diameter less than or equal to 10 micrometers (PM₁₀)). As a result, the source is excluded from the requirements 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 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.
 - d. This permit is effective only upon the withdrawal of Consolidated Permit Appeal PCB Nos. 2010-110 and 2011-043.
- 2a. The Kolberg Screen Plant and Stack/Conveyor on the Screen Plant are subject to the New Source Performance Standard (NSPS) for Coal Preparation and Processing Plants, 40 CFR 60, Subparts A and Y. The Illinois EPA is administering the NSPS in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 60.250(b), the provisions in 40 CFR 60.251, 40 CFR 60.252(a), 40 CFR 60.253(a), 40 CFR 60.254(a), 40 CFR 60.255(a), and 40 CFR 60.256(a) are applicable to any of the following affected facilities that commenced construction, reconstruction or modification after October 27, 1974, and on or before April 28, 2008: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems, transfer and loading systems.
 - b. Pursuant to 40 CFR 60.254(a), on and after the date on which the performance test is conducted or required to be completed under 40 CFR 60.8, whichever date comes first, an owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified on or before April 28, 2008, gases which exhibit 20 percent opacity or greater.
- 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 212.304(a), all storage piles of materials with uncontrolled emissions of fugitive particulate matter in excess of 45.4 Mg per year (50 T/year) which are located within a source whose potential particulate emissions from all emission units exceeds 90.8 Mg/year (100 T/year) shall be protected by a cover or sprayed with a surfactant solution or water on a regular basis, as needed, or treated by an equivalent method, 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 212.305, all conveyor loading operations to storage piles specified in 35 Ill. Adm. Code 212.304 shall utilize spray systems, telescopic chutes, stone ladders or equivalent methods in accordance with the operating program required by 35 Ill. Adm. Code 212.309, 212.310, and 212.312.
- f. 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 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.
- g. Pursuant to 35 Ill. Adm. Code 212.308, crushers, grinding mills, screening operations, bagging operations, bucket elevators, conveyor transfer points, conveyors, 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.
 - i. Conveyor loadout to trucks and railcars shall be conducted with sleeves extending to at least 6 inches below the sides and the receiving vehicle, except for topping off.
 - ii. Conveyor loadout sleeves shall be inspected for proper operation while such loadout to trucks or railcars is occurring, at least once each week when such loadout to trucks or railcars is performed.

- h. 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.
- i. 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.
- j. 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.
- k. Pursuant to 35 Ill. Adm. Code 212.316(b), no person shall cause or allow fugitive particulate matter emissions generated by the crushing or screening of slag, stone, coke or coal to exceed an opacity of 10 percent.
- l. Pursuant to 35 Ill. Adm. Code 212.316(c), no person shall cause or allow fugitive particulate matter emissions from any roadway or parking area to exceed an opacity of 10 percent, except that the opacity shall not exceed 5 percent at quarries with a capacity to produce more than 1 million tons/year of aggregate.

- m. Pursuant to 35 Ill. Adm. Code 212.316(d), no person shall cause or allow fugitive particulate matter emissions from any storage pile to exceed an opacity of 10 percent, to be measured four feet from the pile surface.
- n. Pursuant to 35 Ill. Adm. Code 212.316(f), unless an emission unit has been assigned a particulate matter, PM₁₀, or fugitive particulate matter emissions limitation elsewhere in 35 Ill. Adm. Code 212.316 or in 35 Ill. Adm. Code Part 212 Subparts R or S, no person shall cause or allow fugitive particulate matter emissions from any emission unit to exceed an opacity of 20 percent.
- o. 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).
- p. Pursuant to 35 Ill. Adm. Code 212.321(b), interpolated and extrapolated values of the data in 35 Ill. Adm. Code 212.321(c) shall be determined by using the equation:

$$E = A(P)^B$$

where

P = Process weight rate; and

E = Allowable emission rate; and,

- i. Up to process weight rates of 408 MG/hour (450 T/hour):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

- ii. For process weight rate greater than or equal to 408 Mg/hour (450 T/hour):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

- q. The affected emission units subject 35 Ill. Adm. Code 212.322 include the Shaker Building with Receiving Hoppers for Railcars and 300' Conveyor; South Collector Belt #1; South Incline Belt #2; South

Highline Belt #3; South Shiploader Tripper and Belt #4; and South Shiploader Pan, Spout and Trimmer. Pursuant to 35 Ill. Adm. Code 212.322(a) and except as further provided in 35 Ill. Adm. Code 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.322(c).

- r. Pursuant to 35 Ill. Adm. Code 212.322(b), interpolated and extrapolated values of the data in 35 Ill. Adm. Code 212.322(c) shall be determined by using the equation:

$$E = C + A(P)^B$$

where

P = Process weight rate; and

E = Allowable emission rate; and,

- i. Up to process weight rates of 27.2 MG/hour (30 T/hour):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

- ii. For process weight rate greater than or equal to 27.2 Mg/hour (30 T/hour):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	25.21	55.0
B	0.11	0.11
C	-18.4	-40.0

- s. Pursuant to 35 Ill. Adm. Code 212.700(a), 35 Ill. Adm. Code 212 Subpart U (Additional Control Measures) shall apply to those sources in the areas designated in and subject to 35 Ill. Adm. Code 212.324(a)(1) or 212.423(a) and that have actual annual source-wide emissions of PM₁₀ of at least fifteen (15) tons per year.
- 4a. Pursuant to 35 Ill. Adm. Code 214.122(b)(2), no person shall cause or allow the emission of sulfur dioxide into the atmosphere in any one hour period from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hour), burning liquid

fuel exclusively to exceed 0.46 kg of sulfur dioxide per MW-hour of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu).

- b. 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 exceed 2000 ppm.
 - c. Pursuant to 35 Ill. Adm. Code 214.304, the emissions from the burning of fuel at process emission sources located in the Chicago or St. Louis (Illinois) major metropolitan areas shall comply with applicable Subparts B through F (i.e., 35 Ill. Adm. Code 214.122(b)).
5. This permit is issued based on the coal storage systems (as defined in 40 CFR 60.251(h) to be any facility used to store coal except for open storage piles) and the open coal storage piles (as defined in 40 CFR 60.251(m) to be any facility, including storage area, that is not enclosed that is used to store coal, including the equipment used in the loading, unloading, and conveying operations of the facility) associated with the Kolberg Screen Plant and Stacker/Conveyor on the Screen Plant not being subject to the requirements of 40 CFR 60.254(c) because the Kolberg Screen Plant and Stacker/Conveyor on the Screen Plant and the associated coal storage systems and open coal storage piles were constructed prior to the applicability date of May 27, 2009 and have not been reconstructed or modified since installation.
- 6a. Pursuant to 35 Ill. Adm. Code 212.304(b), 35 Ill. Adm. Code 212.304(a) shall not apply to a specific storage pile if the owner or operator of that pile proves to the Illinois EPA that fugitive particulate emissions from that pile do not cross the property line either by direct wind action or reentrainment.
 - b. 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.
 - c. Pursuant to 35 Ill. Adm. Code 212.323, 35 Ill. Adm. Code 212.321 and 212.322 shall not apply to emission units, such as stockpiles of particulate matter, to which, because of the disperse nature of such emission units, such rules cannot reasonably be applied.
 - d. Pursuant to 35 Ill. Adm. Code 212.324(d), the mass emission limits contained in 35 Ill. Adm. Code 212.324(b) and (c) shall not apply to those emission units with no visible emissions other than fugitive particulate matter; however, if a stack test is performed, 35 Ill. Adm.

Code 212.324(d) is not a defense finding of a violation of the mass emission limits contained in 35 Ill. Adm. Code 212.324(b) and (c).

- 7a. Pursuant to 40 CFR 60.11(c), the opacity standards set forth in 40 CFR Part 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.
 - b. 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.
- 8a. Pursuant to 35 Ill Adm. Code 212.324(f), for any process emission unit subject to 35 Ill. Adm. Code 212.324(a), the owner or operator shall maintain and repair all air pollution control equipment in a manner that assures that the emission limits and standards in 35 Ill. Adm. Code 212.324 shall be met at all times. 35 Ill. Adm. Code 212.324 shall not affect the applicability of 35 Ill. Adm. Code 201.149. Proper maintenance shall include the following minimum requirements:
 - i. Visual inspections of air pollution control equipment;
 - ii. Maintenance of an adequate inventory of spare parts; and
 - iii. Expeditious repairs, unless the emission unit is shutdown.
 - b. Pursuant to 35 Ill. Adm. Code 212.701(a), those sources subject to 35 Ill. Adm. Code 212 Subpart U shall prepare contingency measure plans reflecting the PM₁₀ emission reductions set forth in 35 Ill. Adm. Code 212.703. These plans shall become federally enforceable permit conditions. Such plans shall be submitted to the Illinois EPA by November 15, 1994. Notwithstanding the foregoing, sources that become subject to the provisions of 35 Ill. Adm. Code 212 Subpart U after July 1, 1994, shall submit a contingency measure plan to the Illinois EPA for review and approval within ninety (90) days after the date such source or sources became subject to the provisions of 35 Ill. Adm. Code 212 Subpart U or by November 15, 1994, whichever is later. The Illinois EPA shall notify those sources requiring contingency measure plans, based on the Illinois EPA's current information; however, the Illinois EPA's failure to notify any source of its requirement to submit contingency measure plans shall not be a defense to a violation of 35 Ill. Adm. Code 212 Subpart U and shall not relieve the source of its obligation to timely submit a contingency measure plan.

- c. Pursuant to 35 Ill. Adm. Code 212.703(a), all sources subject to 35 Ill. Adm. Code 212 Subpart U shall submit a contingency measure plan. The contingency measure plan shall contain two levels of control measures:
 - i. Level I measures are measures that will reduce total actual annual source-wide fugitive emissions of PM₁₀ subject to control under 35 Ill. Adm. Code 212.304, 212.305, 212.306, 212.308, 212.316(a) through (e), 212.424 or 212.464 by at least 15%.
 - ii. Level II measures are measures that will reduce total actual annual source-wide fugitive emissions of PM₁₀ subject to control under 35 Ill. Adm. Code 212.304, 212.305, 212.306, 212.308, 212.316(a) through (e), 212.424 or 212.464 by at least 25%.
- d. Pursuant to 35 Ill. Adm. Code 212.703(b), a source may comply with 35 Ill. Adm. Code 212 Subpart U through an alternative compliance plan that provides for reductions in emissions equal to the level of reduction of fugitive emissions as required at 35 Ill. Adm. Code 212.703(a) and which has been approved by the Illinois EPA and USEPA as federally enforceable permit conditions. If a source elects to include controls on process emission units, fuel combustion emission units, or other fugitive emissions of PM₁₀ not subject to 35 Ill. Adm. Code 212.304, 212.305, 212.306, 212.308, 212.316(a) through (e), 212.424 or 212.464 at the source in its alternative control plan, the plan must include a reasonable schedule for implementation of such controls, not to exceed two (2) years. This implementation schedule is subject to Illinois EPA review and approval.
- e. Pursuant to 35 Ill. Adm. Code 212.704(b), if there is a violation of the ambient air quality standard for PM₁₀ as determined in accordance with 40 CFR Part 50, Appendix K, the Illinois EPA shall notify the source or sources the Illinois EPA has identified as likely to be causing or contributing to one or more of the exceedences leading to such violation, and such source or sources shall implement Level I or Level II measures, as determined pursuant to 35 Ill. Adm. Code 212.704(e). The source or sources so identified shall implement such measures corresponding to fugitive emissions within ninety (90) days after receipt of a notification and shall implement such measures corresponding to any nonfugitive emissions according to the approved schedule set forth in such source's alternative control plan. Any source identified as causing or contributing to a violation of the ambient air quality standard for PM₁₀ may appeal any finding of culpability by the Illinois EPA to the Illinois Pollution Control Board pursuant to 35 Ill. Adm. Code 106 Subpart J.
- f. Pursuant to 35 Ill. Adm. Code 212.704(e), the Illinois EPA shall require that sources comply with the Level I or Level II measures of their contingency measure plans, pursuant 35 Ill. Adm. Code 212.704(b), as follows:

- i. Level I measures shall be required when the design value of a violation of the 24-hour ambient air quality standard, as computed pursuant to 40 CFR 50, Appendix K, is less than or equal to 170 ug/m³.
 - ii. Level II measures shall be required when the design value of a violation of the 24-hour ambient air quality standard, as computed pursuant to 40 CFR 50, Appendix K, exceeds 170 ug/m³.
- 9a. Except as provided in Condition 9(b), the moisture content of the bulk solid material handled by the source shall be at least 1.3% by weight. The Permittee shall show compliance with this requirement by recording the moisture content of each lot of bulk solid material received at the source as provided by the supplier of the bulk solid material. If the moisture content of a bulk solid material received at the source is below 3.0% by weight as documented by the supplier, then the Permittee shall:
- i. Utilize wet suppression on the material handling operations (e.g., material transfer and screening) associated with bulk solid materials having a moisture content below 3.0% by weight to reduce particulate matter emissions and to maintain compliance with the applicable visible emissions standards for each affected material handling operation; or
 - ii. Follow the testing requirements of Condition 9(d).
- b. Notwithstanding the requirements in Condition 9(a), the Permittee may receive and off-load bulk solid material with a moisture content of less than 1.3% by weight (i.e., low-moisture material), so long as the Permittee:
- i. Receives the low-moisture material by rail car and off-loads the low-moisture material in the Shaker Building;
 - ii. Applies water or dust suppressant to the low-moisture material during non-freezing conditions before the material is stockpiled or discharged from the initial receiving conveyor; and
 - iii. Blends the low-moisture material with a higher-moisture bulk solid material before the material is stockpiled or discharged from the initial receiving conveyor.
- c. If the Permittee relies on Condition 9(a)(i) to demonstrate compliance with Condition 9(a) with regard to bulk solid material with a moisture content below 3.0% by weight as documented by the supplier, the Permittee shall monitor the equipment used for wet suppression as follows during non-freezing conditions:
- i. The water supply to the equipment used for wet suppression shall be equipped with a master metering device used to determine water usage for the control of particulate matter emissions.

- ii. The equipment used for wet suppression shall be inspected at least once per week for proper operation (i.e., maintaining adequate flow, clogging of flow lines, etc.) when this equipment is being utilized.
- d. If the Permittee relies on Condition 9(a)(ii) to demonstrate compliance with Condition 9(a) with regard to bulk solid material with a moisture content below 3.0% by weight as documented by the supplier or by testing conducted by the Permittee, the Permittee shall measure the moisture content of a representative sample of such bulk solid material at least once per week using ASTM Procedure D 3302 for coal and ASTM Procedure D 3172 and D 4931 for petroleum coke. Samples shall be collected when wet suppression systems covering the affected bulk solid material are not active. The Permittee may utilize wet suppression on such bulk solid material as needed until three consecutive tests at the source, taken at least 24 hours apart, show moisture contents of 3.0% or greater by weight, after which this testing shall no longer be required for the subject bulk solid material.
- e. The Permittee may test the moisture content of any lot of bulk solid material at any time. For purposes of calculating monthly PM and PM₁₀ emissions using the formula in Condition 10(a)(i), the moisture content from the most recent analysis of each bulk solid material, either as documented by the supplier or as determined from testing by the Permittee, shall be used to calculate the monthly average moisture content, except as provided in Condition 9(f).
- f. The Permittee shall separately calculate the PM and PM₁₀ emissions from receiving bulk solid material with a moisture content below 1.3 percent by weight as documented by the supplier, for the initial transfer (material drop) associated with off-loading. Such separately calculated emissions shall be added to the monthly PM and PM₁₀ emissions calculated using the formula of Condition 10(a)(i).
- g. The above limitations contain revisions to previously issued Construction permit 07100090. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of the aforementioned permit.
- h. The engines, generators and heaters shall only be operated with distillate fuel oil, gasoline or kerosene as the fuel. The use of any other fuel in the engines, generators or heaters 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.
- i. The Permittee shall not keep, store or use distillate fuel oil (Grades No. 1 and 2) at this source with a sulfur content greater than the larger of the following two values:
 - i. 0.28 weight percent, or

- ii. The wt. percent given by the formula: Maximum wt. percent sulfur = (0.00015) x (Gross heating value of oil, Btu/lb).
- j. Organic liquid by-products or waste materials shall not be used in any emission unit at this source without written approval from the Illinois EPA.
- k. The Illinois EPA shall be allowed to sample all fuels stored at the source.
- 10a. The emissions from and the operation of all activities at source shall not exceed the following limits:

PM ₁₀ Emission		PM emissions	
<u>(Tons/Month)</u>	<u>(Tons/Year)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
9.2	92.0	22.5	225.0

These limits are based on the amount of bulk solid material transferred and screened; operation of generators, engine and heaters; and standard emission factors (Tables 1.3-1 and 1.3-3, AP-42, Fifth Edition, Volume I, Supplement E September 1999, corrected May 2010; Table 3.3-1, AP-42, Fifth Edition, Volume I, Supplement B, October 1996; Table 3.4-1, AP 42, Fifth Edition, Volume I, Supplement B, October 1996; Table 11.9-1, AP-42, Volume I, Fifth Edition, Supplement E, October 1998; Table 11.19.2-2, AP-42, Volume I, Fifth Edition, Update 2004, August 2004; Section 13.2.2, AP-42, Volume I, Fifth Edition, November 2006; and Section 13.2.4, AP-42, Volume I, Fifth Edition, November 2006).

- i. PM₁₀ and PM emissions shall be calculated and recorded using the equation:

$$E = [(T_u \times F_u) + (T_e \times N_e \times F_e) + (S \times F_s) + (A_p \times F_p) + (T_v \times D_v \times F_v) + \sum(H_d \times Z_d \times F_d) + \sum(R \times F_f)]/2000$$

Where:

E = Total PM₁₀ or PM emissions, (tons);

T_u = Amount of bulk solid material transferred in unenclosed area, (tons);

F_u = (k * 0.0032 * N_u) * [((U/5)^{1.3}) / ((M/2)^{1.4})];

Where:

k = 0.35 for PM₁₀;
 = 0.74 for PM;

N_u = Number of bulk solid material transfers (drop points);

U = mean wind speed, (miles/hour);

M = material moisture content, (%);

T_e = Amount of bulk solid material transferred in enclosed areas, (tons);

F_e = 0.00055 lb PM₁₀/Ton for bulk solid material with < 1.3% moisture;
= 0.000023 lb PM₁₀/Ton for bulk solid material with ≥ 1.3% moisture;
= 0.0015 lb PM/Ton for bulk solid material with < 1.3% moisture;
= 0.00007 lb PM/Ton for bulk solid material with ≥ 1.3% moisture;

The above emission factors are reduced by 50% due to enclosures.

N_e = Number of enclosed bulk solid material transfers (drop points);

S = Amount of bulk solid material screened, (tons);

F_s = 0.0022 lb PM/ton;
= 0.00074 lb PM₁₀/ton;

A_p = Area of Screening Active Storage Pile (Acres);

F_p = 2,201 lb PM/acre - month;
= 1,041 lb PM₁₀/acre - month;

T_v = Number of Vehicle Trips Associated with Screening;

D_v = Trip Distance Associated with Screening (mile/trip);

E_v = 3.7 lb PM/VMT;
= 1.0 lb PM₁₀/VMT;

H_d = Hours of operation of each engine > 600 hp, (hours);

Z_d = Size of each engine > 600 hp operated (hp);

F_d = 0.0007 lb/(hp-hour) for diesel engines > 600 hp;

R = Diesel, gasoline or kerosene usage in heaters and engines ≤ 600 hp (gallons); and

F_f = 0.002 lb PM or PM₁₀/gallon for diesel and kerosene;
= 0.0013 lb PM or PM₁₀/gallon for gasoline.

- ii. The above limitations contain revisions to previously issued Permit 07100090. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit.
- b. Emissions and operation of the two diesel-powered generators, and miscellaneous diesel-powered engines at the source shall not exceed the following limits:

<u>Pollutant</u>	<u>Emissions</u>	
	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
Carbon Monoxide (CO)	4.29	42.9
Nitrogen Oxides (NO _x)	9.20	92.0
Sulfur Dioxide (SO ₂)	1.71	17.1
Volatile Organic Material (VOM)	1.84	18.4

These emission limits are based on standard emission factors (Tables 1.3-1 and 1.3-3, AP-42, Fifth Edition, Volume I, Supplement E, September 1999, corrected May 2010 (for the heaters), Tables 3.3-1 AP-42, Fifth Edition, Volume I, Supplement B, October 1996 (for the small gasoline and diesel-powered engines < 600 hp), and Table 3.4-1, AP 42, Fifth Edition, Volume I, Supplement B, October 1996 (for the diesel-powered generators > 600 hp) Emissions from the generators shall be calculated as follows:

$$E = [(H_i \times Z_i \times F) + (R \times F)]/2,000$$

Where:

E = Total emissions of pollutant, (tons);

H_i = Hours of operation of each generator > 600 hp (hours);

Z_i = Size of each generator > 600 hp (hp);

R = Diesel, gasoline or kerosene usage in heaters and engines ≤ 600 hp (gallons); and

F = Emission Factor as follows:

<u>Pollutant</u>	<u>Emission Factors</u>				
	<u>Gasoline Engines</u>	<u>Heaters</u>		<u>Diesel Engines</u>	
	<u>≤ 250 Hp</u> <u>(lbs/gal)</u>	<u>Kerosene</u> <u>(lbs/gal)</u>	<u>Diesel</u> <u>(lbs/gal)</u>	<u>≤ 600 hp</u> <u>(lbs/gal)</u>	<u>Engines > 600 hp</u> <u>(lbs/Hp-Hr)</u>
Carbon Monoxide (CO)	0.13	0.005	0.005	0.13	0.0055
Nitrogen Oxides (NO _x)	0.21	0.02	0.02	0.60	0.024
Sulfur Dioxide (SO ₂)	0.011	0.137 x S*	0.139 x S*	0.040	0.00809 x S*
Volatile Organic Material (VOM)	0.39	0.00033	0.00033	0.049	0.000642

S^* = Wt. % sulfur in fuel

- 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).
- 11a. 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.
12. Pursuant to 40 CFR 60.11(e) (2), except as provided in 40 CFR 60.11(e) (3), the owner or operator of an affected facility to which an opacity standard in 40 CFR Part 60 applies shall conduct opacity observations in accordance with 40 CFR 60.11(b), shall record the

opacity of emissions, and shall report to the Illinois EPA or USEPA the opacity results along with the results of the initial performance test required under 40 CFR 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

- 13a. Pursuant to 40 CFR 60.255(a), an owner or operator of each affected facility that commenced construction, reconstruction, or modification on or before April 28, 2008, must conduct all performance tests required by 40 CFR 60.8 to demonstrate compliance with the applicable emission standards using the methods identified in 40 CFR 60.257.
- b. Pursuant to 40 CFR 60.257(a), the owner or operator must determine compliance with the applicable opacity standards as specified in 40 CFR 60.257(a) (1) through (3).
- i. Method 9 of Appendix A-4 of this part and the procedures in 40 CFR 60.11 must be used to determine opacity, with the exceptions specified in 40 CFR 60.257(a) (1) (i) and (ii).
- A. The duration of the Method 9 of Appendix A-4 of 40 CFR Part 60 performance test shall be 1 hour (ten 6-minute averages).
- B. If, during the initial 30 minutes of the observation of a Method 9 of Appendix A-4 of 40 CFR Part 60 performance test, all of the 6- minute average opacity readings are less than or equal to half the applicable opacity limit, then the observation period may be reduced from 1 hour to 30 minutes.
- ii. To determine opacity for fugitive coal dust emissions sources, the additional requirements specified in 40 CFR 60.257(a) (2) (i) through (iii) must be used.
- A. The minimum distance between the observer and the emission source shall be 5.0 meters (16 feet), and the sun shall be oriented in the 140-degree sector of the back.
- B. The observer shall select a position that minimizes interference from other fugitive coal dust emissions sources and make observations such that the line of vision is approximately perpendicular to the plume and wind direction.
- C. The observer shall make opacity observations at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Water vapor is not considered a visible emission.

- iii. A visible emissions observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions specified in 40 CFR 60.257(a)(3)(i) through (iii) are met.
 - A. No more than three emissions points may be read concurrently.
 - B. All three emissions points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.
 - C. If an opacity reading for any one of the three emissions points is within 5 percent opacity from the applicable standard (excluding readings of zero opacity), then the observer must stop taking readings for the other two points and continue reading just that single point.

- 14a. 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 15 shall be performed upon a written request from the Illinois EPA by a qualified individual or independent testing service.
15. 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.
- 16a. Pursuant to 40 CFR 60.7(b), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- b. Pursuant to 40 CFR 60.7(f), any owner or operator subject to the provisions of 40 CFR Part 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.
- 17a. 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.
- b.
 - i. Pursuant to 35 Ill. Adm. Code 212.316(g)(1), the owner or operator of any fugitive particulate matter emission unit subject to 35 Ill. Adm. Code 212.316 shall keep written records of the application of control measures as may be needed for compliance with the opacity limitations of 35 Ill. Adm. Code 212.316 and shall submit to the Illinois EPA an annual report containing a summary of such information.
 - ii. Pursuant to 35 Ill. Adm. Code 212.316(g)(2), the records required under 35 Ill. Adm. Code 212.316(g) shall include at least the following:
 - A. The name and address of the source;

- B. The name and address of the owner and/or operator of the source;
 - C. A map or diagram showing the location of all emission units controlled, including the location, identification, length, and width of roadways;
 - D. For each application of water or chemical solution to roadways by truck: the name and location of the roadway controlled, application rate of each truck, frequency of each application, width of each application, identification of each truck used, total quantity of water or chemical used for each application and, for each application of chemical solution, the concentration and identity of the chemical;
 - E. For application of physical or chemical control agents: the name of the agent, application rate and frequency, and total quantity of agent and, if diluted, percent of concentration, used each day; and
 - F. A log recording incidents when control measures were not used and a statement of explanation.
- iii. Pursuant to 35 Ill. Adm. Code 212.316(g) (4), the records required under 35 Ill. Adm. Code 212.316(g) shall be kept and maintained for at least three (3) years and shall be available for inspection and copying by Illinois EPA representatives during working hours.
- c.
 - i. Pursuant to 35 Ill. Adm. Code 212.324(g) (1), written records of inventory and documentation of inspections, maintenance, and repairs of all air pollution control equipment shall be kept in accordance with 35 Ill. Adm. Code 212.324(f).
 - ii. Pursuant to 35 Ill. Adm. Code 212.324(g) (2), the owner or operator shall document any period during which any process emission unit was in operation when the air pollution control equipment was not in operation or was malfunctioning so as to cause an emissions level in excess of the emissions limitation. These records shall include documentation of causes for pollution control equipment not operating or such malfunction and shall state what corrective actions were taken and what repairs were made.
 - iii. Pursuant to 35 Ill. Adm. Code 212.324(g) (4), a written record of the inventory of all spare parts not readily available from local suppliers shall be kept and updated.
 - iv. Pursuant to 35 Ill. Adm. Code 212.324(g) (5), the records required under 35 Ill. Adm. Code 212.324 shall be kept and maintained for at least three (3) years and shall be available for inspection and copying by Illinois EPA representatives during working hours.

18a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:

- i. If the Permittee is relying on Conditions 9(a) (i) and 9(c) to demonstrate compliance with Condition 9(a), the Permittee shall maintain records for the master metering device on the equipment used for wet suppression, including:
 - A. Dates and hours of usage;
 - B. Total amount of water applied each month;
 - C. Malfunctions (type, dates, and measures to correct);
 - D. Records of each inspection conducted in accordance with Condition 9(c) (ii);
 - E. Dates of rainfall during the preceding 24 hours; and
 - F. Daily observations of bulk solid material conditions (wet or dry) and/or other controls as may be present (e.g., coverage by snow or ice);
- ii. Records of the moisture content of bulk solid materials as provided by the suppliers of bulk solid materials, unless such records are superseded by moisture analysis from samples collected at this source;
- iii. Records of moisture analysis from samples collected at this source including date, time, individual or laboratory performing test, and location of sample (e.g., prior to screening, stockpiles, etc.);
- iv. Name and total amount of each bulk solid material (e.g., coal, petroleum coke, etc.) transferred in unenclosed areas, (tons/month and tons/year);
- v. Name and total amount of each bulk solid material (e.g., coal, petroleum coke, etc.) material transferred in enclosed areas, (tons/month and tons/year);
- vi. Name and total amount of each bulk solid material (e.g., coal, petroleum coke, etc.) screened, (tons/month and tons/year);
- vii. Area of Screening Active Storage Pile (Acres);
- viii. Number of Vehicle Trips Associated with Screening, Trip Distance Associated with Screening (mile/trip), and total vehicle miles travelled (VMT/month and VMT/year);
- ix. Operating hours of the 760 hp Diesel-Powered Generator and the 750 hp Diesel-Powered Generator, (hours/month and hours/year);

- x. Fuel use for all other engines, generators and heaters, except those generators identified in Condition 18(a)(v). The fuel use may be taken from purchase invoices or other similar records, (gallons/month and gallons/year); and
 - xi. Monthly and annual emissions of CO, NO_x, PM, PM₁₀, SO₂, and VOM from this source with supporting calculations (tons/month and tons/year).
- b. All records and logs required by Condition 18(a) shall be retained at a readily accessible location at the source for at least five (5) years from 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 an Illinois EPA or USEPA request for records during the course of a source inspection.
19. Pursuant to 40 CFR 60.258(b), for the purpose of reports required under 40 CFR 60.7(c), any owner operator subject to the provisions of 40 CFR 60 Subpart Y also shall report semiannually periods of excess emissions as follow:
- All 6-minute average opacities that exceed the applicable standard.
- 20a. 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.
- b. Pursuant to 35 Ill. Adm. Code 212.316(g)(5), a quarterly report shall be submitted to the Illinois EPA stating the following: the dates any necessary control measures were not implemented, a listing of those control measures, the reasons that the control measures were not implemented, and any corrective actions taken. This information includes, but is not limited to, those dates when controls were not applied based on a belief that application of such control measures would have been unreasonable given prevailing atmospheric conditions, which shall constitute a defense to the requirements of 35 Ill. Adm. Code 212.316. This report shall be submitted to the Illinois EPA thirty (30) calendar days from the end of a quarter. Quarters end March 31, June 30, September 30, and December 31.
- c. i. Pursuant to 35 Ill. Adm. Code 212.324(g)(4), copies of all records required by 35 Ill. Adm. Code 212.324 shall be submitted to the Illinois EPA within ten (10) working days after a written request by the Illinois EPA.

- ii. Pursuant to 35 Ill. Adm. Code 212.324(g) (6), upon written request by the Illinois EPA, a report shall be submitted to the Illinois EPA for any period specified in the request stating the following: the dates during which any process emission unit was in operation when the air pollution control equipment was not in operation or was not operating properly, documentation of causes for pollution control equipment not operating or not operating properly, and a statement of what corrective actions were taken and what repairs were made.
- 21a. 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
9511 West Harrison
Des Plaines, Illinois 60016

If you have any questions on this permit, please call Robert Bernoteit at 217/785-1705.

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

Date Signed: _____

ECB:RWB:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A- Emission Summary

This attachment provides a summary of the maximum emissions from the source 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 the source. The resulting maximum emissions are below the levels, (e.g., 100 tons/year for NO_x and PM₁₀) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Fugitive PM₁₀ emissions from storage piles and vehicle traffic at the source are not considered for purposes of applicability of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that 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)					
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>VOM</u>
Material Handling Activities and Screening Activities			225.0	92.0		
Diesel-Powered Generators and Miscellaneous Engines and Heaters ¹	<u>42.9</u>	<u>92.0</u>	<u>-----</u>	<u>-----</u>	<u>17.1</u>	<u>18.4</u>
Totals	<u>42.9</u>	<u>92.0</u>	<u>225.0</u>	<u>92.0</u>	<u>17.1</u>	<u>18.4</u>

¹ PM and PM₁₀ emissions including with Material Handling Activities and Screening Activities.