

217/782-2113

CONSTRUCTION PERMIT - NESHAP SOURCE

PERMITTEE

Packaging Corporation of America  
Attn: Bill Buriegi  
5200 West Roosevelt Road  
Chicago, Illinois 60644

Application No.: 10050054

I.D. No.: 031600GWT

Applicant's Designation:

Date Received: May 24, 2010

Subject: Packaging

Date Issued:

Location: 5200 West Roosevelt Road, Chicago, Cook County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of one (1) Flexographic Printer/Slotter (Koppers Printer), one (1) Flexographic Gluer/Printer (Ward FFG Printer) and one (1) Folder/Gluer (J&L Folder/Gluer) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This permit is issued based on the construction of the Flexographic Printer/Slotter, the Flexographic Gluer/Printer, and the Folder/Gluer not constituting a new major source or major modification pursuant to Title I of the Clean Air Act, specifically the Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 Ill. Adm. Code Part 203. The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the Volatile Organic Material (VOM) emissions from the above-listed equipment below the levels that would trigger the applicability of these rules.
- b. This permit is issued based on the emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(g) of the Clean Air Act from the above-listed equipment being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result, this permit is issued based on the emissions of HAPs from the above-listed equipment not triggering the requirements of Section 112(g) of the Clean Air Act.
- c. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- 2a. The wide-web flexographic printing presses at this source are subject to a National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Printing and Publishing Industry, 40 CFR 63, Subparts A and KK. 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 63.820(a)(2), each new and existing facility at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated for which the owner or operator chooses to commit to and meets the criteria of 40 CFR 63.820(a)(2)(i) and (ii) for purposes of establishing the facility to be an area source of HAP with respect to 40 CFR 63 Subpart KK. A facility which establishes area source status through some other mechanism, as described in 40 CFR 63.820(a)(7), is not subject to the provisions of 40 CFR 63 Subpart KK.
  - i. Use less than 9.1 Mg (10 tons) per each rolling 12-month period of each HAP at the facility, including materials used for source categories or purposes other than printing and publishing, and
  - ii. Use less than 22.7 Mg (25 tons) per each rolling 12-month period of any combination of HAP at the facility, including materials used for source categories or purposes other than printing and publishing.
- c. Pursuant to 40 CFR 63.820(a)(3), each facility for which the owner or operator chooses to commit to and meets the criteria stated in 40 CFR 63.820(a)(2) shall be considered an area source, and is subject only to the provisions of 40 CFR 63.829(d) and 40 CFR 63.830(b)(1).
- d. Pursuant to 40 CFR 63.820(a)(4), each facility for which the owner or operator commits to the conditions in 40 CFR 63.820(a)(2) may exclude material used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining electric, propane, gasoline and diesel powered motor vehicles operated by the facility, and the use of HAP contained in intake water (used for processing or noncontact cooling) or intake air (used either as compressed air or for combustion).
- e. Pursuant to 40 CFR 63.820(a)(5), each facility for which the owner or operator commits to the conditions in 40 CFR 63.820(a)(2) to become an area source, but subsequently exceeds either of the thresholds in 40 CFR 63.820(a)(2) for any rolling 12-month period (without first obtaining and complying with other limits that keep its potential to emit HAP below major source levels), shall be considered in violation of its commitment for that 12-month period and shall be considered a major source of HAP beginning the first month after the end of the 12-month period in which either of the HAP-use thresholds was exceeded. As a major source of HAP, each such facility would be subject to the provisions of 40 CFR 63 Subpart KK as noted in 40 CFR 63.820(a)(1) and would no longer be eligible to use the provisions of 40 CFR 63.820(a)(2), even if in subsequent 12-month periods the facility uses less HAP than the thresholds in 40 CFR 63.820(a)(2).
- f. Pursuant to 40 CFR 63.820(a)(6), an owner or operator of an affected source subject to 40 CFR 63.820(a)(2) who chooses to no longer be subject to 40 CFR 63.820(a)(2) shall notify the Illinois EPA or USEPA of such change. If, by no longer being subject to 40 CFR 63.820(a)(2),

the facility at which the affected source is located becomes a major source:

- i. The owner or operator of an existing source must continue to comply with the HAP usage provisions of 40 CFR 63.820(a)(2) until the source is in compliance with all relevant requirements for existing affected sources under 40 CFR 63 Subpart KK;
  - ii. The owner or operator of a new source must continue to comply with the HAP usage provisions of 40 CFR 63.820(a)(2) until the source is in compliance with all relevant requirements for new affected sources under 40 CFR 63 Subpart KK.
- 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 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 212.321(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).
- 4a. Pursuant to 35 Ill. Adm. Code 218.204(c), except as provided in 35 Ill. Adm. Code 218.205, 218.207, 218.208, 218.212, 218.215 and 218.216, no owner or operator of a coating line shall apply at any time any coating in which the VOM content exceeds the following emission limitations for Paper Coating. The following emission limitations are expressed in units of VOM per volume of coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied at each coating applicator, except where noted. Compounds which are specifically exempted from the definition of VOM should be treated as water for the purpose of calculating the "less water" part of the coating composition. Compliance with 35 Ill. Adm. Code 218 Subpart F must be demonstrated through the applicable coating analysis test methods and procedures specified in 35 Ill. Adm. Code 218.105(a) and the recordkeeping and reporting requirements specified in 35 Ill. Adm.

Code 218.211(c) except where noted. (Note: The equation presented in 35 Ill. Adm. Code 218.206 shall be used to calculate emission limitations for determining compliance by add on controls, credits for transfer efficiency, emissions trades and cross line averaging.) The emission limitations are as follows:

i. Prior to May 1, 2011:

kg/l	lb/gal
0.28	(2.3)

ii. On and after May 1, 2011:

kg VOM/kg (lb VOM/lb)	kg VOM/kg (lb VOM/lb)
solids applied	coatings applied

A. Pressure sensitive tape and label surface coatings	0.20	(0.067)
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B. All other paper coatings	0.40	(0.08)
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iii. The paper coating limitation set forth in 35 Ill. Adm. Code 218.204(c) shall not apply to any owner or operator of any paper coating line on which flexographic or rotogravure printing is performed if the paper coating line complies with the emissions limitations in 35 Ill. Adm. Code 218.401. In addition, screen printing on paper is not regulated as paper coating, but is regulated under 35 Ill. Adm. Code 218 Subpart TT. On and after May 1, 2011, the paper coating limitation shall also not apply to coating performed on or in-line with any digital printing press, or to size presses and on-machine coaters on papermaking machines applying sizing or water-based clays.

b. 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.

c. Pursuant to 35 Ill. Adm. Code 218.401(a), no owner or operator of a subject flexographic, packaging rotogravure or publication rotogravure printing line shall apply at any time any coating or ink unless the VOM content does not exceed the limitation specified in either 35 Ill. Adm. Code 218.401(a)(1) or (a)(2). Compliance with this 35 Ill. Adm. Code 218.401 must be demonstrated through the applicable coating or ink analysis test methods and procedures specified in 35 Ill. Adm. Code 218.105(a) and the recordkeeping and reporting requirements specified in 35 Ill. Adm. Code 218.404(c). As an alternative to compliance with

- 35 Ill. Adm. Code 218.401(a), a subject printing line may meet the requirements of 35 Ill. Adm. Code 218.401(b) or (c).
- i. Forty percent VOM by volume of the coating and ink (minus water and any compounds which are specifically exempted from the definition of VOM); or
  - ii. Twenty-five percent VOM by volume of the volatile content in the coating and ink.
5. Pursuant to 35 Ill. Adm. Code 218.402(b), upon achieving compliance with 35 Ill. Adm. Code 218 Subpart H, the flexographic and rotogravure printing lines are not required to meet 35 Ill. Adm. Code 218 Subpart G (35 Ill. Adm. Code 218.301 or 218.302). Flexographic and rotogravure printing lines exempt from 35 Ill. Adm. Code 218 Subpart H are subject to 35 Ill. Adm. Code 218 Subpart G (35 Ill. Adm. Code 218.301 or 218.302). Rotogravure or flexographic equipment used for both roll printing and paper coating is subject to 35 Ill. Adm. Code 218 Subpart H.
- 6a. Pursuant to 35 Ill. Adm. Code 218.218(a), on and after May 1, 2011, every owner or operator of a source subject to the requirements of 35 Ill. Adm. Code 218.204(c) shall:
- i. Store all VOM-containing cleaning materials in closed containers;
  - ii. Ensure that mixing and storage containers used for VOM-containing materials are kept closed at all times except when depositing or removing those materials;
  - iii. Minimize spills of VOM-containing cleaning materials;
  - iv. Convey VOM-containing cleaning materials from one location to another in closed containers or pipes; and
  - v. Minimize VOM emissions from the cleaning of storage, mixing, and conveying equipment.
7. In the event that the operation of this emission unit 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.
- 8a. Emissions and operation of the Koppers Printer/Slotter, Ward FFG Gluer/Printer and J & L Folder/Gluer shall not exceed the following limits:

<u>Material</u>	<u>Material Usage</u>		<u>VOM Content</u>	<u>VOM Emissions</u>	
	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>	<u>(% by Weight)</u>	<u>(Ton/Mo)</u>	<u>(Ton/Yr)</u>
Ink	25.92	259.20	3.60	0.94	9.33
OPVarnish	12.03	120.3	5.10	0.62	6.14
Glues/Adhesives (Regular)	63.63	636.3	0.80	0.51	5.09
Glues/Adhesives (Post)	8.74	87.4	0.10	0.01	0.09
Glue (General Taper)	2.06	20.6	9.00	0.19	<u>1.85</u>
				Total:	22.50

These limits are based on the maximum material usage and the maximum VOM content. Note that there is a "nested" limit on the emissions of the combination of HAPs as a result of the limit on VOM emissions. The HAPs emitted at this source have been determined to be VOMs and therefore limiting VOM emissions also limits HAP emissions. VOM and HAP emissions shall be calculated using the following equation:

$$E = \sum (I_i \times V_{Ii}) + \sum (FS_j \times V_{FSj}) + \sum (CS_k \times V_{CSk})$$

Where:

E = VOM or HAP emissions (tons);

I<sub>i</sub> = Ink and coating usage (tons);

V<sub>Ii</sub> = VOM or HAP content of ink or coating (weight fraction);

FS<sub>j</sub> = Adhesive usage (tons);

V<sub>FSj</sub> = VOM or HAP content of adhesive (weight fraction);

CS<sub>k</sub> = Cleaning solution usage (tons); and

V<sub>CSk</sub> = VOM or HAP content of cleaning solution (weight fraction).

- b. This permit is issued based on negligible emissions of Particulate Matter (PM) from the Koppers Printer/Slotter. For this purpose, emissions shall not exceed nominal emission rates of 0.10 lb/hour and 0.44 ton/year.
- c. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 9a. 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 Conditions 10 and 11 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
10. 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.
- 11a. Pursuant to 35 Ill. Adm. Code 218.211(a), the VOM content of each coating and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105 to establish the records required under 35 Ill. Adm. Code 218.211.
  - b. Pursuant to 35 Ill. Adm. Code 218.404(a), the VOM content of each coating and ink and the efficiency of each capture system and control device shall be determined by the applicable test methods and procedures specified in 35 Ill. Adm. Code 218.105 to establish the records required under 35 Ill. Adm. Code 218.404.
12. Pursuant to 40 CFR 63.829(d), the owner or operator of each facility which commits to the criteria of 40 CFR 63.820(a)(2) shall maintain

records of all required measurements and calculations needed to demonstrate compliance with these criteria, including the mass of all HAP containing materials used and the mass fraction of HAP present in each HAP containing material used, on a monthly basis.

13. 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.
- 14a. Pursuant to 35 Ill. Adm. Code 218.211(c)(2), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 and complying by means of 35 Ill. Adm. Code 218.204 shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:
  - i. The name and identification number of each coating as applied on each coating line.
  - ii. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line.
- b. Pursuant to 35 Ill. Adm. Code 218.404(c)(2), any owner or operator of a printing line subject to the limitations of 35 Ill. Adm. Code 218.401 and complying by means of 35 Ill. Adm. Code 218.401 218.401(a) shall collect and record all of the following information each day for each coating line and maintain the information at the source for a period of three years:
  - i. The name and identification number of each coating and ink as applied on each printing line.
  - ii. The VOM content of each coating and ink as applied each day on each printing line.
- 15a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
  - i. Usage of inks, coatings and solvents (tons/month and tons/year);
  - ii. VOM and HAP contents of the inks, coatings and solvents used (% by weight); and
  - iii. Monthly and annual emissions of PM, VOM and HAPs from the Koppers Printer/Slotter, Ward FFG Gluer/Printer and J & L Folder/Gluer with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years 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.

16. Pursuant to 40 CFR 63.830(b)(6)(ii), each owner or operator of an affected source subject to 40 CFR 63 Subpart KK shall submit to the Illinois EPA or USEPA A summary report specified in 40 CFR 63.10(e)(3) shall be submitted on a semi-annual basis (i.e., once every 6-month period). These summary reports are required even if the affected source does not have any control devices or does not take the performance of any control devices into account in demonstrating compliance with the emission limitations in 40 CFR 63.824 or 40 CFR 63.825. In addition to a report of operating parameter exceedances as required by 40 CFR 63.10(e)(3)(i), the summary report shall include exceedances of either of the criteria of 40 CFR 63.820(a)(2).
17. 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.
- 18a. Pursuant to 35 Ill. Adm. Code 218.211(c), any owner or operator of a coating line subject to the limitations of 35 Ill. Adm. Code 218.204 other than 35 Ill. Adm. Code 218.204(a)(2) or (a)(3) and complying by means of 35 Ill. Adm. Code 218.204 shall comply with the following:
  - i. By a date consistent with 35 Ill. Adm. Code 218.106, or upon initial start-up of a new coating line, or upon changing the method of compliance from an existing subject coating line from 35 Ill. Adm. Code 218.205, 35 Ill. Adm. Code 218.207, 35 Ill. Adm. Code 218.215, or 35 Ill. Adm. Code 218.216 to 35 Ill. Adm. Code 218.204; the owner or operator of a subject coating line shall certify to the Illinois EPA that the coating line will be in compliance with 35 Ill. Adm. Code 218.204 on and after a date consistent with 35 Ill. Adm. Code 218.106, or on and after the initial start-up date. The certification shall include:
    - A. The name and identification number of each coating as applied on each coating line;
    - B. The weight of VOM per volume of each coating (minus water and any compounds which are specifically exempted from the definition of VOM) as applied each day on each coating line;
    - C. For coating lines subject to the limitations of 35 Ill. Adm. Code 218.204(c)(2), the weight of VOM per weight of

solids (or the weight of VOM per weight of coatings, as applicable) in each coating as applied each day on each coating line

- ii. On and after a date consistent with 35 Ill. Adm. Code 218.106, the owner or operator of a subject coating line shall notify the Illinois EPA in the following instances:
  - A. Any record showing violation of 35 Ill. Adm. Code 218.204 shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.
  - B. At least 30 calendar days before changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d)(1) or (e)(1), respectively. Upon changing the method of compliance from 35 Ill. Adm. Code 218.204 to 35 Ill. Adm. Code 218.205 or 35 Ill. Adm. Code 218.207, the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.211(d) or (e), respectively.
- b. Pursuant to 35 Ill. Adm. Code 218.404(c), any owner or operator of a printing line subject to the limitations of 35 Ill. Adm. Code 218.401 and complying by means of 35 Ill. Adm. Code 218.401(a) shall comply with the following:
  - i. By a date consistent with 35 Ill. Adm. Code 218.106, or upon initial start-up of a new printing line, or upon changing the method of compliance from an existing subject printing line from 35 Ill. Adm. Code 218.401(b) or 35 Ill. Adm. Code 218.401(c) to 35 Ill. Adm. Code 218.401(a), the owner or operator of a subject printing line shall certify to the Illinois EPA that the printing line will be in compliance with 35 Ill. Adm. Code 218.401(a) on and after a date consistent with 35 Ill. Adm. Code 218.106, or on and after the initial start-up date. Such certification shall include:
    - A. The name and identification number of each coating and ink as applied on each printing line.
    - B. The VOM content of each coating and ink as applied each day on each printing line.
  - ii. On and after a date consistent with 35 Ill. Adm. Code 218.106, the owner or operator of a subject printing line shall notify the Illinois EPA in the following instances:
    - A. Any record showing violation of 35 Ill. Adm. Code 218.401(a) shall be reported by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation.

B. At least 30 calendar days before changing the method of compliance with 35 Ill. Adm. Code 218.401 from 35 Ill. Adm. Code 218.401(a) to 35 Ill. Adm. Code 218.401(b) or (c), the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.404(d)(1) or (e)(1), respectively. Upon changing the method of compliance with 35 Ill. Adm. Code 218.401 from 35 Ill. Adm. Code 218.401(a) to 35 Ill. Adm. Code 218.401(b) or (c), the owner or operator shall comply with all requirements of 35 Ill. Adm. Code 218.404(d) or (e), respectively.

19a. 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 or 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 David Hulskotter at 217/782-2113.

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

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

ECB:DWH:jws

cc: Illinois EPA, FOS Region 1