

217/785-1705

CONSTRUCTION PERMIT

PERMITTEE

Illinois Recycling and Renewable Fuels, LLC
Attn: Mr. M. L. Smith, P.E.
21686 East Lincoln Highway
Lynwood, Illinois 60411

Application No.: 11040025 I.D. No.: 031045AOG
Applicant's Designation: Chicago Heights Date Received: April 12, 2011
Subject: Recycling
Date Issued: October 6, 2011
Location: 1301 South State Street, Chicago Heights, Cook County 60411

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

Two Flails (Bag Openers) Controlled by Bag Filters BF-3 and 4
Three Primary Trommels Controlled by Bag Filters BF-5 and 6
Three Shredders Controlled by Bag Filters BF-7, 8, 9, 10 and 11
Three Air Classifiers (AC-1, 2 & 3) Controlled by Bag Filters BF-7, 8, 9, 10 and 11
One Air Classifier (AC-4) Controlled by Bag Filter BF-5
Six Cyclone Separators Controlled by Bag Filters BF-7, 8, 9, 10 and 11
One Cyclone Separator Controlled by Bag Filter BF-5
Two Secondary Trommels Controlled by Bag Filters BF-5 and 6
Two Disc Screens Controlled by Bag Filters BF-5 and 6
Six Stationary Packers Controlled by Bag Filters BF-7 and 8

as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

- 1a. This Permit is issued based on the construction of the recycling of municipal solid waste (MSW) for refuse derived fuel (RDF) source not constituting a new major source or major modification pursuant to Title I of the Clean Air Act, specifically 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The source has requested that the Illinois EPA establish emission limitations and other appropriate terms and conditions in this permit that limit the emissions of Particulate Matter (PM) and PM less than 10 microns (PM₁₀) from the above-listed equipment below the levels that would trigger the applicability of these rules.

- b. This permit is issued based on the potential to emit (PTE) for hazardous air pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act being less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs, or such less quantity as USEPA may establish by rule which would require the Permittee to obtain a Clean Air Act Permit Program (CAAPP) permit from the Illinois EPA.

- 2a. Permittee can operate the source under this construction permit for a period of 12 months from the date of initial start of operation of the source.
- b. During operation of the source, the Permittee shall have personnel on-site that have been trained in the proper operation, monitoring, and shut-down of the source.
- c. If the testing required by Condition 5 does not demonstrate compliance with applicable regulatory statutes and regulations and permit conditions, the Permittee shall notify the Illinois EPA in writing as required by Condition 10 and cease operation of the source.
- 3a. The Permittee shall comply with the opacity limitations of 35 Ill. Adm. Code 212.123 and the particulate matter emission limitations of 35 Ill. Adm. Code 212.321.
- b. 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 (35 Ill. Adm. Code 212.301).
- 4a. Emissions and operation of the source shall not exceed the following limits:

<u>Pollutant</u>	<u>Waste Throughput</u>		<u>Emission Factor</u> (Lbs/Ton)	<u>Emissions</u>	
	(Tons/Mo)	(Tons/Yr)		(Tons/Mo)	(Tons/Yr)
PM/PM ₁₀	98,969	986,960	0.037	1.86	18.30

These limits are based on maximum allowable throughput of municipal solid waste (2,704 tons/day) and information in the permit application.

- b. Compliance with annual limits 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).
- 5a. Within 180 days after startup of the source, PM, PM₁₀, cadmium, lead, and mercury emissions and opacity from the exhaust of Bag Filters 3, 5, 7, and 8 (BF-3, BF-5, BF-7, BF-8) shall be measured during conditions which are representative of maximum emissions. These tests shall be used in part to determine compliance with 35 Ill. Adm. Code 212.123 and 212.321.
- b. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Illinois EPA: Refer to 40 CFR Part 60, Appendix A, and 40 CFR Part 61, Appendix B, for USEPA test methods:

Location of Sample Points

USEPA Method 1 or 1A;

Gas Flow and Velocity	USEPA Method 2, 2A, 2C, 2D, 2F, or 2G;
Flue Gas Weight	USEPA Method 3, 3A, or 3B;
Moisture	USEPA Method 4;
Particulate Matter	USEPA Method 5, 5B, 5D, 5F, or 5I;
Opacity	USEPA Method 9 or 22 (if no visible emissions are observed for 90 percent of the readings over 1 hour); and
Cadmium, Lead, and Mercury	USEPA Method 29

- c. At least 30 days prior to the actual date of testing, the Permittee shall submit a written test plan to the Illinois EPA, Compliance Section. This plan shall include at a minimum:
- i. The name (or other identification) and location of the emission points to be tested and the name and address of the facility at which they are located;
 - ii. The name and address of the independent testing service(s) who will be performing the tests, with their experience with similar tests;
 - iii. The specific determinations of emissions and/or performance which are intended to be made, including the site(s) in the ductwork or stack at which sampling will occur;
 - iv. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions, minimum control performance, the levels of operating parameters for the emission unit, including associated control equipment, at or within which compliance is intended to be shown, and the means by which the operating parameters will be determined;
 - v. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods. The specific sampling, analytical and quality control procedures which will be used, with an identification of the standard methods upon which they are based;
 - vi. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justifications;
 - vii. Any proposed use of an alternative test method, with detailed justification; and
 - viii. The format and content of the Source Test Report.
- d. The Permittee shall provide the Illinois EPA with written notification

of testing at least thirty (30) days prior to testing to enable the Illinois EPA to have an observer present. This notification shall include the name and location of emission points to be tested, scheduled date and time, and contact person with telephone number.

- e. If testing is delayed, the Permittee shall promptly notify the Illinois EPA by facsimile, at least 5 days prior to the scheduled date of testing or immediately, if the delay occurs in the 5 days prior to the scheduled date. This notification shall also include the new date and time for testing, if set, or a separate notification shall be sent with this information when it is set.
- f. The Permittee shall submit the Final Source Test Report(s) for these tests accompanied by a cover letter stating whether or not compliance was shown, to the Illinois EPA without delay, within 30 days after the test results are compiled, but no later than 60 days after the final date of sampling. The Final Source Test Report shall include at a minimum:
 - i. General information describing the test, including the name and identification of the emission source which was tested, date of testing, name of testing service and names of personnel performing the tests, and Illinois EPA observers, if any;
 - ii. A summary of results;
 - iii. Description of test procedures and method(s), including description and map of emission units and of sampling points, sampling train, testing and analysis equipment, and test schedule;
 - iv. Detailed description of test conditions, including:
 - A. List and description of the equipment (including serial numbers or other equipment specific identifiers) tested and process information (i.e., mode(s) of operation, process rate, fuel or raw material consumption rate, and heat content of the fuels);
 - B. Control equipment information (i.e., equipment condition and operating parameters) during testing; and
 - C. A discussion of any preparatory actions taken (i.e., inspections, maintenance and repair).
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration. Identification of the applicable regulatory standards that the testing was performed to demonstrate compliance with, a comparison of the test results to the applicable regulatory standards, and a statement whether the test(s) demonstrated compliance with the applicable standards;

- vi. An explanation of any discrepancies among individual tests, failed tests or anomalous data.
 - vii. The results and discussion of all quality control evaluation data, including a copy of all quality control data; and
 - viii. The applicable operating parameters of the pollution control device(s) during testing (temperature, pressure drop, scrubbant flow rate, etc.), if any, during testing.
- g. Satisfactory completion of this test so as to demonstrate compliance with applicable emission standards is a prerequisite to issuance of an operating permit, pursuant to 35 Ill. Adm. Code 201.160.
- 6a. The Permittee shall implement and perform all the odor prevention activities and procedures identified in the permit application. In the event that the operation of the source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, installation of controls, in order to eliminate the odor nuisance.
- b. The Permittee shall implement and perform all the odor prevention activities and procedures identified in the permit application. The operation of the source may not cause or threaten or allow the discharge or emission of any contaminant into the environment in any state so as to cause or tend to cause air pollution in Illinois, either alone or in combination with contaminants from other sources, or so as to violate regulations or standards adopted by the Board under the Illinois Environmental Protection Act.
- 7a. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the equipment covered under this permit such that the equipment are kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.
- b. Pollution control devices shall be in operation at all times when the associated emission units are in operation and emitting air contaminants.
8. 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.
- 9a. The Permittee shall maintain records of the following items:
- i. Vendor/manufacturer recommendations;

- ii. Records addressing use of good operating practices for the emission units and pollution control equipment:
 - A. Records for periodic inspection/maintenance of the emission units and pollution control equipment with date, individual performing the inspection/maintenance, and nature of inspection/maintenance; and
 - B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
 - C. Operating log for the source including, but not limited to, trained operating personnel on-site, and time and duration of operation.
 - b. The Permittee shall maintain monthly records of the following items:
 - i. The amount of municipal solid waste received (tons/month and tons/year).
 - ii. The total amount of waste shipped off site (tons/month and tons/year).
 - iii. The total amount of refuse derived fuel (RDF) shipped off-site (tons/month and tons/year).
 - iv. The type and total amount of material sent off site for recycling (tons/month and tons/year).
 - v. PM and PM₁₀ emissions (tons/month and tons/year) with supporting calculations.
 - c. 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 available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to the Illinois EPA or USEPA request for records during the course of a source inspection.
10. If there is an exceedance of or 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/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.

11. 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

It should be noted that during the analysis of this permit application, it was determined that your facility has the potential to emit more than 100 tons per year of particulate matter of less than ten microns PM₁₀ and will be classified as a major source under the Clean Air Act Permit Program (CAAPP). To avoid the CAAPP permitting requirements, you may want to consider immediately applying for a Federally Enforceable State Operating Permit (FESOP) once the required testing demonstrates compliance.

A FESOP is an operating permit containing federally enforceable limits in the form of permit conditions which effectively restrict the potential emissions of a source to below major source thresholds, thereby excluding the source from the CAAPP. The necessary application forms are available on the Illinois EPA's website at <http://www.epa.state.il.us/air/caapp/permit-forms.html>.

If you have any questions on this permit, please contact Mike Dragovich at 217/782-2113.

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

Date Signed: _____

ECB:MJD:psj

cc: Region 1
Permit Section, DLPC