



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: July 10, 2012

RE: Green Stream Company / 039 - 31950 - 00632

FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

## Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FNPER-AM.dot12/3/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Amit Shah  
Green Stream Company, Inc.  
54722 Chelsea Court  
Elkhart, IN 46516

July 10, 2012

Re: R039-31950-00632  
Second Registration Notice-Only Change to  
R039-25232-00632

Dear Amit Shah:

Global Group, Inc. was issued a Registration No. R039-25232-00632 on November 1, 2007 for a stationary wood pallet manufacturing and recycling plant located at 54722 Chelsea Court, Elkhart, Indiana 46516. On May 29, 2012, the Office of Air Quality (OAQ) received an application from the source requesting that the registration be updated to indicate a change in ownership and company name to Green Stream Company, Inc. This change to the registration is considered a notice-only change pursuant to 326 IAC 2-5.5-6(d)(3). In addition, the source requested to remove the diesel-fired wood grinder from the registration, since it has been removed from the site. The cyclone and baghouse unit has been removed from the description of the wood cutting and assembly lines since they have been disconnected according to the inspector. Pursuant to 326 IAC 2-5.5-6, the registration is hereby revised as follows, with deleted language as ~~strikeouts~~ and new language **bolded**:

1. The company name has been revised throughout the registration as follows:

Company Name: ~~Global Group, Inc.~~  
**Green Stream Company, Inc.**

2. The registration has been updated to remove the 440 HP diesel-fired wood grinder and the cyclone and baghouse unit as follows:

- ~~(a) One (1) diesel-fired stationary wood grinder, identified as WG, approved for construction in 2007, with a maximum wood grinding capacity of 6.5 tons per hour, and powered by a 440-HP engine.~~
- (ab) Two (2) wood cutting and assembly lines equipped with one cyclone and a baghouse unit for particulate control, identified as SV1 and SV2, constructed in 2005, with a maximum combined production rate of 21,000 lbs of wood per hour.**
- (be) One (1) wood transfer conveyer, constructed in 2005, with a maximum capacity of 6.72 tons per hour, with fugitive emissions controlled by water spray.**
- (cd) One (1) wood scrap storage pile, having a storage area of 1 acre, with fugitive emissions controlled by water spray.**
- (de) Four (4) natural gas fired forced air space heaters, constructed in 2005, identified as H2, H3, H4, and H5, each with a maximum heat input capacity of 0.3 MMBtu/hr.**

IDEM, OAQ has decided to make additional revisions to the registration as described below. The registration has been revised as follows with deleted language as ~~strikeouts~~ and new language **bolded**:

3. IDEM, OAQ has decided to remove all references to the source mailing address. IDEM, OAQ will continue to maintain records of the mailing address. Section A.1 of the registration and the reporting forms has been revised as follows:

Mailing Address: ~~P.O. Box 3017, Elkhart, Indiana 46516~~

4. Several of IDEM's branches and sections have been renamed. Therefore, IDEM has updated the addresses listed in the registration. References to "Compliance Data Section" and "Compliance Branch" have been changed to "Compliance and Enforcement Branch". The registration has been revised as follows:

~~Compliance Data Section~~ **Compliance and Enforcement Branch**  
~~Compliance Branch~~ **Compliance and Enforcement Branch**

Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit (PTE) 100,000 tons per year or more of CO2 equivalent emissions (CO2e). Therefore, CO2e emissions have been calculated for this source. Based on the calculations, the unlimited PTE GHGs from the entire source is less than 100,000 tons of CO2e per year (see Appendix A for detailed calculations). This did not require any changes to the registration.

The source shall continue to operate according to 326 IAC 2-5.5. Please find enclosed the revised registration. A copy of the registration is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Brian Wright, at (800) 451-6027, press 0 and ask for Brian Wright or dial (317) 234-6544.

Sincerely,



Nathan C. Bell, Section Chief  
Permits Branch  
Office of Air Quality

NB/bw

Attachment: Revised Registration and Appendix A (calculations)

cc: File - Elkhart County  
Elkhart County Health Department  
Compliance and Enforcement Branch  
Billing, Licensing and Training Section



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## REGISTRATION OFFICE OF AIR QUALITY

**Green Stream Company, Inc.  
54722 Chelsea Court  
Elkhart, Indiana 46516**

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. R039-25232-00632

Original signed by:  
Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

Issuance Date: November 1, 2007

First Registration Notice-Only Change No. 039-26191-00632, issued March 17, 2008

Second Registration Notice-Only Change No. 039-31950-00632

Issued by:

  
Nathan Bell, Section Chief  
Permits Branch  
Office of Air Quality

Issuance Date:

July 10, 2012

## SECTION A

## SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Registrant to obtain additional permits pursuant to 326 IAC 2.

### A.1 General Information

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The Registrant owns and operates a stationary wood pallet manufacturing and recycling production operation.

Source Address:	54722 Chelsea Court, Elkhart, Indiana 46516
General Source Phone Number:	574-293-1949
SIC Code:	2448 (Wood Pallets and Skids)
County Location:	Elkhart County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

### A.2 Emission Units and Pollution Control Equipment Summary

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This stationary source consists of the following emission units and pollution control devices:

- (a) Two (2) wood cutting and assembly lines, identified as SV1 and SV2, constructed in 2005, with a maximum combined production rate of 21,000 lbs of wood per hour.
- (b) One (1) wood transfer conveyer, constructed in 2005, with a maximum capacity of 6.72 tons per hour, with fugitive emissions controlled by water spray.
- (c) One (1) wood scrap storage pile, having a storage area of 1 acre, with fugitive emissions controlled by water spray.
- (d) Four (4) natural gas fired forced air space heaters, constructed in 2005, identified as H2, H3, H4, and H5, each with a maximum heat input capacity of 0.3 MMBtu/hr.

## SECTION B

## GENERAL CONDITIONS

### B.1 Definitions [326 IAC 2-1.1-1]

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Terms in this registration shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

### B.2 Effective Date of Registration [IC 13-15-5-3]

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Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

### B.3 Registration Revocation [326 IAC 2-1.1-9]

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Pursuant to 326 IAC 2-1.1-9 (Revocation), this registration to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM, the fact that continuance of this registration is not consistent with purposes of this article.

### B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

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- (a) All terms and conditions of permits established prior to Registration No. R039-25232-00632, and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

### B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

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Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.

- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, IN 46204-2251

- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

**B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]**

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Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

**B.7 Registrations [326 IAC 2-5.1-2(i)]**

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Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

**SECTION C**

**SOURCE OPERATION CONDITIONS**

Entire Source

**Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]**

**C.1 Opacity [326 IAC 5-1]**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this registration:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**C.2 Fugitive Dust Emissions [326 IAC 6-4]**

The Registrant shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

**SECTION D.1**

**OPERATION CONDITIONS**

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

(a) Two (2) wood cutting and assembly lines, identified as SV1 and SV2, constructed in 2005, with a maximum combined production rate of 21,000 lbs of wood per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]**

**D.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3]**

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the woodworking operations shall not exceed the following:

Description	Process Weight Rate (lbs/hr)	Allowable PM Emission Rate (lbs/hour)
Wood Cutting (Line 1, Line 2)	21,500	20.13

The allowable rate of emission was calculated as follows:

Interpolation of the data in the table in 326 IAC 6-3-2(e)(2) for the process weight rates up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and } P = \text{process weight rate in tons per hour}$$

When the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission is five hundred fifty-one thousandths (0.551) pound per hour.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH**

**REGISTRATION  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

<b>Company Name:</b>	Green Stream Company
<b>Address:</b>	54722 Chelsea Court
<b>City:</b>	Elkhart, Indiana 46516
<b>Phone Number:</b>	574-596-7929
<b>Registration No.:</b>	R039-25232-00632

I hereby certify that Green Stream Company, Inc. is :

still in operation.

I hereby certify that Green Stream Company, Inc. is :

no longer in operation.

in compliance with the requirements  
of Registration No. R039-25232-00632

not in compliance with the requirements  
of Registration No. R039-25232-00632.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Phone Number:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>

**Appendix A: Emissions Calculations  
Emission Summary**

**Company Name:** Green Stream Company, Inc.  
**Address City IN Zip:** 54722 Chelsea Court, Elkhart, IN 46516  
**Registration No.:** R039-25232-00632  
**Notice-Only Change No.:** R039-31950-00632  
**Reviewer:** Brian Wright

Category	Potential to Emit (tons/year) (Before Controls)							
	Pollutant	Natural Gas Space Heaters H2, H3, H4, H5	Wood Cutting Operation Line1, Line2	Scrap Wood Handling (Fugitive)	Scrap Wood Screening and Conveying (Fugitive)	Scrap Wood Storage Piles (Fugitive)	Unpaved Roads (Fugitive)	TOTAL
Criteria Pollutants	PM	0.01	16.10	0.13	0.09	1.01	2.12	19.47
	PM10	0.04	9.20	0.06	0.03	0.35	0.54	10.23
	PM2.5	0.04	9.20	0.01	0.03	0.35	0.05	9.69
	SO2	0.003						0.003
	NOx	0.52						0.52
	VOC	0.03						0.03
	CO	0.43						0.43
	GHGs as CO2e	622						622
Hazardous Air Pollutants	Benzene	1.1E-05						1.1E-05
	Cadmium	5.7E-06						5.7E-06
	Chromium	7.2E-06						7.2E-06
	Dichlorobenzene	6.2E-06						6.2E-06
	Formaldehyde	3.9E-04						3.9E-04
	Lead	2.6E-06						2.6E-06
	Manganese	2.0E-06						2.0E-06
	n-Hexane	0.009						0.009
	Nickel	1.1E-05						1.1E-05
	Toluene	1.8E-05						1.8E-05
<b>Totals</b>	<b>0.010</b>						<b>0.010</b>	

Total emissions based on rated capacity at 8,760 hours/year.

Category	Potential to Emit (tons/year) (After Controls)							
	Emissions Generating Activity							
Pollutant	Natural Gas Space Heaters H2, H3, H4, H5	Wood Cutting Operation Line1, Line2	Scrap Wood Handling (Fugitive)	Scrap Wood Screening and Conveying (Fugitive)	Scrap Wood Storage Piles (Fugitive)	Unpaved Roads (Fugitive)	TOTAL	
Criteria Pollutants	PM	0.01	16.10	0.07	0.04	0.51	1.06	17.79
	PM10	0.04	9.20	0.03	0.02	0.18	0.27	9.73
	PM2.5	0.04	9.20	0.03	0.02	0.18	0.03	9.49
	SO2	0.003						0.003
	NOx	0.52						0.52
	VOC	0.03						0.03
	CO	0.43						0.43
	GHGs as CO2e	622						622
Hazardous Air Pollutants	Benzene	1.1E-05						1.1E-05
	Cadmium	5.7E-06						5.7E-06
	Chromium	7.2E-06						7.2E-06
	Dichlorobenzene	6.2E-06						6.2E-06
	Formaldehyde	3.9E-04						3.9E-04
	Lead	2.6E-06						2.6E-06
	Manganese	2.0E-06						2.0E-06
	n-Hexane	0.009						0.009
	Nickel	1.1E-05						1.1E-05
	Toluene	1.8E-05						1.8E-05
<b>Totals</b>	<b>0.010</b>						<b>0.010</b>	

Total emissions based on rated capacity at 8,760 hours/year.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**

**Company Name: Green Stream Company, Inc.**  
**Address City IN Zip: 54722 Chelsea Court, Elkhart, IN 46516**  
**Registration No.: R039-25232-00632**  
**Notice-Only Change No.: R039-31950-00632**  
**Reviewer: Brian Wright**

Units	Heat Input Capacity MMBTu/hr
H2	0.30
H3	0.30
H4	0.30
H5	0.30
<b>Total</b>	<b>1.20</b>

HHV mmBtu	Potential Throughput MMCF/yr
mmscf	
<b>1020</b>	<b>10.3</b>

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emission in tons/yr	0.0	0.0	0.0	0.0	0.5	0.0	0.4

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.  
 PM2.5 emission factor is filterable and condensable PM2.5 combined.  
 \*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.  
 MMBtu = 1,000,000 Btu  
 MMCF = 1,000,000 Cubic Feet of Gas  
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03  
 Potential Throughput (MMCF) = Heat Input Capacity (MMBTu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Hazardous Air Pollutants**

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.08E-05	6.18E-06	3.86E-04	9.28E-03	1.75E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.58E-06	5.67E-06	7.21E-06	1.96E-06	1.08E-05

The five highest organic and metal HAPs emission factors are provided above.  
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Greenhouse Gases**

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	618	0.0	0.0
Summed Potential Emissions in tons/yr	618		
CO2e Total in tons/yr	622		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emissions Calculations  
Wood Cutting Operations (Line1 & Line2)**

**Company Name:** Green Stream Company, Inc.  
**Address City IN Zip:** 54722 Chelsea Court, Elkhart, IN 46516  
**Registration No.:** R039-25232-00632  
**Notice-Only Change No.:** R039-31950-00632  
**Reviewer:** Brian Wright

Process	Maximum Throughput (lbs/hr)	Uncontrolled Emission Factor (lb/ton)		Uncontrolled PTE (lbs/hr)		Uncontrolled PTE (tons/yr)		326 IAC 6-3-2 Allowable PM Emissions (lbs/hr)
		PM	PM10/PM2.5*	PM	PM10/PM2.5*	PM	PM10/PM2.5*	
Wood cutting (Line 1 and Line 2)	21000	0.35	0.200	3.68	2.100	16.10	9.20	20.13

**Methodology**

\*PM2.5 emissions assumed equal to PM10 emissions.

Emission Factors are from AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants

EPA March 1990 for Sawmill Operations (Log Sawing: General) (SCC 3-07-008-01, SCC 3-07-008-02, SCC 3-07-008-03)

Uncontrolled Potential Emissions (lbs/hr) = [Maximum Throughput (lbs/hr)] \* [ton/2,000 lbs] \* [Uncontrolled Emission Factor (lbs/ton)]

Uncontrolled Potential Emissions (tons/yr) = [Uncontrolled Potential Emissions (lbs/hr)] \* [8,760 hrs/yr] \* [ton/2,000 lbs]

**Compliance with 326 IAC 6-3-2:**

Allowable Emissions, $E = 4.10 * P^{0.67}$ (for weight rates up to 60,000 lb/hr) where E = emissions in lbs/hr P = process weight in tons/hr P = 21500 lbs/hr = 10.75 tons/hr  Allowable PM Emissions, E = 20.13 lbs/hr
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**Appendix A: Emissions Calculations**  
**Material Processing And Handling (Fugitive Emissions) (continued)**

**Company Name:** Green Stream Company, Inc.  
**Address City IN Zip:** 54722 Chelsea Court, Elkhart, IN 46516  
**Registration No.:** R039-25232-00632  
**Notice-Only Change No.:** R039-31950-00632  
**Reviewer:** Brian Wright

**Batch or Continuous Drop Operations (AP-42 Section 13.2.4)**

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

$$Ef = k \cdot (0.0032)^{1.3} / (M/2)^{1.4}$$

where: Ef = Emission factor (lb/ton)

k (PM) = 0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) = 0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) = 0.053	= particle size multiplier (0.35 assumed for aerodynamic diameter <=2.5 um)
U = 10.2	= worst case annual mean wind speed (Source: NOAA, 2005*)
M = 4.0	= material % moisture content
Ef (PM) = 2.27E-03	lb PM/ton of material handled
Ef (PM10) = 1.07E-03	lb PM10/ton of material handled
Ef (PM2.5) = 1.62E-04	lb PM2.5/ton of material handled

Maximum Material Handling Throughput = 58,867 tons/yr

Type of Activity	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10 (tons/yr)	Uncontrolled PTE of PM2.5 (tons/yr)	Control Description	Control Efficiency	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.07	0.03	0.005	open-water spray	50%	0.03	0.02	0.002
Front-end loader dumping of materials into truck	0.07	0.03	0.005	open-water spray	50%	0.03	0.02	0.002
<b>Totals</b>	<b>0.13</b>	<b>0.06</b>	<b>0.010</b>			<b>0.07</b>	<b>0.03</b>	<b>0.005</b>

**Methodology**

\*Worst case annual mean wind speed (South Bend, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2005  
 Uncontrolled PTE (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)  
 Controlled PTE = [Uncontrolled PTE (tons/yr)] \* [1 - control efficiency]

**Scrap Wood Screening and Conveying (AP-42 Section 11.19.2)**

To estimate potential fugitive dust emissions from raw material conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10/PM2.5 (lbs/ton)*	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10 (tons/yr)	Control Description	Control Efficiency	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10/PM2.5 (tons/yr)
Scrap Wood Screening and Conveying	0.003	0.0011	0.09	0.03	open-water spray	50%	0.04	0.016
<b>Totals</b>			<b>0.09</b>	<b>0.03</b>			<b>0.04</b>	<b>0.02</b>

**Methodology**

\*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).  
 Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2  
 Uncontrolled PTE (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] \* [Emission Factor (lb/ton)] \* (ton/2000 lbs)  
 Controlled PTE = [Uncontrolled PTE (tons/yr)] \* [1 - control efficiency]

**Abbreviations**

PTE = Potential to Emit  
 PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PM2.5 = Particulate Matter (<2.5 um)

**Appendix A: Emissions Calculations  
Material Processing And Handling (Fugitive Emissions)**

Company Name: **Green Stream Company, Inc.**  
Address City IN Zip: **54722 Chelsea Court, Elkhart, IN 46516**  
Registration No.: **R039-25232-00632**  
Notice-Only Change No.: **R039-31950-00632**  
Reviewer: **Brian Wright**

**Scrap Wood Storage Pile - Wind Erosion**

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

$E_f = 1.7 \cdot (s/1.5)^3 \cdot (365 - p) / 235 \cdot (l/f^{1.5})$ <p>where <math>E_f</math> = emission factor (lb/acre/day)  <math>s</math> = silt content (wt %)  <math>p</math> = <u>125.00</u> days of rain greater than or equal to 0.01 inches  <math>f</math> = <u>15.00</u> % of wind greater than or equal to 12 mph</p>
--

Description	Silt Content (wt %)*	Emission Factor (lb/acre/day)	**Maximum Anticipated Pile Size (acres)	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10/PM2.5 (tons/yr)	Control Description	Control Efficiency	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10/PM2.5 (tons/yr)
Scrap Wood Storage Pile	4.80	5.56	1.00	1.01	0.35	open-water spray	50%	0.51	0.18
<b>Totals</b>				<b>1.01</b>	<b>0.35</b>			<b>0.51</b>	<b>0.18</b>

**Methodology**

\*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)  
 Uncontrolled PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) \* (Maximum Pile Size (acres)) \* (ton/2000 lbs) \* (8760 hours/yr)  
 Uncontrolled PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) \* 35%  
 Controlled PTE = [Uncontrolled PTE (tons/yr)] \* [1 - control efficiency]

**Vehicle Traffic-Unpaved Roads at Industrial Site**

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Vehicle Information (provided by source)

Type	Maximum trips per hour (trip/hr)	Maximum Weight Loaded (tons/trip)	Total Weight driven per hour (ton/hr)	Maximum roundtrip distance (mi/trip)	Maximum miles driven (miles/yr)
**Vehicle traffic- Car/Truck	5.0	15.0	75.0	0.019	832.2

Average Vehicle Weight Per Trip = 15.0 tons/trip  
 Average Miles Per Trip = 0.019 miles/trip

Unmitigated Emission Factor,  $E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b]$  (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where $k$ =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
$s$ =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Rd.)
$a$ =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
$W$ =	15.0	15.0	15.0	tons = average vehicle weight (provided by source)
$b$ =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E \cdot [(365 - P)/365]$   
 Mitigated Emission Factor,  $E_{ext} = E \cdot [(365 - P)/365]$   
 where  $P$  = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM10	
Unmitigated Emission Factor, $E_f$ =	5.32	1.36	0.14	lb/mile
Mitigated Emission Factor, $E_{ext}$ =	5.10	1.30	0.13	lb/mile
Dust Control Efficiency =	50%	50%	50%	(open water sprays)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle traffic- Car/Truck**	2.21	0.56	0.06	2.12	0.54	0.05	1.06	0.27	0.03

**Methodology**

Total Weight driven per hour (tons/hr) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per hour (trip/hr)]  
 Maximum miles Vehicle driven per year = [Maximum Roundtrip distance (mi/trip)] \* [Maximum trips per hour (trips/hr)] \* 8760 (hrs/yr)  
 Unmitigated PTE (tons/yr) = (Maximum roundtrip miles (miles/yr)) \* (Unmitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Mitigated PTE (tons/yr) = (Maximum roundtrip miles (miles/yr)) \* (Mitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) \* (1 - Dust Control Efficiency)



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

## SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

**TO:** Amit Shah  
Green Stream Company  
54722 Chelsea Ct  
Elkhart, IN 46516

**DATE:** July 10, 2012

**FROM:** Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

**SUBJECT:** Final Decision  
Registration - Notice-Only Change  
039 - 31950 - 00632

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07

# Mail Code 61-53

IDEM Staff	LPOGOST 7/10/2012 Green Stream Company, Inc. 039 - 31950 - 00632 final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handling Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee
											Remarks
1		Amit Shah Green Stream Company, Inc. 54722 Chelsea Ct Elkhart IN 46516 (Source CAATS) Via confirmed delivery									
2		Elkhart City Council and Mayors Office 229 South Second Street Elkhart IN 46516 (Local Official)									
3		Elkhart County Health Department 608 Oakland Avenue Elkhart IN 46516 (Health Department)									
4		Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 (Local Official)									
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