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

TO: Interested Parties / Applicant

DATE: November 20, 2012

RE: Futurex, Inc / 121-32304-00011

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

Notice of Decision: Approval - Registration

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 IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

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 of 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
FN-REGIS.dot 1/2/08

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REGISTRATION
OFFICE OF AIR QUALITY

Futurex, Inc.
26 E. Guion St.
Marshall, IN 47859

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. 121-32304-00011	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 20, 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

The Registrant owns and operates a stationary plastic sheet manufacturing plant.

Source Address:	26 E. Guion St., Marshall, IN 47859
General Source Phone Number:	(765) 498-3900
SIC Code:	3089 (Plastics Products, Not Elsewhere Classified)
County Location:	Parke County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) Two (2) blenders, identified as blender 1 and blender 2, constructed in 1975, with a combined maximum capacity of 375 pounds of polyethylene pellets and colorant per hour, using no controls and exhausting inside the building.

(b) Four (4) electric extruders, using no controls and exhausting inside the building consisting of:

(1) Line 12, with a maximum capacity of 147 pounds of polystyrene pellets per hour and constructed in 1971,

(2) Line 13, with a maximum capacity of 345 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 1985,

(3) Line 14, with a maximum capacity of 170 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 1990, and

(4) Line 15, with a maximum capacity of 128 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 1990.

(c) One (1) cutting operation using a cyclone for particulate control, exhausting inside the building, and consisting of:

(1) One (1) 20" vertical band saw, identified as band saw 1, with maximum capacity of 337 pounds of polystyrene and ABS (Acrylonitrile Butadiene Styrene)per hour.

(2) One (1) 36" vertical band saw, identified as band saw 2, with maximum capacity of 337 pounds of polystyrene and ABS (Acrylonitrile Butadiene Styrene)per hour.

(d) One (1) woodworking operation, identified as miter saw, with a combined maximum capacity of 2,500 pounds of wood per hour, using no controls and exhausting inside the building.

(e) Six (6) granulators, using no controls and exhausting inside the building consisting of:

(1) Line 12, with a maximum capacity of 147 pounds of polystyrene pellets per hour and constructed in 1999,

(2) Line 13, with a maximum capacity of 345 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 2005,

(3) Line 14, with a maximum capacity of 170 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 2008, and

(4) Line 15, with a maximum capacity of 128 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 2007.

(5) Platform constructed in 1972.

(6) Outside grinding constructed in 2011.

(f) One (1) parts washer, constructed in 2002, that does not exceed 18 gallons per twelve (12) months.

(g) Six (6) storage silos, identified as Silo 1 through Silo 6, with a maximum storage capacity of 85,000 lbs of polystyrene or ABS (Acrylonitrile Butadiene Styrene), each.

(h) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, including the following:

(1) Three (3) natural gas-fired heaters, with a maximum heat input capacity of 0.15 MMBtu/hr, each, using no controls and exhausting inside.

(2) One (1) natural gas-fired heater, with a maximum heat input capacity of 0.08 MMBtu/hr, using no controls and exhausting inside.

(i) Paved roads.

SECTION B GENERAL CONDITIONS

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

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]

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]

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]

(a) All terms and conditions of permits established prior to Registration No. 121-32304-00011 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)]

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)]

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)]

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

B.8 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this registration, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant notifies:

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

The Registrant shall implement the PMPs.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.

(c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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) blenders, identified as blender 1 and blender 2, constructed in 1975, with a combined maximum capacity of 375 pounds of polyethylene pellets and colorant per hour, using no controls and exhausting inside the building.

(b) Four (4) electric extruders, using no controls and exhausting inside the building consisting of:

(1) Line 12, with a maximum capacity of 147 pounds of polystyrene pellets per hour and constructed in 1971,

(2) Line 13, with a maximum capacity of 345 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 1985,

(3) Line 14, with a maximum capacity of 170 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 1990, and

(4) Line 15, with a maximum capacity of 128 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 1990.

(c) One (1) cutting operation using a cyclone for particulate control, exhausting inside the building, and consisting of:

(1) One (1) 20" vertical band saw, identified as band saw 1, with maximum capacity of 337 pounds of polystyrene and ABS (Acrylonitrile Butadiene Styrene)per hour.

(2) One (1) 36" vertical band saw, identified as band saw 2, with maximum capacity of 337 pounds of polystyrene and ABS (Acrylonitrile Butadiene Styrene)per hour.

(d) One (1) woodworking operation, identified as miter saw, with a combined maximum capacity of 2,500 pounds of wood per hour, using no controls and exhausting inside the building.

(The information describing the process contained in this facility 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 [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the processes listed in the table below shall be limited by the following:

Emission Unit	Process Weight Rate		Allowable PM Limit (lbs/hr)
	(lbs/hr)	(tons/hr)	
Extruder Line 12	147	0.074	0.72
Extruder Line 13	345	0.17	1.25
Extruder Line 14	170	0.09	0.82
Extruder Line 15	128	0.06	0.62
Cutting Operation (20" vertical band saw)	337	0.17	1.25
Cutting Operation (36" vertical band saw)	337	0.17	1.25
Woodworking (miter saw)	2,500	1.25	4.76

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

Compliance Determination Requirements

D.1.2 Particulate Control

In order to comply with Condition D.1.1, the cyclone shall be in operation and control emissions at all times the cutting operation is in operation.

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).

Company Name:	Futurex, Inc.
Address:	26 E. Guion St.
City:	Marshall, IN 47859
Phone Number:	(765) 498-3900
Registration No.:	121-32304-00011

I hereby certify that Futurex, Inc. is:
- ☐ still in operation.
- ☐ no longer in operation.

I hereby certify that Futurex, Inc. is:
- ☐ in compliance with the requirements of Registration No. 121-32304-00011.
- ☐ not in compliance with the requirements of Registration No. 121-32304-00011.

Authorized Individual (typed):
Title:
Signature:
Phone Number:
Date:

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.

Noncompliance:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Re-Registration

Source Description and Location

Source Name:	**Futurex, Inc.**
Source Location:	**26 E. Guion St., Marshall, IN 47859**
County:	**Parke**
SIC Code:	**3089 (Plastics Products, Not Elsewhere Classified)**
Registration No.:	**121-32304-00011**
Permit Reviewer:	**Bruce Farrar**

On September 12, 2012, the Office of Air Quality (OAQ) received an application from Futurex, Inc. related to operation of unpermitted emission units and the continued operation of an existing plastic sheet manufacturer.

Existing Approvals

The source has been operating under Registration No. 121-3793-00011, issued on September 7, 1994. However, pursuant to 326 IAC 2-5.5-2(b), existing sources operating under an existing registration were required to apply for approval for a registration not later than December 25, 2000. Futurex, Inc. failed to comply with this requirement within the specified deadline.

County Attainment Status

The source is located in Parke County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Parke County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Parke County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2

emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Parke County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-5.5 (Registrations) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Futurex, Inc. on September 12, 2012, relating to a registration that has unpermitted equipment.

The source consists of the following existing emission unit*(s)*:

(a) Two (2) blenders, identified as blender 1 and blender 2, constructed in 1975, with a combined maximum capacity of 375 pounds of polyethylene pellets and colorant per hour, using no controls and exhausting inside the building.

(b) Four (4) electric extruders, using no controls and exhausting inside the building consisting of:

(1) Line 12, with a maximum capacity of 147 pounds of polystyrene pellets per hour and constructed in 1971,

(2) Line 13, with a maximum capacity of 345 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 1985,

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(c) One (1) cutting operation using a cyclone for particulate control, exhausting inside the building, and consisting of:

(1) One (1) 20" vertical band saw, identified as band saw 1, with maximum capacity of 337 pounds of polystyrene and ABS (Acrylonitrile Butadiene Styrene)per hour.

(2) One (1) 36" vertical band saw, identified as band saw 2, with maximum capacity of 337 pounds of polystyrene and ABS (Acrylonitrile Butadiene Styrene)per hour.

(d) One (1) woodworking operation, identified as miter saw, with a combined maximum capacity of 2,500 pounds of wood per hour, using no controls and exhausting inside the building.

(e) Six (6) granulators, using no controls and exhausting inside the building consisting of:

(1) Line 12, with a maximum capacity of 147 pounds of polystyrene pellets per hour and constructed in 1999,

(2) Line 13, with a maximum capacity of 345 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 2005,

(3) Line 14, with a maximum capacity of 170 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 2008, and

(4) Line 15, with a maximum capacity of 128 pounds of ABS (Acrylonitrile Butadiene Styrene) per hour and constructed in 2007.

(5) Platform constructed in 1972.

(6) Outside grinding constructed in 2011.

(f) One (1) parts washer, constructed in 2002, that does not exceed 18 gallons per twelve (12) months.

(g) Six (6) storage silos, identified as Silo 1 through Silo 6, with a maximum storage capacity of 85,000 lbs of polystyrene or ABS (Acrylonitrile Butadiene Styrene), each.

(h) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour, including the following:

(1) Three (3) natural gas-fired heaters, with a maximum heat input capacity of 0.15 MMBtu/hr, each, using no controls and exhausting inside.

(2) One (1) natural gas-fired heater, with a maximum heat input capacity of 0.08 MMBtu/hr, using no controls and exhausting inside.

(i) Paved roads.

Enforcement Issues

Futurex Inc. was issued a Registration No. 121-3793-00011 on September 7, 1994, for a stationary plastic extrusion plant. Pursuant to 326 IAC 2-5.5-2(b), the source was required to apply for Re-Registration by December 25, 2000. On September 12, 2012, IDEM, OAQ received an application from Futurex Inc. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the operating permit rules.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Registration

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
6 Silos	-	-	-	-	-	-	-	-	-	-
2 Blenders	-	-	-	-	-	-	-	-	-	-
6 Granulators	-	-	-	-	-	-	-	-	-	-
4 Extruders	0.07	0.07	0.07	-	-	0.09	-	-	-	
Cutting	4.07	4.07	4.07	-	-	-	-	-	-	-
woodworking (Pallets)	17.52	17.52	17.52	-	-	-	-	-	-	-
Parts Washer	-	-	-	-	-	0.06	-	-		
Natural Gas Combustion	0.004	0.017	0.017	1.37E-03	0.23	0.01	0.19	275	4.29E-03	4.29E-03 (Hexane)
Fugitive Emissions (paved roads)	0.10	0.017	0.005	-	-	-	-	-	-	-
Total PTE of Entire Source	**21.77**	**21.70**	**21.69**	**1.37E-03**	**0.23**	**0.16**	**0.19**	**275**	**4.29E-03**	**4.29E-03 (Hexane)**
Registration Levels**	25	25	25	25	25	25	100	100,000	25	10

- = negligible
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**The 100,000 CO_2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

(a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of PM, PM10 and PM2.5 are within the ranges listed in 326 IAC 2-5.5-1(b)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.5-1(b)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.5 (Registrations). A Registration will be issued.

(b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

(c) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(b) The requirements of the National Emission Standards for Halogenated Solvent Cleaning, 40 CFR 63.460, Subpart T (326 IAC 20-6), are not included in the permit, since this source does not use any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutant Emissions NESHAP): Group IV Polymers and Resins, 40 CFR 63.1310, Subpart JJJ (326 IAC 20), are not included in the permit, since this source does not use a thermoplastic product process units (TPPU) and does not produce the polymers but uses the product in a pellet form.

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Products, 40 CFR 63.4480, Subpart PPPP (326 IAC 20), are not included in the permit, since this source does not surface coat plastic parts.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Reinforced Plastic Composites Production, 40 CFR 63.5780, Subpart WWWW (326 IAC 20), are not included in the permit, since this source does not produce reinforced plastic composites.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63.11169, Subpart HHHHHH (6H) (326 IAC 20), are not included in the permit, since this source does use surface coating in any production.

(g) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

(h) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

(a) 326 IAC 2-5.5 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.

(b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.

(c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

(d) 326 IAC 5-1 (Opacity Limitations)
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 permit:

(1) 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.

(2) 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.

(e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

(f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

(g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

Blenders

(h) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
326 IAC 6-3-2 does not apply to the blenders, because they have negligible particulate emissions.

(i) 326 IAC 8-1 (Volatile Organic Compound Rule)
326 IAC 8-1 does not apply to the blenders, because they have no VOC emissions.

Electric Extruders (Line 12 through Line 15)

(j) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the processes listed in the table below shall be limited by the following:

Emission Unit	Process Weight Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable PM Limit (lbs/hr)
Line 12	147	0.074	0.72
Line 13	345	0.17	1.25
Line 14	170	0.09	0.82
Line 15	128	0.06	0.62

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

Based on calculations, a control device is not needed to comply with this limit.

(k) 326 IAC 8-1 (Volatile Organic Compound Rule)
Pursuant to 326 IAC 8-1-1(b), the extruder lines 12 through 15 each has potential VOC emission less than 15 lbs per day. Therefore, 326 IAC 8-1 does not apply to extruder lines 12 through 15.

Cutting operation

(l) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the processes listed in the table below shall be limited by the following:

Emission Unit	Process Weight Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable PM Limit (lbs/hr)
20" vertical band saw	337	0.17	1.25
36" vertical band saw	337	0.17	1.25

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

Based on calculations, the cyclone is not needed to comply with this limit. However, since the emission factor is based on collections from the cyclone, the cyclone shall be in operation at all times the cutting operation is in operation.

Woodworking Operation

(m) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the woodworking operation, identified as miter saw, shall not exceed 4.76 pounds per hour when operating at a process weight rate of 1.25 tons per hour. The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

Based on calculations, a control device is not needed to comply with this limit.

Parts Washer

(n) Pursuant to 326 IAC 8-1-1(b) the parts washer is exempt from the requirements of 326 IAC 8-3 because the parts washer potential to emit VOC before add-on control is below fifteen (15) pounds per day.

Granulators

(o) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
326 IAC 6-3-2 does not apply to the granulators, because they have negligible particulate emissions.

(p) 326 IAC 8-1 (Volatile Organic Compound Rule)
326 IAC 8-1 does not apply to the granulators, because they have no VOC emissions.

Storage Silos

(q) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
326 IAC 6-3-2 does not apply to the storage silos, because they have negligible particulate emissions.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on September 12, 2012.

The operation of this source shall be subject to the conditions of the attached proposed Registration No. 121-32304-00011. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Bruce Farrar at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5401 or toll free at 1-800-451-6027 extension 4-5401.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) 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.in.gov/idem

Appendix A: Emissions Calculations
Summary of Emissions

Company Name: Futurex, Inc.
Address City IN Zip: 26 E. Guion St, Marshall, IN 47859
Registration Number: 121-32304-00011
Reviewer: Bruce Farrar
Date: September 12, 2012

	Uncontrolled Potential Emissions (tons/yr)										
Process/Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOX**	**VOC**	**CO**	**GHGs as CO_2e**	**Combined HAPs**	**Single HAP**	
Silos [α]	-	-	-	-	-	-	-	-	-	-	
Blender [β]	-	-	-	-	-	-	-	-	-	-	
Granulators [γ]	-	-	-	-	-	-	-	-	-	-	
Extruders	0.07	0.07	0.07	-	-	0.09	-	-			
Cutting	4.07	4.07	4.07	-	-	-	-	-	-	-	
woodworking (Pallets)	17.52	17.52	17.52	-	-	-	-	-	-	-	
Parts Washer	-	-	-	-	-	0.06	-	-			
Natural Gas Combustion	4.32E-03	0.02	0.02	1.37E-03	0.23	0.01	0.19	275	4.29E-03	4.10E-03	Hexane
Fugitive Emissions (Paved Roads)	0.10	0.02	0.005	-	-	-	-	-	-	-	
Total	**21.77**	**21.70**	**21.69**	**1.37E-03**	**0.23**	**0.16**	**0.19**	**275**	**4.29E-03**	**4.29E-03**	**Hexane**

α Silos emissions are negligible pursuant to AP 42 (Chapter 6.6.3 Polystyrene) table 6.6.3-1 (item F, storage), (reformated 1/95).

β Blenders have negligible emissions, pursuant to AP42- Chapter 6.6.2 (Polyethylene Terephthalate), table 6.6.2-1 (item B, mix tanks), (reformatted 1/95).
γ Granulators have neglible emissions as provided by the source.

Appendix A: Emissions Calculations
Emissions From Extruding Operations

Company Name: Futurex, Inc.
Address City IN Zip: 26 E. Guion St, Marshall, IN 47859
Registration Number: 121-32304-00011
Reviewer: Bruce Farrar
Date: September 12, 2012

Emission Unit	Maximum Capacity (lbs/hr)	PM Emission Factor (lbs/ton)	VOC Emission Factor (lbs/ton)	PM (Tons/Year)	VOC (Tons/Year)
Extruder 1	147.00	0.04	0.05	0.01	0.01
polystyrene					
Extruder 2	375.00	0.04	0.05	0.03	0.04
Acrylonitrile butadiene styrene (ABS)					
Extruder 3	170.00	0.04	0.05	0.01	0.02
Acrylonitrile butadiene styrene (ABS)					
Extruder 4	128.00	0.04	0.05	0.01	0.01
Acrylonitrile butadiene styrene					
			Total:	0.07	0.09

Notes:

α. Emission Factor is from "Development of Emission Factors for Polyethylene Processing", JAWMA, Vol 46, June 1996. AP-
Assume PM = PM10 and PM2.5
PM emission factor = 19.58 lbs/1 million lbs = (19.58 lbs/1,000,000 lbs) * (2,000 lbs/ 1 ton) = .04 lbs/ton
VOC emission factor = 25.0 lbs/1 million lbs = (25.0 lbs/1,000,000 lbs) * (2,000 lbs/ 1 ton) = .05 lbs/ton

ABS MSDS states material is high-molecular-weight polymers not expected to be chemically active under recommended of use. Trace amounts may be released under suggested processing temperature ranges. VOC percent is negligible.

Polystyrene MSDS states material is high molecular weight polymers not expected to be chemically active under recommended of use. Trace amounts of styrene monomer may be volatized under normal and processing conditions. VOC is less than0.5% by volume.

Methodology:

Potential PM/VOC Emissions (lbs/hr) = ((Maximum Capacity (lbs/hr)) * (1ton/2000 lbs)) * (Emission Factor (lbs/ton))
Potential PM/VOC Emissions (tons/yr)= (PM/VOC emissions (lbs/hr)) * 8760 hrs/yr * (1 ton/2000 lb)
HDPE PM and VOC emission factors is y = mt+c, where "t" is extrusion temperature (°F) and "y" is emission quantity in lbs per million lbs of resin, and c = y intercept.

t = 380°F
y = 0.04 lbs/ton PM or 0.05 lbs/ton VOC

c = -77.6 for VOC and -34.0 for PM
Particulates = (380 * 0.141) - 34.0 = 19.58 lbs per million lbs of Polystyrene and ABS.
VOC = (380 * 0.27) - 77.6 = 25.0 lbs per million lbs of Polystyrene and ABS.

Appendix A: Emissions Calculations

Emissions From Cutting Operations

Company Name:	**Futurex, Inc.**
Address City IN Zip:	**26 E. Guion St, Marshall, IN 47859**
Registration Number:	**121-32304-00011**
Reviewer:	**Bruce Farrar**
Date:	**September 12, 2012**

Emission Unit	PM Emission (lbs/hr)	PM emissions (tons/yr)	Controlled PM (lb/hr)	Controlled PM (ton/yr)
Vertical Saws	0.93	4.07	0.37	1.63

Notes:

Information Provided by the Source: 4 lbs collected @ 72 hours.

PTE = (4lbs / 72 hours / 60% efficiency of cycone) = 0.93 lbs per hour of PM

Uncontrolled PM/PM10 emissions = amount of dust collected (lbs/collection) x (1 collection/No. of hours of operation) / (control efficiency)

Cyclone Control Efficiency: 60%

One (1) Rockwell 8-340 20" Vertical Band Saw installed in 1997

One (1) Duall 36" Vertical Band Saw installed in 2011

Methodology:

Uncontrolled PM Emissions (lbs/hr) = 0.93 lbs

Uncontrolled Emissions (tons/yr) = Particulate Emission Rate (lb/hr)* 8760 hr/yr * 1 ton/2,000 lbs

Controlled PM Emissions (lbs/hr) = 0.93 lbs * (1- control efficiency)

Controlled PM Emissions (tons/yr) = Controlled PM Emission (lb/hr)* 8760 hr/yr * 1 ton/2,000 lbs

Appendix A: Emissions Calculations
Emissions From Woodworking Operation

Company Name: **Futurex, Inc.**
Address City IN Zip: **26 E. Guion St, Marshall, IN 47859**
Registration Number: **121-32304-00011**
Reviewer: **Bruce Farrar**
Date: **September 12, 2012**

Emission Unit	PM Emission (lbs/hr)	PM emissions (tons/yr)
Miter Saw	4	17.52

Notes:

Information Provided by the Source: 8 lbs collected @ 2 hours. Collections from drop box located behind the saw.
PTE = (8 lbs / 2 hours) = 4.00 lbs per hour of PM
Uncontrolled PM/PM10 emissions = amount of dust collected (lbs/collection) x (1 collection/No. of hours of operation)
One (1) Dewalt 12" Compound Miter Saw installed in 2011

Methodology:
Uncontrolled PM Emissions (lbs/hr) = 2 lbs
Uncontrolled Emissions (tons/yr) = Particulate Emission Rate (lb/hr)* 8760 hr/yr * 1 ton/2,000 lbs

Appendix A: Emissions Calculations
Emissions From Parts Washer

Company Name: **Futurex, Inc.**
Address City IN Zip: **26 E. Guion St, Marshall, IN 47859**
Registration Number: **121-32304-00011**
Reviewer: **Bruce Farrar**
Date: **September 12, 2012**

Material	Usage Rate (gals/yr)	Density (lbs/gal)	VOC Content (%)	Potential Emissions (tons/yr)
Mineral Spirit	18	6.44	100%	0.06

Notes:
Usage per year = 18 gallons/year, as provided by the source
Density is 6.44 lbs/gal, as taken from the MSDS
Zep Dyna Brute Parts Cleaner installed in 2002

Methodology:
Potential VOC emissions (tons/yr) = Usage rate (gals/yr) x Density (lbs/gal) x VOC Content (%) x 1 ton/2000 lbs

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

Company Name: **Futurex, Inc.**
Address City IN Zip: **26 E. Guion St, Marshall, IN 47859**
Permit Number: **121-32304-00011**
Reviewer: **Bruce Farrar**
Date: **September 12, 2012**

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr	Unit Description
			Three (3) Heaters @ 0.15 MMBtu/hr, each
0.5	1020	4.6	One (1) Heater @ 0.08 MMBtu/hr

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	4.32E-03	0.02	0.02	0.00	0.23	0.01	0.19

*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

See page 7 for HAPs emissions calculations.

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

Company Name: **Futurex, Inc.**
Address City IN Zip: **26 E. Guion St, Marshall, IN 47859**
Permit Number: **121-32304-00011**
Reviewer: **Bruce Farrar**
Date: **September 12, 2012**

	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	4.779E-06	2.731E-06	1.707E-04	4.097E-03	7.738E-06

	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	1.138E-06	2.503E-06	3.186E-06	8.648E-07	4.779E-06

Methodology is the same as page 6.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.
See Page 8 for Greenhouse Gas calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Greenhouse Gas Emissions
Company Name: Futurex, Inc.
Address City IN Zip: 26 E. Guion St, Marshall, IN 47859
Permit Number: 121-32304-00011
Reviewer: Bruce Farrar
Date: September 12, 2012

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	273	0.0	0.0
Summed Potential Emissions in tons/yr	273		
CO2e Total in tons/yr	275		

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: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: Futurex, Inc.
Source Address: 26 E. Guion St, Marshall, IN 47859
Permit Number: 121-32304-00011
Reviewer: Bruce Farrar
Date: September 12, 2012

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	5.0	1.0	5.0	40.0	200.0	96	0.018	0.1	33.2
Vehicle (leaving plant) (one-way trip)	5.0	1.0	5.0	40.0	200.0	96	0.018	0.1	33.2
Front Loader	1.0	12.0	12.0	3.0	36.0	65	0.012	0.1	53.9
		Totals	**22.0**		**436.0**			**0.3**	**120.3**

Average Vehicle Weight Per Trip = 19.8 tons/trip
Average Miles Per Trip = 0.01 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	19.8	19.8	19.8	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	1.830	0.366	0.0898	lb/mile
Mitigated Emission Factor, Eext =	1.673	0.335	0.0821	lb/mile

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)
Vehicle (entering plant) (one-way trip)	0.03	0.01	0.00	0.03	0.01	1.36E-03
Vehicle (leaving plant) (one-way trip)	0.03	0.01	0.00	0.03	0.01	1.36E-03
Loader	0.05	0.01	0.00	0.05	0.01	2.21E-03
Totals	**0.11**	**0.02**	**0.01**	**0.10**	**0.02**	**4.94E-03**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs

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

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
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Toll Free (800) 451-6027
www.idem.IN.gov

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

TO: Mark Eldridge
Futurex, Inc
80 E. Smith St
Bloomingdale, IN 47832

DATE: November 20, 2012

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

SUBJECT: Final Decision
Registration
121-32304-00011

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:
Brent Thompson (President)
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.

Mail Code 61-53

IDEM Staff	MIDENNEY 11/20/2012 Futurex, Incorporated 121-32304-00011 (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: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing 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		Mark Eldridge Futurex, Incorporated 80 E Smith St Bloomingdale IN 47832 (Source CAATS) via confirm delivery									
2		Brent Thompson President Futurex, Incorporated 70 N Main St Bloomingdale IN 47832 *(RO CAATS)*									
3		Parke County Commissioners 116 West High Street Rockville IN 47872 *(Affected Party)*									
4		Mr. Gary Hanner Hanner Hanner & Hanner P.O. Box 122 Rockville IN 47872 *(Affected Party)*									
5		Parke County Health Department 116 W. High St. Room 10 Rockville IN 47872 *(Health Department)*									
6		Parke County Board of Commissioners 121 W. High St. Rockville IN 47872 *(Local Official)*									
7											
8											
9											
10											
11											
12											
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
5			

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