INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
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May 28, 2004

Mr. Christopher Miller, Plant Engineer
General Electric Company dba LNP Engineering Plastics
945 S. Marr Road
Columbus, Indiana 47201

Re: Revised Registration No. 005-18797-00049

Dear Mr. Miller:

General Electric Company dba LNP Engineering Plastics, located at 945 South Marr Road, Columbus Indiana 47201 was issued Registration No. 005-17704-00049 on August 5, 2003 and re-registered 005-17886-00049 on October 8, 2003 for a fiber filled plastic pellets manufacturing plant. A letter requesting addition of new units (coextrusion line, fluidized bed cleaning system, central vacuum system, and rooftop unit) was received on March 11, 2004. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following fiber filled plastics manufacturing plant, is classified as registered:

(a) Four (4) long fiber filled extruded thermoplastic manufacturing lines, including:

(1) Line 71, constructed in 1994, having a maximum production rate of 1,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(2) Line 72, constructed in 1995, having a maximum production rate of 1,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(3) Line 73, constructed in 1998, having a maximum production rate of 2,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(4) Line 74, constructed in 2000, having a maximum throughput of 1,700 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(b) Six (6) short fiber filled extruded thermoplastic manufacturing lines, including:

(1) Line 81, constructed in 1989, having a maximum production rate of 2,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(2) Line 82, constructed in 1989, having a maximum production rate of 2,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(3) Line 84, constructed in 2002, having a maximum production rate of 200 pounds per hour, with emissions of particulate matter controlled using a dust collector.

(4) Line 90, constructed in January 2003, having a maximum production rate of 1,800 pounds per hour, with emissions of particulate matter controlled by a dust collector.

(5) Line 91, constructed in 1994, having a maximum production rate of 2,000 pounds per hour, with emissions of particulate matter controlled by a dust collector.

(6) Line 92, constructed in 1999, having a maximum production rate of 3,000 pounds of product per hour, with emissions of particulate matter controlled by a dust collector.

(c) Pneumatic conveyance systems used to transfer raw material, intermediates, and finished products between silos, storage bins and hoppers. Each system uses a series of cyclones, filters and dust collectors, which collect the transferred material and in some cases, prevent dust entering the vacuum pumps.

(d) One (1) color pigment blending room, constructed in 2002, having a maximum production rate of 237 pounds per hour. Emissions of particulate matter are controlled using a dust collector.

(e) One (1) molding room, constructed in 1994, consisting of two (2) molding units, identified as QC1 and QC2. Each molding unit has a maximum throughput of 1.5 pounds of product per hour.

(f) One (1) research and development line, constructed in 1998, consisting of a feeder, hopper, extruder, die block, cooling bath, pelletizer, and molder, with a maximum production capacity of 300 pounds of product per hour. Emissions from these units are exhausted at stacks RD1 and RD2.

(g) One (1) natural gas-fired makeup air unit with a maximum heat input capacity of 1.458 MMBtu per hour for the long-fiber product research and development lab constructed in January 2003.

(h) Two (2) natural gas-fired pyrolysis cleaning ovens, identified as Units G1, and F, having a maximum heat input capacity of 0.37 and 1.5 MMBtu per hour, respectively. These ovens were constructed in 1994 and 1997, respectively.

(i) Natural gas-fired heaters having a combined heat input capacity of 28.08 MMBtu per hour.

(j) A cold cleaner used to perform organic solvent degreasing of parts in the maintenance shop that does not exceed 145 gallons per 12 months and that is not subject to 326 IAC 20-6.

(k) One (1) R&D coextrusion line (identified as RD3), with a maximum production rate of 300 pounds of product per hour. This unit was constructed in 2004.

(l) One (1) natural gas-fired rooftop unit, with a maximum heat input capacity of 0.80 MMBtu per hour for the Gate 1 Office Area. This unit was installed in 2004.

(m) One (1) fluidized bed-cleaning system, using a natural gas-fired burner with a maximum heat input capacity of 0.225 MMBtu per hour. This unit was constructed in 2004.

(n) One (1) central vacuum system consisting of two units (identified as CV1 and CV2). CV1 consists of a turbine providing vacuum suction through a vessel containing cartridge filters. CV2 consists of a turbine providing vacuum suction through an initial hopper for removal of pellets and a second hopper containing a bag filter. This unit was constructed in 2004.

The following conditions shall be applicable:

(a) 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:

(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 15 minutes (60 readings) in a 6-hour period 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.

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the long fiber filled extruded thermoplastic manufacturing lines (Lines 71, 72, 73, and 74), short fiber filled extruded thermoplastic manufacturing lines (Lines 81, 82, 84, 90, 91, and 92), color pigment blending room, pneumatic conveyance systems, and two (2) research and development lines shall not exceed the pound per hour emission rates shown in the following table:

Process	Process Weight (lbs/hour)	Process Weight (tons/hour)	Particulate Limitation (lbs/hour)
Line 71 (including associated pneumatic conveyance system)	1,000	0.50	2.58
Line 72 (including associated pneumatic conveyance system)	1,000	0.50	2.58
Line 73 (including associated pneumatic conveyance system)	2,000	1.00	4.10
Line 74 (including associated pneumatic conveyance system)	1,700	0.85	3.68
Line 81 (including associated pneumatic conveyance system)	2,000	1.00	4.10
Line 82 (including associated pneumatic conveyance system)	2,000	1.00	4.10
Line 84 (including associated pneumatic conveyance system)	200	0.10	0.877
Line 90 (including associated pneumatic conveyance system)	1,800	0.90	3.82
Line 91 (including associated pneumatic conveyance system)	2,000	1.00	4.10
Line 92 (including associated pneumatic conveyance system)	3,000	1.50	5.38
Color Pigment Blending Room	237	0.12	0.98
Silo Pneumatic Conveying System	12,340	6.17	13.9
Each of the two (2) Research and Development Lines	300	0.15	1.15

The particulate emission limitation were calculated as follows:

Interpolation of the data for the process weight rate up to 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

(c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing

Processes), the particulate emissions from molders QC-1 and QC-2, and from central vacuum systems CV1 and CV2, each of which has a maximum process weight rate of less than 100 pounds per hour, shall not exceed 0.551 pounds per hour each.

(d) Each of the pyrolysis cleaning ovens (identified as units G-1 and F) has a maximum solid waste capacity of less than 100 pounds per hour. The fluidized bed cleaning system has a maximum solid waste capacity of 49 pounds per hour. Pursuant to 326 IAC 4-2 (Incinerators), each of these three incinerator units shall:

(1) Consist of primary and secondary chambers or the equivalent;

(2) Be equipped with a primary burner unless burning wood products;

(3) Comply with 326 IAC 5-1 and 326 IAC 2;

(4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2; and

(5) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.

(6) If any of the requirements of (d)(1) through (d)(5) above are not met, the Permittee shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

The Permittee operating the incinerator must make the manufacturer's specifications or the operation and maintenance plan available to the department upon request.

This registration is a revised registration issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Branch
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

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.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Sanober Durrani, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7810 to speak directly to Ms. Durrani. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/SD

cc: File - Bartholomew County
Air Compliance - D.J. Knotts
Permit Tracking - Sara Cloe
Technical Support and Modeling - Michele Boner
Compliance Branch

Registration
Annual Notification

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

Company Name:	**LNP Engineering Plastics, Inc.**
Address:	**945 S. Marr Road**
City:	**Columbus, Indiana 47201**
Authorized individual:	**Mr. John Curvey**
Phone #:	**812-348-0229**
Registration #:	**005-18797-00049**

I hereby certify that General Electric Company dba LNP Engineering Plastics is still in operation and is in compliance with the requirements of Registration 005-18797-00049.

Name (typed):
Title:
Signature:
Date:

Issued May 28, 2004

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration Revision

Source Background and Description

Source Name:	General Electric Company dba LNP Engineering Plastics
Source Location:	945 S. Marr Road, Columbus, Indiana 47201
County:	Bartholomew
SIC Code:	3087
Permit Revision No.:	005-18797-00049
Permit Reviewer:	ERG/SD

The Office of Air Quality (OAQ) has reviewed an application from General Electric Company dba LNP Engineering Plastics relating to the operation of a fiber filled plastics manufacturing plant

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Four (4) long fiber filled extruded thermoplastic manufacturing lines, including:

(1) Line 71, constructed in 1994, having a maximum production rate of 1,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(2) Line 72, constructed in 1995, having a maximum production rate of 1,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(3) Line 73, constructed in 1998, having a maximum production rate of 2,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(4) Line 74, constructed in 2000, having a maximum throughput of 1,700 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(b) Six (6) short fiber filled extruded thermoplastic manufacturing lines, including:

(1) Line 81, constructed in 1989, having a maximum production rate of 2,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(2) Line 82, constructed in 1989, having a maximum production rate of 2,000 pounds of product per hour, with emissions of particulate matter controlled using a dust collector.

(3) Line 84, constructed in 2002, having a maximum production rate of 200 pounds per hour, with emissions of particulate matter controlled using a dust collector.

(4) Line 90, constructed in January 2003, having a maximum production rate of 1,800 pounds per hour, with emissions of particulate matter controlled by a dust collector.

(5) Line 91, constructed in 1994, having a maximum production rate of 2,000 pounds per hour, with emissions of particulate matter controlled by a dust collector.

(6) Line 92, constructed in 1999, having a maximum production rate of 3,000 pounds of product per hour, with emissions of particulate matter controlled by a dust collector.

(c) Pneumatic conveyance systems used to transfer raw material, intermediates, and finished products between silos, storage bins and hoppers. Each system uses a series of cyclones, filters and dust collectors, which collect the transferred material and in some cases, prevent dust entering the vacuum pumps.

(d) One (1) color pigment blending room, constructed in 2002, having a maximum production rate of 237 pounds per hour. Emissions of particulate matter are controlled using a dust collector.

(e) One (1) molding room, constructed in 1994, consisting of two (2) molding units, identified as QC1 and QC2. Each molding unit has a maximum throughput of 1.5 pounds of product per hour.

(f) One (1) research and development line, constructed in 1998, consisting of a feeder, hopper, extruder, die block, cooling bath, pelletizer, and molder, with a maximum production capacity of 300 pounds of product per hour. Emissions from these units are exhausted at stacks RD1 and RD2.

(g) One (1) natural gas fired makeup air unit with a maximum heat input capacity of 1.458 MMBtu per hour for the long-fiber product research and development lab constructed in January 2003.

(h) Two (2) natural gas-fired pyrolysis cleaning ovens, identified as Units G1, and F, having a maximum heat input capacity of 0.37 and 1.5 MMBtu per hour, respectively. These ovens were constructed in 1994 and 1997, respectively.

(i) Natural gas-fired heaters having a combined heat input capacity of 28.08 MMBtu per hour.

(j) A cold cleaner used to perform organic solvent degreasing of parts in the maintenance shop that does not exceed 145 gallons per 12 months and that is not subject to 326 IAC 20-6.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

The source plans to construct the following emission units and pollution control devices:

(k) One (1) R&D coextrusion line (identified as RD3), with a maximum production rate of 300 pounds of product per hour.

(l) One (1) natural gas-fired rooftop unit, with a maximum heat input capacity of 0.80 MMBtu per hour, for the Gate 1 Office Area.

(m) One (1) fluidized bed-cleaning system, using a natural gas-fired burner with a maximum heat input capacity of 0.225 MMBtu per hour.

(n) One (1) central vacuum system consisting of two units (identified as CV1 and CV2). CV1 consists of a turbine providing vacuum suction through a vessel containing cartridge filters. CV2 consists of a turbine providing vacuum suction through an initial hopper for removal of pellets and a second hopper containing a bag filter.

These units will be constructed in 2004.

The potential to emit of all criteria pollutants from the new construction are within registration levels. In addition, the Permittee requested a change in internal impregnation components used in one (1) fiber-filled extruded thermoplastic line (identified as line 72). Line 72 shall remain at a maximum production rate of 1,000 pounds of product per hour, and controlled by a dust collector.

Existing Approvals

The source has been operating under previous approvals including, but no limited to, the following:

(a) Exemption issued September 2, 1989;

(b) Exemption 005-2670-00049, issued April 13, 1993;

(c) Registration 005-3552-00049, issued March 30, 1994;

(d) Exemption 005-3823-00049, issued August 3, 1994;

(e) Registration 005-5009-00049, issued December 7, 1995;

(f) Exemption 005-8274-00049, issued April 7, 1997;

(g) Registration 005-9519-00049, issued April 24, 1998;

(h) Exemption 005-9838-00049, issued July 23, 1998;

(i) Registration 005-15779-00049, issued July 3, 2003; and

(j) Registration 005-17704-00049, issued on August 5, 2003.

All conditions from previous approvals were incorporated into this permit.

Air Pollution Control Justification as an Integral Part of the Process

The company had submitted the following justification such that the cyclone and filter be considered as an integral part of the pneumatic conveyance system:

The process operations at the plant include pneumatic conveying to move pellets and powders from the storage areas to the processing lines. The nature of this operation is such that equipment typically viewed as air pollution control equipment is, for these operations, necessary to the proper

functioning of the equipment, and therefore integral to the process units. The pneumatic transfer system works using a vacuum pump, which pulls air through the storage bin and associated conduits to a cyclone and filter, which are arranged in series. The cyclone is used to collect the transferred material, while the filter protects the vacuum pump from damage by fine particles that may be entrained in the air stream. Since the cyclone and filter make the transfer of the material possible and protect the vacuum pump from damage, they are considered intergral to the process.

IDEM, OAQ has evaluated the justifications and agreed that the air pollution control equipment described above will be considered as an intergral part of the pneumatic conveyance systems. Therefore, the permitting level will be determined using the potential to emit after the air pollution control equipment. Operating conditions in the proposed permit will specify that this air pollution control equipment shall operate at all times when the pneumatic conveyance systems are in operation.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{o}F)
L1	Line 71-Long Fiber Pulfusion Line	58.5	1	2,000	120
L2	Line 72 – Die Block	58	1.2	5,500	110
L3	Line 73 – Pultrusion Line	58	2	10,000	110
L4	Line 74 – Long Fiber Pultrusion Line	45	2	9,000	110
A	Line 81 - Extruder	30	1.2	3,500	Between 70 and 90
B	Line 82 - Extruder	30	1.2	3,500	Between 70 and 90
M	Line 84 - Extruder	40	1	4,000	150
N	Line 84-Vaccuum Pump Exhaust	30	0.17	50	110
TO	Line 90	30	1.5	9,000	110
T1	Line 91-Twin Screw Compounding	58.5	1.5	3,500	120
G1	Pyrolysis Cleaning Oven	NA	NA	NA	NA
T2	Line 92 – Twin Screw Compounding	58	1.5	7,000	110
G2	0.29 MMBtu /hourParts Oven	58	1.5	NA	180
F	Pyrolysis Cleaning Oven	25	1	1,200	100
AA	Exhaust Fan for Quality Control Molding Machines	40	1.5	1,600	110
RD1	R & D Extruder	50	2	4,000	110
RD2	R & D Molder	50	1.3	800	110
RD3	R & D Coextrusion Line	30	2	8,000	110
AB	Ventilation for Toll Cleaning Area	12	1	500	Ambient

NA – Information no available.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on March 11, 2004.

Emission Calculations

See Appendix A of this document for detailed emission calculations (Appendix A, pages 1 through 8).

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential to Emit (tons/year)
PM	18.1
PM10	18.1
SO_2	0.09
VOC	13.4
CO	12.3
NO_x	14.7
Single HAP	Negligible
Combination HAP	Negligible

*The potential to emit of HAPs is from natural gas combustion in the heaters and ovens, and are negligible.

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of pollutants are less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.

(b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

(c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

County Attainment Status

The source is located in Bartholomew County.

Pollutant	Status
PM10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Bartholonew County has been designated as attainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

(b) Bartholomew County has been classified as attainment for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of

Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	18.1
PM10	18.1
SO_2	0.09
VOC	13.4
CO	12.3
NO_x	14.7
Single HAP	Negligible
Combination HAPs	Negligible

*The potential to emit of HAPs is from natural gas combustion in the heaters and ovens, and are negligible.

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.

(b) These emissions were based on potential to emit calculations for the source (see Appendix A).

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPs is less than 25 tons per year.

This status is based on the potential to emit calculations fo the source (see Appendix A).

Federal Rule Applicability

(a) The natural gas-fired heaters and ovens are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD. The natural gas-fired heaters and ovens are part of the affected source for the small gaseous fuel subcategory, as defined by 40 CFR 63.7575, because they each have a rated capacity of less than or equal to 10 million British thermal units per hour heat input. However, pursuant to 40 CFR 63.7506(c), there are no applicable requirements from 40 CFR 63,

Subpart DDDDD and 40 CFR, Subpart A for the affected source for the small gaseous fuel subcategory.

(b) This source is not subject to the requirements of 40 CFR 63, Subpart U – National Emission Standards for Hazardous Air Pollutant Emission: Group 1 Polymers and Resins (326 IAC 20), because this source is not a major source of hazardous air pollutants and does not produce elastomer products.

(c) This source is not subject to the requirements of 40 CFR 63, Subpart W National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production (326 IAC 20), because this source is not a major source of hazardous air pollutants and does not produce epoxy resins or non-nylon polyamides.

(d) Although this source handles thermoplastic materials, it is not subject to the requirements of 40 CFR 63, Subpart JJJ-National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins (326 IAC 20), because the source is not a major source of hazardous air pollutants and only performs finishing processes, which are specifically exempt from the requirements of this rule under 40 CFR 63.1310(d).

State Rule Applicability – Entire Source

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting) because it does not have the potential to emit greater than twenty five (25) tons per year VOC or NOx.

326 IAC 2-2 (Prevention of Significant Deterioration)

LNP Engineering Plastics, Inc. was a minor source under PSD when it was constructed in 1994 and is not in one (1) of the twenty-eight (28) source categories. The source was modified numerous times between 1994 and 2003, none of which triggered PSD. The source submitted an application on March 11, 2004 requesting construction of one R&D coextrusion line (identified as RD3), one (1) natural gas-fired rooftop unit, one (1) fluidized bed-cleaning system, and one central vacuum system. After this modification, the potential to emit of each criteria pollutant from the entire source remains less than 250 tons per year. Therefore, this source is not subject to the requirements of 326 IAC 2-2.

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 the permit:

(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.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the fiber filled plastic pellet manufacturing plant will emit less than ten (10) tons per year of a single HAP and potential to emit of calculation of HAPs are less than twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

State Rule Applicability - Filled Fiber Plastic Pellets Manufacturing

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the long fiber filled extruded thermoplastic manufacturing lines (Lines 71, 72, 73, and 74), short fiber filled extruded thermoplastic manufacturing lines (Lines 81, 82, 84, 90, 91, and 92), color pigment blending room, pneumatic conveyance systems, and two (2) research and development lines shall not exceed the pound per hour emission rates shown in the following table:

Process	Process Weight (lbs/hour)	Process Weight (tons/hour)	Particulate Limitation (lbs/hour)
Line 71 including associated pneumatic conveyance system)	1,000	0.5	2.58
Line 72 including associated pneumatic conveyance system)	1,000	0.5	2.58
Line 73 including associated pneumatic conveyance system)	2,000	1.0	4.10
Line 74 including associated pneumatic conveyance system)	1,700	0.85	3.68
Line 81 including associated pneumatic conveyance system)	2,000	1.0	4.10
Line 82 including associated pneumatic conveyance system)	2,000	1.0	4.10
Line 84 including associated pneumatic conveyance system)	200	0.10	0.877
Line 90 including associated pneumatic conveyance system)	1,800	0.9	3.82
Line 91 including associated pneumatic conveyance system)	2,000	1.0	4.10
Line 92 including associated pneumatic conveyance system)	3,000	1.5	5.38
Color Pigment Blending Room	237	0.12	0.98
Silo Pneumatic Conveying System	12,340	6.17	13.9
Each of the two (2) Research and Development	300	0.15	1.15

The particulate emission limitations were calculated as follows:

Interpolation of the data for the process weight rate up to 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

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from molders QC-1 and QC-2, and from central vacuum systems CV1 and CV2, each of which has a maximum process weight rate of less than 100 pounds per hour, and l not exceed 0.551 pounds per hour each.

326 IAC 4-2 (Incinerators)

The pyrolysis cleaning ovens (identified as units G1 and F) and the fluidized bed cleaning system (identified as unit G2) are subject to the requirements of 326 IAC 4-2 because these type of units are considered as an incinerator. Pursuant to 326 IAC 4-2 (Incinerators), the pyrolysis cleaning ovens and fluidized bend cleaning system shall:

(1) Consist of primary and secondary chambers or the equivalent;

(2) Be equipped with a primary burner unless burning wood products;

(3) Comply with 326 IAC 5-1 and 326 IAC 2;

(4) Be maintained, operated, and burn waste in accordance with the manufacturer's specifications or an operation and maintenance plan as specified in 326 IAC 4-2-2; and

(5) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas under standard conditions corrected to fifty percent (50%) excess air.

(6) If any of the requirements of (d)(1) through (d)(5) above are not met, the Permittee shall stop charging the incinerator until adjustments are made that address the underlying cause of the deviation.

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

All facilities constructed after January 1, 1980, the applicability date for this rule, have potential VOC emissions less than twenty-five (25) tons per year. Therefore, this source is not subject to the requirements of 326 IAC 8-1-6 (New Facilities - General Reduction Requirement).

326 IAC 8-3-1(Organic Solvent Degreasing Operations)

The degreasing operation is subject to the requirements of 326 IAC 8-3-2(Cold Cleaner Operations) because the degreaser was constructed in 1998. Pursuant to this rule, for cold cleaning operation constructed after January 1, 1980, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

Conclusion

The operation of this fiber filled plastic pellet manufacturing plant shall be subject to the conditions of the Registration Revision 005-18797-00049.

Appendix A: Emissions Calculations
VOC Emissions
From R&D coextrusion line consisting of polymer melting process

Company Name: General Electric Company dba LNP Engineering Plastics
Address: 945 S. Marr Road, Columbus, Indiana 47201
Registration: 005-18797
Plt ID: 005-00049
Reviewer: ERG/SD
Date: April 5th, 2004

Emission Unit	Emission Factor (lb/ton)*	Maximum Throughput (tons/hour)	Resin Pellet Loading %	PTE of VOC (tons/year)
R & D Coextrusion Line	1.000	0.15	70%	0.46
TOTAL				**0.46**

* - An emission factor of 0.354 lbs of VOC per ton of product is from Table 5, Test Run 2 of the "Journal of the Air & Waste Management Association," Volume 49, January 1999, page 55. An emission factor of 0.404 lbs of VOC per ton of product is from Table 5, Test Run 6 of the "Journal of the Air & Wasate Management Association," Volume 49, January 1999, Page 55. For this resin, a conservative VOC emission factor of 1.000 lb of VOC per ton of product has been used since no emission factor could be found. This product has a higher VOC content than the other resins used at this facility.

Methodology:
PTE of VOC (tons/year) = Emission Factor (lb/ton) * Max. Throughput (lbs/ton) * Maximum resin pellet loading * 8760 hours/year * 1 ton/2000 lbs.

Appendix A: Emissions Calculations
Particulate Emissions
From R&D coextrusion line consisting of polymer melting process

Company Name: General Electric Company dba LNP Engineering Plastics
Address: 945 S. Marr Road, Columbus, Indiana 47201
Registration: 005-18797
Plt ID: 005-00049
Reviewer: ERG/SD
Date: April 5th, 2004

Maximum Throughput Capacity in lbs/hour = 300

Emission Unit		Type of Material Handled	Additives/Pellets (%)	* Emission Factor (lbs/ton of Material)	PTE of PM/PM10 (tons/year)
Coextrusion Line	Feeder # 1	Resin Pellets	16%	0.04	4.20E-03
	Feeder # 2	Additives	4%	0.19	4.99E-03
	Feed throat # 1	Resin Pellets	16%	0.04	4.20E-03
		Additives	4%	0.19	4.99E-03
	Feeder # 3	Additives	3%	0.19	3.74E-03
	Feeder # 4	Liquid			
	Feeder # 5	Resin Pellets	50%	0.04	1.31E-02
		Additives	1%	0.04	2.63E-04
	Feed throat # 2	Resin Pellets	49%	0.04	1.29E-02
		Additives	1%	0.19	1.25E-03
	Extruder # 1	Resin Pellets/Additives		0.00	0.00E+00
	Extruder # 2	Resin Pellets/Additives		0.00	0.00E+00
	Die Block	Strand Glass			
	Cooling Bath	City Water			
	Puller				
	Pelletizer				
	Cleaning	Resin Pellets	100%	0.04	2.63E-02
	Feed out	Resin Pellets	100%	0.04	2.63E-02
TOTAL					**0.10**

*** Note:**
For the purposes of this Registration, a conservative emission factor of 0.04 lbs per ton (as used in Registration No. 005-17886-00049, issued on October 28, 2003) is used to calculate PTE of PM/PM10 generated from transfer of pellets.

Methodology
PTE (tons/year) = Max. Throughput Capacity (lbs/hour) * Additives/Pellets (%) * 1 ton/2000 lbs * Emission Factor (lbs/ton) * 8760 hours/year * 1 ton/2000 lbs

Appendix A: Emission Calculations
Natural Gas Combustion
One (1) Fluidized Bed Cleaning System

Company Name: General Electric Company dba LNP Engineering Plastics
Address: 945 S. Marr Road, Columbus, Indiana 47201
Registration: 005-18797
Plt ID: 005-00049
Reviewer: ERG/SD
Date: April 5th, 2004

Heat Input Capacity (MMBtu/hour)	Potential Throughput (MMCF/year)
0.23	1.97

Pollutant

	* PM	* PM10	SO_2	** NO_x	VOC	CO
Emission Factor (lb/MMCF)	7.60	7.60	0.60	100	5.50	84.0
Potential To Emit (tons/year)	0.01	0.01	0.001	0.10	0.01	0.08

* PM and PM10 emission factors are filterable and condensible PM and PM10 combined.
** Emission factor for NO_x: Uncontrolled = 100 lb/MMCF.

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, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

METHODOLOGY
Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hr) * 8760 hours/year * 1 MMCF/1000 MMBtu
Potential To Emit (tons/year) = Potential Throughput (MMCF/year) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs

See next page for HAPs emissions calculations.

Appendix A: Emission Calculations
Natural Gas Combustion
One (1) Fluidized Bed Cleaning System

Company Name: General Electric Company dba LNP Engineering Plastics
Address: 945 S. Marr Road, Columbus, Indiana 47201
Registration: 005-18797
Plt ID: 005-00049
Reviewer: ERG/SD
Date: April 5th, 2004

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential To Emit (tons/year)	2.07E-06	1.18E-06	7.39E-05	1.77E-03	3.35E-06

HAPs - Metals

	Lead	Cadmuim	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential To Emit (tons/year)	4.93E-07	1.08E-06	1.38E-06	3.74E-07	2.07E-06

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors as provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998). Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Natural Gas Combustion
One (1) Roof Top Unit

Company Name: General Electric Company dba LNP Engineering Plastics
Address: 945 S. Marr Road, Columbus, Indiana 47201
Registration: 005-18797
Plt ID: 005-00049
Reviewer: ERG/SD
Date: April 5th, 2004

Heat Input Capacity (MMBtu/hour)	Potential Throughput (MMCF/year)
0.08	0.70

Pollutant

	* PM	* PM10	SO_2	** NO_x	VOC	CO
Emission Factor (lb/MMCF)	7.60	7.60	0.60	100	5.50	84.0
Potential To Emit (tons/year)	2.66E-03	2.66E-03	2.10E-04	3.50E-02	1.93E-03	2.94E-02

* PM and PM10 emission factors are filterable and condensible PM and PM10 combined.
** Emission factor for NO_x: Uncontrolled = 100 lb/MMCF.

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, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

METHODOLOGY
Potential Throughput (MMCF/year) = Heat Input Capacity (MMBtu/hr) * 8760 hours/year * 1 MMCF/1000 MMBtu
Potential To Emit (tons/year) = Potential Throughput (MMCF/year) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs

See next page for HAPs emissions calculations.

Appendix A: Emission Calculations
Natural Gas Combustion
One (1) Roof Top Unit

Company Name: General Electric Company dba LNP Engineering Plastics
Address: 945 S. Marr Road, Columbus, Indiana 47201
Registration: 005-18797
Plt ID: 005-00049
Reviewer: ERG/SD
Date: April 5th, 2004

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential To Emit (tons/year)	7.36E-07	4.20E-07	2.63E-05	6.31E-04	1.19E-06

HAPs - Metals

	Lead	Cadmuim	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential To Emit (tons/year)	1.75E-07	3.85E-07	4.91E-07	1.33E-07	7.36E-07

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors as provided above are from AP-42, Chapter 1.4, Table 1-4.2, 1.4-3 and 1.4-4 (July, 1998). Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Particulate Emissions
From Central Vaccum System

Company Name: General Electric Company dba LNP Engineering Plastics
Address: 945 S. Marr Road, Columbus, Indiana 47201
Registration: 005-18797
Plt ID: 005-00049
Reviewer: ERG/SD
Date: April 5th, 2004

Maximum Amount of Waste Generated (lbs/hour) = 10

Emission Unit		Type of Material Handled	Material (%)	* Emission Factor (lbs/ton of Material)	PTE of PM/PM10 (tons/year)
Central Vaccum System	CV1	Resin Pellets	10%	0.04	8.76E-05
		Additives	40%	25.6	2.24E-01
	CV2	Resin Pellets	10%	0.04	8.76E-05
		Additives	40%	25.6	2.24E-01
TOTAL					**0.45**

*** Notes:**

(1) An emission factor of 0.04 lbs per ton is from Registration No. 005-17886-00049, issued October 28, 2003.

(2) An emission factors of 25.6 lbs per ton of carbon black pneumatic transfer was developed by GE and used in Registration No. 005-17886-00049, issued on October 28, 2003.

Methodology

PTE of PM/PM10 (tons/year) = Max. Throughput Capacity (lbs/hour) * Additives/Pellets (%) * 1 ton/2000 lbs * Emission Factor (lbs/ton) * 8760 hours/year * 1 ton/2000 lbs

Appendix A: Emission Calculations
Summary Emissions

Company Name: General Electric Company dba LNP Engineering Plastics
Address: 945 S. Marr Road, Columbus, Indiana 47201
Registration: 005-18797
Plt ID: 005-00049
Reviewer: ERG/SD
Date: April 5th, 2004 (Updated May 13th, 2004)

Emission Unit	Density (lb/gal)	Max. Usage (gal/hour)	Weight % VOC	PTE of VOC (tons/year)
Degreaser	6.700	0.017	100%	0.49
TOTAL				**0.49**

METHODOLOGY
PTE of VOC (tons/year) = Density (lb/gal) * Maximum usage rate (gal/hour) * Weight % VOC * 8760 hours/year * 1 ton/2000 lbs

Appendix A: Emission Calculations
Summary Emissions

Company Name: General Electric Company dba LNP Engineering Plastics
Address: 945 S. Marr Road, Columbus, Indiana 47201
Registration: 005-18797
Plt ID: 005-00049
Reviewer: ERG/SD
Date: April 5th, 2004

POTENTIAL TO EMIT OF CRITERIA POLLUTANTS IN TONS PER YEAR

Emission Units	PM	PM10	SO_2	NO_x	VOC	CO
Existing Units consisting of						
Polymer melting Processes	16.4	16.4			11.6	
Pyrolysis Ovens	0.06	0.06	0.01	0.8	0.05	0.7
Degreaser					0.49	
Heaters and Ovens	1.04	1.04	0.08	13.7	0.76	11.5
New Units						
Coextrusion Line	0.10	0.10			0.46	
Fluidized bed cleaning system	0.01	0.01	0.001	0.10	0.01	0.08
Roof top unit	2.66E-03	2.66E-03	2.10E-04	3.50E-02	1.93E-03	2.94E-02
Central vacuum system	0.45	0.45				
TOTAL from the entire source	18.1	18.1	0.09	14.7	13.4	12.3