



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: May 11, 2005
RE: UGN, Inc. / 127-21099-00072
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, 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
FNPER-MOD.dot 1/10/05



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

Mitchell E. Daniels, Jr.
Governor

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Commissioner

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May 11, 2005

Mr. Ken DeRolf
UGN, Inc.
1001 State Street
Chicago Heights, Illinois 60411

Re: 127-21099-00072
Second Minor Permit Revision to
MSOP 127-16516-00072

Dear Mr. DeRolf:

UGN, Inc. was issued a minor source operating permit on April 22, 2003 for a stationary automotive polyurethane foam composite part/plastic headliner manufacturing plant located at 2252 Industrial Drive, Valparaiso, Indiana 46383. A letter requesting a revision to this permit was received on April 8, 2005. Pursuant to the provisions of 326 IAC 2-6.1-6 a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the addition of two (2) Ultralite Cells, identified as UL-1 and UL-2, each with a maximum throughput rate of 936 pounds of padding per hour. These units will be constructed in 2005. This modification is being performed through a MSOP Minor Permit Revision pursuant to 326 IAC 2-6.1-6(g)(4)(A) as the potential to emit of PM and PM10 are greater than five (5) tons per year and less than twenty-five (25) tons per year.

The following construction conditions are applicable to the proposed project:

1. The data and information supplied with the application shall be considered part of this permit revision approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Pursuant to IC 13-15-5-3, this approval to construct becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to IAC 2-6.1-6, the minor source operating permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this permit revision which includes this letter, the attached operating conditions applicable to these emission units, and revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Nathan Bell, at OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204, or call (800) 451-6027, press 0 and ask for Nathan Bell or extension (4-3350), or dial (317) 234-3350.

Sincerely,

Original signed by
Nysa L. James, Section Chief
Permits Branch
Office of Air Quality

ncb

Attachments

cc: File - Porter County
U.S. EPA, Region V
Porter County Health Department
IDEM Northwest Regional Office
Air Compliance Section Inspector - Michael Hall and Ramesh Tejuja
Compliance Data Section
Administrative and Development
Technical Support and Modeling



Mitchell E. Daniels, Jr.
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 Commissioner

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**NEW SOURCE CONSTRUCTION PERMIT
 AND MINOR SOURCE OPERATING PERMIT
 OFFICE OF AIR QUALITY**

**UGN, Inc.
 2252 Industrial Drive
 Valparaiso, Indiana 46383**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 127-16516-00072	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 22, 2003 Expiration Date: April 22, 2008
First Notice Only Change No.: 127-18606-00072	Issuance Date: March 30, 2004
First Minor Permit Revision No.: 127-20418-00072	Issuance Date: January 11, 2005
Second Minor Permit Revision No.: 127-21099-00072	Pages Affected: 2, 3, 4, 5, 15, 16, 17, 18, 19
Issued by: Original signed by Nysa L. James, Section Chief Office of Air Quality	Issuance Date: May 11, 2005

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SECTION A

SOURCE SUMMARY

This permit 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 Permittee 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 Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates stationary automotive polyurethane foam composite part/plastic headliner manufacturing plant.

Authorized Individual:	Environmental Coordinator
Source Address:	2252 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address:	1001 State Street, Chicago Heights, Illinois 60411
General Source Phone:	708-757-8608
SIC Code:	3714
County Location:	Porter
Source Location Status:	Severe nonattainment area for ozone based on the 1-hour standard Nonattainment area for ozone based on the 8-hour standard Nonattainment area for PM2.5
Source Status:	Attainment area for all other criteria pollutants Minor Source, under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act Not in 1 of 28 Listed Source Categories

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

- (a) Seven (7) molding cells (identified as Cell # 1 through 7), consisting of forty-four (44) injection mold carriers, with a total production of 12,481 pounds of molded polyurethane foam insulation per hour. The stacks on Cell #3 have an exhaust rate of 8,500 acfm each. All other stacks have a flow rate of 5,000 acfm. This facility was constructed in 1996.
- (b) One (1) headliner adhesive spray line booth (identified as HL-1), using two (2) airless spray guns, capable of spraying both sides of 60 headliners per hour. This facility was constructed in 1997.
- (c) One (1) laminator press, which has a capability to handle 1.46 x 2.87 square meters for the largest part. This unit was constructed in 1997.
- (d) Three (3) water jet cutters, with a combined capacity of 60 headliners per hour. These units were constructed in 1997.
- (e) Two (2) 11,000 gallon bulk organic chemical storage tanks. These units were constructed in 1997.
- (f) Two (2) 6,000 gallon bulk organic chemical storage tanks. These units were constructed in 1997.
- (g) One (1) cold cleaner tank with a storage capacity of 20 gallons and maximum solvent consumption of one (1) gallon per day, used for degreasing operation and located in the maintenance department. This unit was installed in January, 1997.

- (h) Plant wide use of cleanup solvents and mold release agents delivered from either aerosol cans, manual spray bottles, or air atomization spray guns and use of adhesive, which is brushed on or applied with aerosol spray cans. Also, the use of solvent pumped from one closed container to another to flush adhesive delivery lines.
- (i) Eleven (11) roof air-makeup units burning natural gas, with a combined heat input capacity of 26.90 MMBtu/hr. These units were installed in 1997.
- (j) Fifteen (15) various natural gas-fired heaters, with a combined heat input capacity of 3.64 MMBtu/hr. These units were installed in 1996.
- (k) One (1) mudguard operation (identified as cell #9) using polyester terephthalate (PET) and latex padding with a maximum process rate of 360 pounds per hour. This facility will be constructed in 2003.
- (l) Two (2) cold tank cleaners with a combined storage capacity of 115 gallons and maximum solvent consumption of one (1) gallon per day, used for degreasing operations. These units will be constructed in 2003.
- (m) Two (2) adhesive spray booths, identified as PVC-1 and PVC-2, constructed in 2004, each with a maximum throughput rate of 100 fibrous pads per hour, using airless spray guns, and controlled by dry filters.
- (n) One (1) clean-up operation for tool and equipment, constructed in 2004, using aerosol spray cans.
- (o) Four (4) hot molding presses (identified as HMP-1,2,3, and 4) each with a maximum throughput rate of 236 pounds of padding and fabric per hour, and using a water-based mold release agent, sprayed intermittently onto the mold surface to prevent sticking. These units were constructed in 2004.
- (p) One (1) Ultralite Cell, identified as UL-1, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-1-B and C-1-D, respectively, and to hood systems C-1-A and C-1-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.
- (q) One (1) Ultralite Cell, identified as UL-2, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-2-B and C-2-D, respectively, and to hood systems C-2-A and C-2-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) Seven (7) molding cells (identified as Cell # 1 through 7), consisting of forty-four (44) injection mold carriers, with a total production of 12,481 pounds of molded polyurethane foam insulation per hour. The stacks on Cell #3 have an exhaust rate of 8,5000 acfm each. All other stacks have a flow rate of 5,000 acfm. This facility was constructed in 1996.
- (b) One (1) headliner adhesive spray line booth (identified as HL-1), using two (2) airless spray guns, capable of spraying both sides of 60 headliners per hour. This facility was constructed in 1997.
- (c) One (1) laminator press, which has a capability to handle 1.46 x 2.87 square meters for the largest part. This unit was constructed in 1997.
- (d) Three (3) water jet cutters, with a combined capacity of 60 headliners per hour. These units were constructed in 1997.
- (e) Two (2) 11,000 gallon bulk organic chemical storage tanks. These units were constructed in 1997.
- (f) Two (2) 6,000 gallon bulk organic chemical storage tanks. These units were constructed in 1997.
- (g) One (1) cold cleaner tank with a storage capacity of 20 gallons and maximum solvent consumption of one (1) gallon per day, used for degreasing operation and located in the maintenance department. This unit was installed in January, 1997.
- (h) Plant wide use of cleanup solvents and mold release agents delivered from either aerosol cans, manual spray bottles, or air atomization spray guns and use of adhesive, which is brushed on or applied with aerosol spray cans. Also, the use of solvent pumped from one closed container to another to flush adhesive delivery lines.
- (k) One (1) mudguard operation (identified as cell #9) using polyester terephthalate (PET) and latex padding with a maximum process rate of 360 pounds per hour. This facility will be constructed in 2003.
- (l) Two (2) cold tank cleaners with a combined storage capacity of 115 gallons and maximum solvent consumption of one (1) gallon per day, used for degreasing operations. These units will be constructed in 2003.
- (m) Two (2) adhesive spray booths, identified as PVC-1 and PVC-2, constructed in 2004, each with a maximum throughput rate of 100 fibrous pads per hour, using airless spray guns, and controlled by dry filters.
- (n) One (1) clean-up operation for tool and equipment, constructed in 2004, using aerosol spray cans.
- (o) Four (4) hot molding presses (identified as HMP-1,2,3, and 4) each with a maximum throughput rate of 236 pounds of padding and fabric per hour, and using a water-based mold release agent, sprayed intermittently onto the mold surface to prevent sticking. These units were constructed in 2004.

- (p) One (1) Ultralite Cell, identified as UL-1, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-1-B and C-1-D, respectively, and to hood systems C-1-A and C-1-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.
- (q) One (1) Ultralite Cell, identified as UL-2, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-2-B and C-2-D, respectively, and to hood systems C-2-A and C-2-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.

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

Emission Limitations and Standards

D.1.1 Emission Offset [326 IAC 2-3]

This source is not subject to the requirements of 326 IAC 2-3 (Emission Offset) because the potential to emit VOC from the entire source is less than twenty-five (25) tons per year. Any change or modification which would increase the potential emissions to equal to or greater than twenty-five (25) tons per year of VOC must receive prior approval from IDEM, OAQ.

D.1.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations 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.

D.1.3 Volatile Organic Compounds (VOC) [326 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

- (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^oC) (one hundred degrees Fahrenheit (100^oF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^oC) (one hundred twenty degrees Fahrenheit (120^oF)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

D.1.4 Particulate Matter (PM) [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2(d):
 - (1) Particulate from the one (1) headliner spray booth line (HL-1) and spray booths PVC-1 and PVC-2, shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.
 - (2) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

- (A) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
 - (B) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
 - (3) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.
- (b) Pursuant to 326 IAC 6-3-2:

Particulate emissions from the four (4) hot mold presses shall not exceed 0.98 pounds per hour when operating at a process weight rate of 236 pounds per hour, each.

Particulate emissions from each of the two (2) Ultralite Cells (UL-1 and UL-2) shall not exceed 2.47 pounds per hour when operating at a process weight rate of 936 pounds per hour.

The pounds per hour limitations were calculated using 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:

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

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and control devices.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-1.1-11]

Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of a representative Ultralite Cell (UL-1 or UL-2), the Permittee shall perform a one time stack test to measure PM, PM10, VOCs, and HAPs emitted from the heating of padding material in the curing ovens using methods as approved by the Commissioner, in order to determine alternative emission factors for PM, PM10, VOCs, and HAPs. PM10 includes filterable and condensable PM10. The testing shall be performed on one representative Ultralite Cell (UL-1 or UL-2) only if the other Ultralite Cell has identical specifications, will be operated under similar conditions, and will process similar materials. If the Ultralite Cell is not identical in above aspects to the representative Ultralite Cell, it will have to be tested individually. Testing shall be conducted in accordance with Section C - Performance Testing. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.7 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the headlines spray booth stacks (HL-1 and HL-2) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a violation of this permit.

- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.8 Volatile Organic Compounds (VOC) [326 IAC 8-9-1]

Pursuant to 326 IAC 8-9-1 (Volatile Organic Liquid Storage Vessels), the source owner and operator shall maintain a record and submit to the department a report containing the following information for the two (2) six thousand (6,000) gallon storage tanks:

- (1) The vessel identification;
- (2) The vessel dimensions; and
- (3) The vessel capacity.

D.1.9 Volatile Organic Compound Storage Vessels [40 CFR 60, Subpart Kb]

Pursuant to 40 CFR 60, Subpart Kb (326 IAC 12), the Permittee shall maintain records of the dimensions and an analysis showing the capacity of the two (2) 11,000 gallon storage tanks. These records shall be maintained for the life of the source.

D.1.10 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.1.1.
 - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - (2) The cleanup and degreasing solvent usage for each month;
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for a
Minor Permit Revision to a Minor Source Operating Permit

Source Background and Description

Source Name:	UGN, Inc.
Source Location:	2252 Industrial Drive, Valparaiso, Indiana 46383
County:	Porter
SIC Code:	3714
Operation Permit No.:	127-16516-00072
Operation Permit Issuance Date:	April 22, 2002
Minor Permit Revision No.:	127-21099-00072
Permit Reviewer:	Nathan C. Bell

The Office of Air Quality (OAQ) has reviewed a revision application from UGN, Inc. relating to the construction and operation of two (2) Ultralite Cells, identified as UL-1 and UL-2, at their stationary automotive polyurethane foam composite part/plastic headliner manufacturing plant.

History

UGN, Inc. was issued a New Source Construction Permit and MSOP No. 127-16516-00072 on April 22, 2003. On April 8, 2005, UGN, Inc. submitted a permit revision application to IDEM, OAQ requesting permission to construct and operate two (2) Ultralite Cells, identified as UL-1 and UL-2.

New Emission Units and Pollution Control Equipment Receiving New Source Review Approval

The application includes information relating to the construction and operation of the following equipment:

- (a) One (1) Ultralite Cell, identified as UL-1, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-1-B and C-1-D, respectively, and to hood systems C-1-A and C-1-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.
- (b) One (1) Ultralite Cell, identified as UL-2, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-2-B and C-2-D, respectively, and to hood systems C-2-A and C-2-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.

Existing Approvals

The source has been operating under the following air approvals:

- (a) MSOP 127-16516-00027, issued on April 22, 2003;
- (b) First Notice Only Change No. 127-18606-00072, issued March 30, 2004; and
- (c) First Minor Permit Revision No. 127-20418-00072, issued January 11, 2005.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Vent/Hood ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
C-1-A	UL-1 Hood	30	1.2	2,500	100
C-1-B	UL-1 Oven	30	1.2	2,000	118
C-1-C	UL-1 Hood	30	1.2	2,500	100
C-1-D	UL-1 Oven	30	1.2	2,000	118
C-2-A	UL-2 Hood	30	1.2	2,500	100
C-2-B	UL-2 Oven	30	1.2	2,000	118
C-2-C	UL-2 Hood	30	1.2	2,500	100
C-2-D	UL-2 Oven	30	1.2	2,000	118

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 April 8, 2005.

Emission Calculations

(a) Natural gas combustion

For detailed emission calculations from natural gas combustion, see Appendix A.

(b) Hot melt adhesive application

Based on information provided by the source in the application, the robotic hot melt adhesive application will use a non-VOC based adhesive and will not emit any regulated criteria pollutants or hazardous air pollutants (HAPs).

(c) Mold/bond press and the trim presses

Based on information provided by the source in the application, the mold/bond press and the trim presses will not emit any regulated criteria pollutants or hazardous air pollutants (HAPs).

(d) Heating of padding in curing ovens

The padding (AFR and LOFT) that is processed at this source is pre-manufactured by Hobbs Manufacturing and contains polyester fibers that are coated with latex and may contain pigments and fire retardant compounds. The polyester fibers are formed into a pad and cured in an oven at Hobbs Manufacturing before being sent to UGN, Inc., Valparaiso. The curing ovens will indirectly heat the fibers, with no direct contact of the padding with the oven flame. The oven helps to firm-up the padding by partially melting the polyester fibers.

Based on information provided by the source, the Ultralite Cells (UL-1 and UL-2) curing ovens emit volatile organic compounds (VOCs), particulate matter (PM/PM10), and HAPs. However, there are no AP-42 Emission Factors (EF) specific to this process to determine potential emissions at the maximum production rate.

Potential emissions of VOCs and PM/PM10 were estimated by the source using data obtained from stack testing of similar Ultralite Cells (Cells 3 and 7), performed on August 14, 2003, at a UGN, Inc. plant in Jackson, Tennessee. The source estimated the potential emission from Ultralite Cells UL-1 and UL-2 at an accelerated throughput rate of 936 lb/hr (0.468 tons/hr) of padding and increased oven temperatures by assuming a 2.0 fold increase in PM/PM10 emissions and 3.23 fold increase in the VOC emissions as compared to data from the Jackson plant. In addition, the worse case potential emissions from the Ultralite Cells (UL-1 and UL-2) were determined assuming that the padding contained fire retardant. Potential emissions of HAPs was estimated using data obtained from same stack test data (see Appendix A for HAP calculations).

Since there are no AP-42 Emission Factors (EF) specific to this process, the source has agreed to perform a one time stack test to determine the emission factors for VOCs, PM/PM10, and HAPs specific to this process when operating under the maximum design oven temperature(s) (See Testing Requirements).

Based on the emission factors provided by the source, the potential emissions of VOCs and PM/PM10 from the Ultralite Cells (UL-1 and UL-2) curing ovens are summarized below.

Emission Factor for PM/PM10 = 3.20 pounds of PM/PM10 per ton of padding (one cell)*
Emission Factor for VOCs = 0.55 pounds of VOCs per ton of padding (one cell)*

*Note: The emission factors for PM/PM10 and VOCs from heating of the padding in the curing ovens includes PM/PM10 and VOCs emitted as a result of combustion of natural gas.

For Ultralite Cell UL-1 (2 curing ovens)

PTE of PM/PM10 = (3.2 lb/ton) * (0.468 ton/hr padding) = 1.50 lb/hr PM/PM10 (one cell)
= (1.50 lb/hr) * (8,760 hr/yr) * (ton/2000 lb) = 6.57 ton/yr PM/PM10 (one cell)

PTE of VOCs = (0.55 lb/ton) * (0.468 ton/hr padding) = 0.26 lb/hr VOCs (one cell)
= (0.26 lb/hr) * (8,760 hr/yr) * (ton/2000 lb) = 1.14 ton/yr VOCs (one cell)

For Ultralite Cell UL-2 (2 curing ovens)

PTE of PM/PM10 = (3.2 lb/ton) * (0.468 ton/hr padding) = 1.50 lb/hr PM/PM10 (one cell)
= (1.50 lb/hr) * (8,760 hr/yr) * (ton/2000 lb) = 6.57 ton/yr PM/PM10 (one cell)

PTE of VOCs = (0.55 lb/ton) * (0.468 ton/hr padding) = 0.26 lb/hr VOCs (one cell)
= (0.26 lb/hr) * (8,760 hr/yr) * (ton/2000 lb) = 1.14 ton/yr VOCs (one cell)

Totals for UL-1 and UL-2

Total PTE of PM/PM10 = (6.57 ton/yr) + (6.57 ton/yr) = **13.14 ton/yr** PM/PM10 (two cells)
Total PTE of VOCs = (1.14 ton/yr) + (1.14 ton/yr) = **2.28 ton/yr** VOCs (two cells)

Potential To Emit Before Controls for the Modification

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.”

This table reflects the potential to emit (PTE) before controls for the modification (UL-1 and UL-2).

Pollutant	Potential To Emit of Modification (tons/year)
PM	13.14
PM10	13.14
SO2	0.03
VOC	2.28
CO	3.53
NOx	4.20

HAP's	Potential To Emit of Modification (tons/year)
Chloromethane	negligible
1,3-Butadiene	negligible
Methylene Chloride	0.13
2-Butanone	negligible
Benzene	negligible
Dichlorobenzene	negligible
Formaldehyde	negligible
n-Hexane	0.08
Toluene	negligible
Lead	negligible
Cadmium	negligible
Chromium	negligible
Manganese	negligible
Nickel	negligible
TOTAL HAPs	0.22

Justification for Revision

This modification is being performed through a MSOP Minor Permit Revision pursuant to 326 IAC 2-6.1-6(g)(4)(A) as the potential to emit of PM and PM10 are greater than five (5) tons per year and less than twenty-five (25) tons per year.

Potential to Emit After Issuance for the Modification

The table below summarizes the total potential to emit of this modification and the entire source, reflecting all limits, of the significant emission units after control. The control equipment is considered federally enforceable only after issuance of this Permit Revision.

Process/Facility	Potential to Emit (tons/year)						
	PM	PM10	SO ₂	VOC	CO	NO _x	HAPs
* Combustion Units	1.02	1.02	0.08	0.74	11.2	13.4	0.25
* Headliner Spray booth HL-1	10.7	10.7	0.00	0.06	0.00	0.00	0.008
* Miscellaneous Products Usage/ Parts Waster/ Clean Up Usage/ Mold Cells/ Mud Guard/ Three Cold Tank Cleaners	24.4	24.4	0.00	7.56	0.00	0.00	1.003
** Spray Booths PVC-1 and PVC-2	0.00	0.00	0.00	1.11	0.00	0.00	0.00
*** Four Hot Mold Presses	6.76	6.76	0.00	2.15	0.00	0.00	1.08
Proposed Modification: Two Ultralite Cells (UL-1 and UL-2)	13.14	13.14	0.03	2.28	3.53	4.20	0.22
Total PTE of Entire Source after Modification	56.0	56.0	0.11	13.9	14.7	17.6	2.56
Part 70 Applicability Threshold Level	N/A	100	100	25	100	25	10 for a single HAP and 25 for any combination of HAPs.

* The potential to emit of the existing units are from the Technical Support Document (TSD) for MSOP No. 127-16516-00072, issued April 22, 2003.
 ** The potential to emit of the spray booths (PVC 1 and PVC-2) is from First Notice Only Change No. 127-18606-00072, issued March 30, 2004.
 *** The potential to emit of the four hot mold presses is from First Minor Permit Revision No. 127-20418-00072, issued January 11, 2005.

This modification to an existing minor stationary source will **not** change the status of the stationary source because the potential emissions from the entire source will still be less than the Part 70 major source thresholds. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) are not applicable to this source.

County Attainment Status

The source is located in Porter County.

Pollutant	Status
PM10	Attainment or Unclassifiable
PM2.5	Nonattainment
SO ₂	Attainment or Unclassifiable
1-Hour Ozone	Severe Nonattainment
8-Hour Ozone	Moderate Nonattainment
CO	Attainment or Unclassifiable
NO ₂	Attainment or Unclassifiable
Lead	Attainment or Unclassifiable

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone.
- (1) On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NO_x threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Porter County has been designated as nonattainment in Indiana for the 1-hour ozone standard. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the source section.
- (2) VOC and NO_x emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Porter County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) U.S. EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Porter County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM₁₀ emissions as surrogate for PM_{2.5} emissions pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability for the source section.
- (c) Porter 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. See the State Rule Applicability for the source section.
- (d) Fugitive Emissions
Since this type of operation is not in 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, Emission Offset Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Potential To Emit (ton/year)
PM	56.0
PM ₁₀	56.0
SO ₂	0.11
VOC	14.9
CO	14.7
NO _x	17.6

HAP's	Potential To Emit (ton/year)
Acetaldehyde	0.05
Formaldehyde	1.09
Hexane	1.11
Methylene Chloride	0.13
MDI	0.011
Toluene	0.16
Worst Case HAP	1.11
TOTAL HAPs	2.56

- (a) This existing source is not a PSD major stationary source because no attainment regulated pollutant is emitted at a rate greater than or equal to 250 tons per year and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements are not applicable.
- (b) This existing source, located in Porter County, is not an Emission Offset major stationary source because no nonattainment regulated pollutant (other than VOC) is emitted at a rate greater than or equal to 100 tons per year and VOCs are not emitted at a rate greater than or equal to 25 tons per year. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements are not applicable.

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.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included for this modification.
- (b) This source is not subject to the requirements of 40 CFR 63, Subpart DDDDD, (63.7480 through 63.7575), NESHAPs for Industrial, Commercial, and Institutional Boilers and Process Heaters, because the source is not a major source of HAPs.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 20, and 40 CFR Part 61, 63) included for this modification.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source was constructed after the applicability date of August 7, 1977, however, it is not one of the 28 listed source categories defined in 326 IAC 2-2-1(y)(1), no major modifications were done to this source, and the uncontrolled potential to emit of all attainment regulated pollutants is less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

326 IAC 2-3 (Emission Offset)

The requirements of 326 IAC 2-3 (Emission Offset) apply to major sources or major modifications constructed in an area designated as non-attainment. This existing source, located in Porter County, is not an Emission Offset major stationary source because no nonattainment regulated pollutant (other than VOC) is emitted at a rate greater than or equal to 100 tons per year and VOCs are not emitted at a rate greater than or equal to 25 tons per year. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements are not applicable.

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

The source was constructed prior to July 27, 1997. Therefore, it was not subject to 326 IAC 2-4.1. The requirements of 326 IAC 2-4.1 are not applicable to this modification, since 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.

326 IAC 2-6 (Emission Reporting)

This source, which is located in Porter County, is not subject to 326 IAC 2-6 (Emission Reporting), because it is not required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, does not emit VOC or NOx into the ambient air at levels equal to or greater than 25 tons per year, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year.

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:

- (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 8-7-2 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)

This source, which is located in Porter County, is not subject to 326 IAC 8-7-2, because it does not have the potential to emit VOCs at levels equal to or greater than 25 tons per year.

State Rule Applicability - Two (2) Ultralite Cells (UL-1 and UL-2)

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The two (2) Ultralite Cells (UL-1 and UL-2) are not subject to 326 IAC 6-2 as they are not sources of indirect heating.

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

The requirements of 326 IAC 6-3 are applicable to each of the two (2) Ultralite Cells (UL-1 and UL-2). Pursuant to 326 IAC 6-3-2, the allowable particulate matter emission rate for a maximum process weight rate of 0.468 tons per hour (936 pounds per hour) shall be 2.47 pounds per hour. The pounds per hour limitations were calculated as follows:

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:

$$E = 4.10 P^{0.67} = 4.10 * [0.468]^{0.67} = 2.47 \text{ lb/hr}$$

where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour

The hourly potential particulate matter emissions are estimated to be 1.5 lb/hr (6.57 tons per year), which is less than the 326 IAC 6-3-2 allowable hourly rate of 2.47 lb/hr. Therefore, compliance with 326 IAC 6-3 is expected.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

The two (2) Ultralite Cells (UL-1 and UL-2) are each not subject to the requirements of 326 IAC 7-1, because the potential and the actual emissions are less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable, since each of the two (2) Ultralite Cells (UL-1 and UL-2) does not have the potential to emit VOCs at levels equal to or greater than twenty-five (25) tons per year.

Testing Requirements

Pursuant to 326 IAC 2-1.1-11 (Testing Requirements), within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of a representative Ultralite Cell (UL-1 or UL-2), the Permittee shall perform a one time stack test to measure PM, PM10, VOCs, and HAPs emitted from the heating of padding material in the curing ovens using methods as approved by the Commissioner, in order to determine alternative emission factors for PM, PM10, VOCs, and HAPs. PM10 includes filterable and condensable PM10. The testing shall be performed on one representative Ultralite Cell (UL-1 or UL-2) only if the other Ultralite Cell has identical specifications, will be operated under similar conditions, and will process similar materials. If the Ultralite Cell is not identical in above aspects to the representative Ultralite Cell, it will have to be tested individually. Testing shall be conducted in accordance with Section C - Performance Testing. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

Changes To The Permit:

The following changes have been made to the permit, with deleted language as ~~strikeouts~~ and new language **bolded**:

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates stationary automotive polyurethane foam composite part/plastic headliner manufacturing plant.

Authorized Individual:	Environmental Coordinator
Source Address:	2252 Industrial Drive, Valparaiso, Indiana 46383
Mailing Address:	1001 State Street, Chicago Heights, Illinois 60411
General Source Phone:	708-757-8608
SIC Code:	3714
County Location:	Porter
Source Location Status:	Nonattainment area for Ozone Severe nonattainment area for ozone based on the 1-hour standard

**Nonattainment area for ozone based on the 8-hour standard
Nonattainment area for PM2.5**

Source Status:

Attainment area for all other criteria pollutants
Minor Source, under PSD and Emission Offset Rules;
Minor Source, Section 112 of the Clean Air Act
Not in 1 of 28 Listed Source Categories

A.2 Emissions Units and Pollution Control Equipment Summary

- (p) One (1) Ultralite Cell, identified as UL-1, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-1-B and C-1-D, respectively, and to hood systems C-1-A and C-1-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.
- (q) One (1) Ultralite Cell, identified as UL-2, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-2-B and C-2-D, respectively, and to hood systems C-2-A and C-2-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (p) One (1) Ultralite Cell, identified as UL-1, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-1-B and C-1-D, respectively, and to hood systems C-1-A and C-1-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.
- (q) One (1) Ultralite Cell, identified as UL-2, to be constructed in 2005, with a maximum throughput rate of 936 pounds of padding per hour, equipped with two (2) natural gas-fired curing ovens, each rated at 2.4 MMBtu per hour, with each oven exhausting to vents C-2-B and C-2-D, respectively, and to hood systems C-2-A and C-2-C, a robotic hot melt adhesive applicator utilizing non-VOC containing adhesive, mold presses, and a trim press.

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

D.1.4 Particulate Matter (PM) [326 IAC 6-3-2]

- (b) Pursuant to 326 IAC 6-3-2:

Particulate emissions from each of the two (2) Ultralite Cells (UL-1 and UL-2) shall not exceed 2.47 pounds per hour when operating at a process weight rate of 936 pounds per hour.

The pounds per hour limitations ~~was~~ were calculated using the following equation:

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-1.1-11]

Within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up of a representative Ultralite Cell (UL-1 or UL-2), the Permittee shall perform a one time stack test to measure PM, PM10, VOCs, and HAPs emitted from the heating of padding material in the curing ovens using methods as approved by the Commissioner, in order to determine alternative emission factors for PM, PM10, VOCs, and HAPs. PM10 includes filterable and condensable PM10. The testing shall be performed on one representative Ultralite Cell (UL-1 or UL-2) only if the other Ultralite Cell has identical specifications, will be operated under similar conditions, and will process similar materials. If the Ultralite Cell is not identical in above aspects to the representative Ultralite Cell, it will have to be tested individually. Testing shall be conducted in accordance with Section C - Performance Testing. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.1.76 Monitoring

D.1.87 Volatile Organic Compounds (VOC) [326 IAC 8-9-1]

D.1.98 Volatile Organic Compound Storage Vessels [40 CFR 60, Subpart Kb]

D.1.109 Record Keeping Requirements

- (b) To document compliance with Condition D.1.76, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

Conclusion

This permit revision shall be subject to the conditions of the attached proposed MSOP Minor Permit Revision No. 127-21099-00072.

**Appendix A: Emissions Calculations
Emission Summary**

Company Name: UGN, Inc.
Address City IN Zip: 2252 Industrial Drive, Valparaiso, Indiana 46383
Permit Revision Number: 127-21099
Plt ID: 127-00072
Reviewer: Nathan C. Bell
Date: April 21, 2005

Category	Uncontrolled Potential Emissions (tons/year)			
	Emissions Generating Activity			
	Pollutant	Natural Gas Combustion*	Heating of Padding*	TOTAL
Criteria Pollutants	PM	NA*	13.14	13.14
	PM10	NA*	13.14	13.14
	SO2	0.03		0.03
	NOx	4.20		4.20
	VOC	NA*	2.28	2.28
	CO	3.53		3.53
Hazardous Air Pollutants	Chloromethane		7.0E-04	7.0E-04
	1,3-Butadiene		3.0E-03	3.0E-03
	Methylene Chloride		0.13	0.13
	2-Butanone		1.3E-03	1.3E-03
	m- and p-Xylene		2.7E-03	2.7E-03
	Benzene	NA*	3.6E-03	3.6E-03
	Dichlorobenzene	5.0E-05		5.0E-05
	Formaldehyde	3.2E-03		3.2E-03
	n-Hexane	0.08		0.08
	Toluene	NA*	4.3E-03	4.3E-03
	Lead	2.1E-05		2.1E-05
	Cadmium	4.6E-05		4.6E-05
	Chromium	5.9E-05		5.9E-05
	Manganese	1.6E-05		1.6E-05
	Nickel	8.8E-05		8.8E-05
	Totals	0.08	0.14	0.22
			Worse Case HAP	0.13

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

* NA = Not Applicable. The emission factor for PM/PM10 and VOCs from heating of the padding in the curing ovens includes PM/PM10 and VOCs emitted as a result of combustion of natural gas.

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

Company Name: UGN, Inc.
Address City IN Zip: 2252 Industrial Drive, Valparaiso, Indiana 46383
Permit Revision Number: 127-21099
Plt ID: 127-00072
Reviewer: Nathan C. Bell
Date: April 21, 2005

Emission Unit	Number of Units	Unit Heat Input Capacity MMBtu/hr	Combined Total Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Pollutant					
					PM*	PM10*	SO2	NOx**	VOC	CO
Emission Factor (lb/MMCF)					1.9	7.6	0.6	100	5.5	84.0
Potential Emission tons/yr					PM*	PM10*	SO2	NOx**	VOC	CO
UL-1 Curing Ovens	2	2.40	4.800	42.05	0.040	0.160	0.013	2.102	0.116	1.766
UL-2 Curing Ovens	2	2.40	4.800	42.05	4.0E-02	0.160	0.013	2.102	0.116	1.766
Totals	4		9.6		0.080	0.320	0.025	4.205	0.231	3.532

Pollutant	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission tons/yr										
Emission Unit	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
UL-1 Curing Ovens	4.4E-05	2.5E-05	1.6E-03	0.038	7.1E-05	1.1E-05	2.3E-05	2.9E-05	8.0E-06	4.4E-05
UL-2 Curing Ovens	4.4E-05	2.5E-05	1.6E-03	0.038	7.1E-05	1.1E-05	2.3E-05	2.9E-05	8.0E-06	4.4E-05
Totals	8.8E-05	5.0E-05	3.2E-03	0.076	1.4E-04	2.1E-05	4.6E-05	5.9E-05	1.6E-05	8.8E-05

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

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

Methodology

Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) * 8,760 hrs/yr * 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) / 2,000 lb/ton

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 (SUPPLEMENT D 3/98)

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

Abbreviations

PM = Particulate Matter

NOx = Nitrous Oxides

DCB = Dichlorobenzene

Cr = Chromium

PM10 = Particulate Matter (<10 um) VOC - Volatile Organic Compounds

Pb = Lead

Mn = Manganese

SO2 = Sulfur Dioxide

CO = Carbon Monoxide

Cd = Cadmium

Ni = Nickel

**Appendix A: Emissions Calculations
Ultralite Cells UL-1 and UL-2**

Company Name: UGN, Inc.
Address City IN Zip: 2252 Industrial Drive, Valparaiso, Indiana 46383
Permit Revision Number: 127-21099
Plt ID: 127-00072
Reviewer: Nathan C. Bell
Date: April 21, 2005

Emission Parameters

Stack Pressure, P =	1.0 atm (assume)
Average Stack Temperature for Cell 7, T =	185.5 Fahrenheit
	= 358.4 Kelvin
Average Stack Flowrate for Cell 7, Q =	1284 acfm
Universal Gas Constant, R =	0.082058 L-atm/mol-K

Emissions of Hazardous Air Pollutants (HAPs)

Hazardous Air Pollutant (HAP)*	CAS Number	Molecular Weight (g/mol)	Maximum Concentration (Tennessee Plant)* (ppbv)	Maximum Emissions (Tennessee Plant)* (tons/yr)	Potential Emissions (Valparaiso Plant)** (tons/yr)
Chloromethane (Methyl Chloride)	74-87-3	50.5	6	2.2E-04	7.0E-04
1,3-Butadiene (Methyl Ethyl Ketone)	106-99-0	54	24	9.3E-04	3.0E-03
Methylene Chloride (Dichloromethane)	75-09-2	85	650	0.040	0.128
2-Butanone	78-93-3	72	8	4.1E-04	1.3E-03
Benzene	71-43-2	78	20	1.1E-03	3.6E-03
Toluene	108-88-3	92	20	1.3E-03	4.3E-03
m- and p-Xylene	1330-20-7	106	11	8.3E-04	2.7E-03
Total HAPs (tons/yr)					0.143

* Maximum emissions of HAPs were calculated using maximum HAP concentration data obtained from stack testing similar Ultralite Cells (Cell 3 and Cell 7), average stack temperature (Cell 7), and average stack flowrate (Cell 7), performed on August 14, 2003, at the UGN, Inc. plant in Jackson, Tennessee.

** The source estimated the potential emission from each curing oven at the accelerated throughput rate of 936 lb/hr (0.468 tons/hr) of padding and increased oven temperatures by assuming a 3.23 fold increase in the VOC emissions as compared to the stack test data from the Jackson, Tennessee plant. Therefore, potential HAP emissions for the Valparaiso Plant were estimated by multiplying the maximum emission from the Tennessee Plant by 3.23.

Methodology

Emissions for each HAP was calculated for this system as follows:

$$E = \frac{(C) * (MW) * (Q)}{c} * \frac{(28.317 \text{ L/cf}) * (60 \text{ min/hr}) * (8760 \text{ hr/yr})}{(1E+06 \text{ L/million L}) * (453.59 \text{ g/lb}) * (2000 \text{ lb/ton}) * (1000 \text{ ppbv/ppmv})}$$

where $c = \frac{(R) * (T)}{(P)}$

E = Emission Rate in pounds per year (tons/yr)

C = Exhaust gas concentration in parts per billion by volume (ppbv)

MW = Molecular Weight in g/mol of compound

Q = Air flow rate in cubic feet per minute (cfm)

R = Universal Gas Constant (0.082058 L-atm/mol-K)

T = Temperature (in degrees Kelvin)

P = Atmospheric pressure (assumed 1 atm)