Mr. Dave V. Smith, Jr.
Alpha Systems, Inc.
5120 Beck Drive
Elkhart, IN 46516

Re: 039-11874
First Minor Permit Revision to
MSOP 039-11066-00504

Dear Mr. Smith:

Alpha Systems, Inc. was issued a minor source operating permit on October 6, 1999 for resin molding and adhesive application operations. A letter requesting a revision to this permit was received on February 8, 2000. 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 minor permit revision consists of the addition of one (1) marble top mold booth, a woodworking and plastic machining area, one (1) glue line, four (4) natural gas-fired ovens, ten (10) natural gas-fired infrared tube heaters, and ten (10) comfort fans. This minor permit revision also consists of the addition of the existing equipment permitted and listed under Registration No. 039-9958-0054, issued November 19, 1998. The source is proposing the following changes (changes are bolded and stricken out for emphasis):

1. The emission units' descriptions, listed under Section A.2, page 3 of 16, are revised as follows to reflect the new units and the existing equipment permitted under Registration No. 139-9958 (changes are bolded and stricken out for emphasis):

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:

Beck Drive Plant: (consists of 5120 Beck Drive building and 5100 Beck Drive building)

5120 Beck Drive Building

(a) Nine (9) natural gas-fired heaters, designated as C1-C9, with a maximum heat input capacity of 0.2 mmBtu/hr each and exhausts to the atmosphere.

(b) Four (4) organic storage tanks, designated as T1-T4, a maximum throughput of 140, 000 gallons per year each, located above ground and exhausts to the atmosphere. Tanks designated as T1 and T2 are vertical fixed roof tanks. Tanks designated as T3 and T4 are flat top tanks.

(c) One (1) solvent -based adhesives production area, consisting of two (2) mixing vessels designated as M-1 and M-2, one (1) bulk product filling machine designated as F1, and exhausts to a stack designated as V1. M1 has a maximum raw material throughput of 586 pounds per hour and a maximum capacity of 300 gallons. M2 has a maximum raw material throughput of 277 pounds per hour and a maximum capacity of 275 gallons. F1 has a maximum raw material filling rate of 350 pounds per minute.

(d) One (1) polyurethane adhesive production area.

(e) One (1) water-based adhesive production area.

(f) One (1) hot melt adhesive production area.

5100 Beck Drive Building

(g) One (1) stone mixer, identified as M1 which has a rated capacity of 2,219 pounds per hour (lb/hr). This mixer can only feed one (1) line at a time, either the flat sheet molding line, FS1 or the sink/countertop molding, C1.

(h) One (1) flat sheet open molding line, identified as FS1 which has a rated capacity of 3,000 lb/hr. This facility is used to manufacture flat strips to match the countertops in line C1. From this process, the flat strip is conveyed to the sawing and sanding operation, identified as S1 for finishing as a final product. This operation is capable of sawing and sanding 105 cubic feet per minute of product.

One (1) dust collector, identified as DC1 used to control the particulate matter (PM) emissions coming from facility S1.

(i) One (1) sink/countertop closed molding line, identified as C1 which is capable of molding 34 parts per hour. From this process, the parts are conveyed to the 0.8 million Btu/hr (mmBtu/hr) natural gas-fired dryer, identified D1 for drying as a final product.

Protecta Drive Plant:

(j) One (1) rubber storage area.

(k) Four (4) vacuum former machines.

(l) One (1) woodworking and plastics machining area, with a maximum wood rate of 6.0 pounds per hour, a maximum plastic rate of 350.0 pounds per hour, exhausts to the atmosphere and consists of the following:

1. Ten (10) inch table saw;
2. Sixty (60) inch edge sander;
3. Two (2) fourteen (14) inch band saws;
4. Ten (10) inch swing saw;
5. Three (3) router tables;
6. One (1) vacuum former machine;

7. One (1) CNC router;
8. Miscellaneous hand operated saws, grinders and drills; and
9. One (1) hydraulic press.

(m) Four (4) natural gas-fired ovens, with a maximum heat input capacity of 2.5 mmBtu/hr each and exhaust to stacks designated as OVN-001 thru OVN-004.

(n) Ten (10) natural gas-fired infrared heater tubes, with a maximum heat input capacity of 0.1 mmBtu/hr each and exhaust to stacks designated as TH-001 thru TH-010.

(o) One (1) marble top mold booth, designated as #1, with a maximum throughout of 0.125 units per hour, consisting of gel coat and resin application, controlled by dry filters for particulate matter overspray and exhausts to one (1) stack designated as SV-001.

(p) One (1) glue line for polycarbonate skylights, with a maximum throughput of 37.7 units per hour and exhausts to the atmosphere.

(q) Ten (10) thirty (30) inch comfort fans.

2. Section D.1, page 12 of 16, is revised as follows to reflect the existing equipment at the Beck Drive Plant, listed under registration No. 039-9958-00504, issued on November 19, 1998 (changes are bolded and stricken out for emphasis):

Beck Drive Plant: (consists of 5120 Beck Drive building and 5100 Beck Drive building)

5120 Beck Drive Building

(a) Nine (9) natural gas-fired heaters, designated as C1-C9, with a maximum heat input capacity of 0.2 mmBtu/hr each and exhausts to the atmosphere.

(b) Four (4) organic storage tanks, designated as T1-T4, a maximum throughput of 140, 000 gallons per year each, located above ground and exhausts to the atmosphere. Tanks designated as T1 and T2 are vertical fixed roof tanks. Tanks designated as T3 and T4 are flat top tanks.

(c) One (1) solvent -based adhesives production area, consisting of two (2) mixing vessels designated as M-1 and M-2, one (1) bulk product filling machine designated as F1, and exhausts to a stack designated as V1. M1 has a maximum raw material throughput of 586 pounds per hour and a maximum capacity of 300 gallons. M2 has a maximum raw material throughput of 277 pounds per hour and a maximum capacity of 275 gallons. F1 has a maximum raw material filling rate of 350 pounds per minute.

(d) One (1) polyurethane adhesive production area.

(e) One (1) water-based adhesive production area.

(f) One (1) hot melt adhesive production area.

5100 Beck Drive Building

(g) One (1) stone mixer, identified as M1 which has a rated capacity of 2,219 pounds per hour (lb/hr). This mixer can only feed one (1) line at a time, either the flat sheet molding line, FS1 or the sink/countertop molding, C1.

(h) One (1) flat sheet open molding line, identified as FS1 which has a rated capacity of 3,000 lb/hr. This facility is used to manufacture flat strips to match the countertops in line C1. From this process, the flat strip is conveyed to the sawing and sanding operation, identified as S1 for finishing as a final product. This operation is capable of sawing and sanding 105 cubic feet per minute of product.

One (1) dust collector, identified as DC1 used to control the particulate matter (PM) emissions coming from facility S1.

(i) One (1) sink/countertop closed molding line, identified as C1 which is capable of molding 34 parts per hour. From this process, the parts are conveyed to the 0.8 million Btu/hr (mmBtu/hr) natural gas-fired dryer, identified D1 for drying as a final product.

3. Condition D.1.3, Particulate Matter (PM), listed on page 13 of 16, is revised as follows to reflect the addition of the existing adhesive booth that is subject to 326 IAC 6-3 (Process Operations)(changes are bolded and stricken out for emphasis):

D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]

(a) The PM emissions from the Sawing/Sanding operation, S1 shall be limited to 3.14 pound per hour emission rate established as E in the ~~following~~ formula **listed below**:

(b) The adhesive booth shall have PM allowable emissions using the following equation:

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

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

4. Section D.2, is added as follows to the MSOP as pages 15a and 15b, to reflect the new equipment and contains the following:

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Protecta Drive Plant:

(a) One (1) rubber storage area.

(b) Four (4) vacuum former machines.

(c) One (1) woodworking and plastics machining area, with a maximum wood rate of 6.0 pounds per hour, a maximum plastic rate of 350.0 pounds per hour, exhausts to the atmosphere and consists of the following:

1. **Ten (10) inch table saw;**
2. **Sixty (60) inch edge sander;**
3. **Two (2) fourteen (14) inch band saws;**
4. **Ten (10) inch swing saw;**
5. **Three (3) router tables;**
6. **One (1) vacuum former machine;**
7. **One (1) CNC router;**
8. **Miscellaneous hand operated saws, grinders and drills; and**
9. **One (1) hydraulic press.**

(d) Four (4) natural gas-fired ovens, with a maximum heat input capacity of 2.5 mmBtu/hr each and exhaust to stacks designated as OVN-001 thru OVN-004.

(e) Ten (10) natural gas-fired infrared heater tubes, with a maximum heat input capacity of 0.1 mmBtu/hr each and exhaust to stacks designated as TH-001 thru TH-010.

(f) One (1) marble top mold booth, designated as #1, with a maximum throughout of 0.125 units per hour, consisting of gel coat and resin application, controlled by dry filters for particulate matter overspray and exhausts to one (1) stack designated as SV-001.

(g) One (1) glue line for polycarbonate skylights, with a maximum throughput of 37.7 units per hour and exhausts to the atmosphere.

(h) Ten (10) thirty (30) inch comfort fans.

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the mold booth, woodworking and plastics machining shall be limited by the following:

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

$$E = 4.10\ P^{0.67}$$

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

D.2.2 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 its control device.

Compliance Determination Requirements

D.2.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Dry Filter Operation

The dry filter shall be in operation at all times when the mold booth is in operation.

D.2.5 Monitoring

(a) Weekly 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 while one or more of the spray equipment is in operation.

(b) Monthly inspections shall be performed of the fiberglass panel manufacturing line emissions from the stack and the presence of overspray on the rooftops and the nearby ground.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

D.2.6 Visible Emissions Notations

(a) Weekly visible emission notations of mold booth #1, at the point of exhaust, shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.2.7 Record Keeping Requirements

(a) To document compliance with Condition D.2.5, the Permitted shall maintain a log of weekly overspray observations, monthly and weekly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(b) To document compliance with D.2.6, the Permitted shall maintain records of weekly visible emission notations of mold booth #1 stack exhaust.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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 Management (OAM).

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 326 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 Nysa L. James, at OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Nysa L. James or extension (3-6875), or dial (317) 233-6875.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
NLJ
cc: File - Elkhart County
U.S. EPA, Region V
Elkhart County Health Department
Air Compliance Section Inspector - Rick Reynolds
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

NEW SOURCE CONSTRUCTION PERMIT and MINOR SOURCE OPERATING PERMIT OFFICE OF AIR MANAGEMENT

Alpha Systems, Inc.
5100 Beck Drive
Elkhart, Indiana 46516

(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 2-5.1 with conditions listed on the attached pages.

Operation Permit No.: MSOP 039-11066-00504	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: October 6, 1999
First Minor Permit Revision: 039-11874	Pages Affected: 3, 3a, 3b, 13-15, 15a and 15b
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A **SOURCE SUMMARY**

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 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 currently owns and operates an adhesive manufacturing plant. The Permittee proposed to construct and operate a plant that will manufacture fiberglass countertops and sinks.

Authorized Individual:	Steve Rusincovitch
Source Address:	5100 Beck Drive, Elkhart, Indiana 46516
Mailing Address:	5120 Beck Drive, Elkhart, Indiana 46516
Phone Number:	(219) 295-5206
SIC Code:	2891
County Location:	Elkhart
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit

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:

Beck Drive Plant: (consists of 5120 Beck Drive building and 5100 Beck Drive building)

5120 Beck Drive Building

(a) Nine (9) natural gas-fired heaters, designated as C1-C9, with a maximum heat input capacity of 0.2 mmBtu/hr each and exhausts to the atmosphere.

(b) Four (4) organic storage tanks, designated as T1-T4, a maximum throughput of 140, 000 gallons per year each, located above ground and exhausts to the atmosphere. Tanks designated as T1 and T2 are vertical fixed roof tanks. Tanks designated as T3 and T4 are flat top tanks.

(c) One (1) solvent -based adhesives production area, consisting of two (2) mixing vessels designated as M-1 and M-2, one (1) bulk product filling machine designated as F1, and exhausts to a stack designated as V1. M1 has a maximum raw material throughput of 586 pounds per hour and a maximum capacity of 300 gallons. M2 has a maximum raw material throughput of 277 pounds per hour and a maximum capacity of 275 gallons. F1 has a maximum raw material filling rate of 350 pounds per minute.

(d) One (1) polyurethane adhesive production area.

(e) One (1) water-based adhesive production area.

(f) One (1) hot melt adhesive production area.

5100 Beck Drive Building

(g) One (1) stone mixer, identified as M1 which has a rated capacity of 2,219 pounds per hour (lb/hr). This mixer can only feed one (1) line at a time, either the flat sheet molding line, FS1 or the sink/countertop molding, C1.

(h) One (1) flat sheet open molding line, identified as FS1 which has a rated capacity of 3,000 lb/hr. This facility is used to manufacture flat strips to match the countertops in line C1. From this process, the flat strip is conveyed to the sawing and sanding operation, identified as S1 for finishing as a final product. This operation is capable of sawing and sanding 105 cubic feet per minute of product.

One (1) dust collector, identified as DC1 used to control the particulate matter (PM) emissions coming from facility S1.

(i) One (1) sink/countertop closed molding line, identified as C1 which is capable of molding 34 parts per hour. From this process, the parts are conveyed to the 0.8 million Btu/hr (mmBtu/hr) natural gas-fired dryer, identified D1 for drying as a final product.

Protecta Drive Plant:

(j) One (1) rubber storage area.

(k) Four (4) vacuum former machines.

(l) One (1) woodworking and plastics machining area, with a maximum wood rate of 6.0 pounds per hour, a maximum plastic rate of 350.0 pounds per hour, exhausts to the atmosphere and consists of the following:

1. Ten (10) inch table saw;
2. Sixty (60) inch edge sander;
3. Two (2) fourteen (14) inch band saws;
4. Ten (10) inch swing saw;
5. Three (3) router tables;
6. One (1) vacuum former machine;
7. One (1) CNC router;
8. Miscellaneous hand operated saws, grinders and drills; and
9. One (1) hydraulic press.

(m) Four (4) natural gas-fired ovens, with a maximum heat input capacity of 2.5 mmBtu/hr each and exhaust to stacks designated as OVN-001 thru OVN-004.

(n) Ten (10) natural gas-fired infrared heater tubes, with a maximum heat input capacity of 0.1 mmBtu/hr each and exhaust to stacks designated as TH-001 thru TH-010.

(o) One (1) marble top mold booth, designated as #1, with a maximum throughout of 0.125 units per hour, consisting of gel coat and resin application, controlled by dry filters for particulate matter overspray and exhausts to one (1) stack designated as SV-001.

(p) One (1) glue line for polycarbonate skylights, with a maximum throughput of 37.7 units per hour and exhausts to the atmosphere.

(q) Ten (10) thirty (30) inch comfort fans**.**

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) The source shall submit a Title V permit application within twelve (12) months after the source becomes subject to Title V. This 12-month period starts at the postmarked submission date of the Affidavit of Construction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Beck Drive Plant: (consists of 5120 Beck Drive building and 5100 Beck Drive building)

5120 Beck Drive Building

(a) Nine (9) natural gas-fired heaters, designated as C1-C9, with a maximum heat input capacity of 0.2 mmBtu/hr each and exhausts to the atmosphere.

(b) Four (4) organic storage tanks, designated as T1-T4, a maximum throughput of 140, 000 gallons per year each, located above ground and exhausts to the atmosphere. Tanks designated as T1 and T2 are vertical fixed roof tanks. Tanks designated as T3 and T4 are flat top tanks.

(c) One (1) solvent -based adhesives production area, consisting of two (2) mixing vessels designated as M-1 and M-2, one (1) bulk product filling machine designated as F1, and exhausts to a stack designated as V1. M1 has a maximum raw material throughput of 586 pounds per hour and a maximum capacity of 300 gallons. M2 has a maximum raw material throughput of 277 pounds per hour and a maximum capacity of 275 gallons. F1 has a maximum raw material filling rate of 350 pounds per minute.

(d) One (1) polyurethane adhesive production area.

(e) One (1) water-based adhesive production area.

(f) One (1) hot melt adhesive production area.

5100 Beck Drive Building

(g) One (1) stone mixer, identified as M1 which has a rated capacity of 2,219 pounds per hour (lb/hr). This mixer can only feed one (1) line at a time, either the flat sheet molding line, FS1 or the sink/countertop molding, C1.

(h) One (1) flat sheet open molding line, identified as FS1 which has a rated capacity of 3,000 lb/hr. This facility is used to manufacture flat strips to match the countertops in line C1. From this process, the flat strip is conveyed to the sawing and sanding operation, identified as S1 for finishing as a final product. This operation is capable of sawing and sanding 105 cubic feet per minute of product.

One (1) dust collector, identified as DC1 used to control the particulate matter (PM) emissions coming from facility S1.

(i) One (1) sink/countertop closed molding line, identified as C1 which is capable of molding 34 parts per hour. From this process, the parts are conveyed to the 0.8 million Btu/hr (mmBtu/hr) natural gas-fired dryer, identified D1 for drying as a final product.

Emission Limitations and Standards

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

The volatile organic material used in the flat sheet open molding line, FS1 and the sink/countertop closed molding line, C1 including the stone mixer M1 shall be limited such that the VOC emissions shall be less than 25 tons per twelve-month period, rolled on a monthly basis.

During the first twelve (12) months of operation, the volatile organic material used shall be limited such that the total volatile organic material used divided by accumulated months of operation shall be less than VOC emission average of 2.08 tons per month, rolled on a monthly basis. Therefore, 326 IAC 8-1-6 will not apply.

D.1.2 Hazardous Air Pollutants (HAPs)

(a) The HAP material used in the Resin Molding Plant (mixer M1, flatsheet, countertop and sink molding facilities) shall be limited such that the single HAP emissions shall be less than 10 tons per twelve-month period, rolled on a monthly basis.

During the first twelve (12) months of operation, the HAP material used shall be limited such that the total HAP material used divided by accumulated months of operation shall be less than a single HAP emission average of 0.83 tons per month, rolled on a monthly basis. Therefore, 326 IAC 2-4.1-1 (New Source Toxics Control) will not apply.

(b) The HAP material used in the Resin Molding Plant (mixer M1, flatsheet, countertop and sink molding facilities) shall be limited such that the combined HAPs emissions shall be less than 25 tons per twelve-month period, rolled on a monthly basis.

During the first twelve (12) months of operation, the HAP material used shall be limited such that the total HAP material used divided by accumulated months of operation shall be less than a combined HAPs emission average of 2.08 tons per month, rolled on a monthly basis. Therefore, 326 IAC 2-4.1-1 (New Source Toxics Control) will not apply.

D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]

(a) The PM emissions from the Sawing/Sanding operation, S1 shall be limited to 3.14 pound per hour emission rate established as E in the formula listed below:

(b) The adhesive booth shall have PM allowable emissions using the following equation:

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

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

D.1.4 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 the Resin Molding operation (mixer M1, flat sheet open molding line, FS1; sink/countertop closed molding line, C1; and baghouse DC1).

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM compliance with the VOC limit specified in Condition D.1.1 and D.1.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.6 Volatile Organic Compounds (VOC)

Compliance with the VOC and HAP content and usage limitations contained in Conditions D.1.1 and D.1.2 shall be determined using formulation data supplied by the manufacturer. IDEM, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.7 Baghouse Operation

Baghouse DC1, shall always be in operation, whenever the Sawing/Sanding operation S1 is in operation.

D.1.8 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the Sawing/Sanding operation S1, when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

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

D.1.9 Record Keeping Requirements

(a) To document compliance with Conditions D.1.1 and D.1.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Conditions D.1.1 and D.1.2.

(1) The amount and VOC and HAP content of each material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(2) A log of the dates of use;

(3) The cleanup solvent usage for each month;

(4) The total VOC and HAP usages for each month; and

(5) The weight of VOCs and HAPs emitted for each compliance period.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Protecta Drive Plant:

(a) One (1) rubber storage area.

(b) Four (4) vacuum former machines.

(c) One (1) woodworking and plastics machining area, with a maximum wood rate of 6.0 pounds per hour, a maximum plastic rate of 350.0 pounds per hour, exhausts to the atmosphere and consists of the following:

1. Ten (10) inch table saw;
2. Sixty (60) inch edge sander;
3. Two (2) fourteen (14) inch band saws;
4. Ten (10) inch swing saw;
5. Three (3) router tables;
6. One (1) vacuum former machine;
7. One (1) CNC router;
8. Miscellaneous hand operated saws, grinders and drills; and
9. One (1) hydraulic press.

(d) Four (4) natural gas-fired ovens, with a maximum heat input capacity of 2.5 mmBtu/hr each and exhaust to stacks designated as OVN-001 thru OVN-004.

(e) Ten (10) natural gas-fired infrared heater tubes, with a maximum heat input capacity of 0.1 mmBtu/hr each and exhaust to stacks designated as TH-001 thru TH-010.

(f) One (1) marble top mold booth, designated as #1, with a maximum throughout of 0.125 units per hour, consisting of gel coat and resin application, controlled by dry filters for particulate matter overspray and exhausts to one (1) stack designated as SV-001.

(g) One (1) glue line for polycarbonate skylights, with a maximum throughput of 37.7 units per hour and exhausts to the atmosphere.

(h) Ten (10) thirty (30) inch comfort fans.

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the mold booth, woodworking and plastics machining shall be limited by the following:

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

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

D.2.2 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 its control device.

Compliance Determination Requirements

D.2.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Dry Filter Operation

The dry filter shall be in operation at all times when the mold booth is in operation.

D.2.5 Monitoring

(a) Weekly 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 while one or more of the spray equipment is in operation.

(b) Monthly inspections shall be performed of the fiberglass panel manufacturing line emissions from the stack and the presence of overspray on the rooftops and the nearby ground.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

D.2.6 Visible Emissions Notations

(a) Weekly visible emission notations of mold booth #1, at the point of exhaust, shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.2.7 Record Keeping Requirements

(a) To document compliance with Condition D.2.5, the Permitted shall maintain a log of weekly overspray observations, monthly and weekly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(b) To document compliance with D.2.6, the Permitted shall maintain records of weekly visible emission notations of mold booth #1 stack exhaust.

(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 MANAGEMENT
COMPLIANCE DATA SECTION

MINOR SOURCE OPERATING PERMIT ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	**Alpha Systems, Inc.**
Address:	**5120 Beck Drive**
City:	**Elkhart, Indiana 46516**
Phone #:	**(219) 295-5206**
MSOP #:	**039-11066-00504**

I hereby certify that **Alpha Systems, Inc.** is
9 still in operation.
9 no longer in operation.

I hereby certify that **Alpha Systems, Inc.** is
9 in compliance with the requirements of MSOP **039-11066-00504.**
9 not in compliance with the requirements of MSOP **039-11066-00504.**

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

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

Noncompliance:

Indiana Department of Environmental Management
Office of Air Management

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

Source Background and Description

Source Name:	Alpha Systems, Inc.
Source Location:	5120 Beck Drive, Elkhart, Indiana 46516
County:	Elkhart
Operation Permit No.:	MSOP 039-11066-00504
Operation Permit Issuance Date:	October 6, 1999
First Minor Permit Revision No.:	039-11874-00504
SIC Code:	3088
Permit Reviewer:	Nysa L. James

The Office of Air Management (OAM) has reviewed an application from Alpha Systems, Inc. relating to the construction and operation of a plastic fabricating and mold building for marble tops operation.

Permitted Emission Units and Pollution Control Equipment

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

Beck Drive Plant: (consists of 5120 Beck Drive building and 5100 Beck Drive building)

5120 Beck Drive Building

(a) Nine (9) natural gas-fired heaters, designated as C1-C9, with a maximum heat input capacity of 0.2 mmBtu/hr each and exhausts to the atmosphere.

(b) Four (4) organic storage tanks, designated as T1-T4, a maximum throughput of 140, 000 gallons per year each, located above ground and exhausts to the atmosphere. Tanks designated as T1 and T2 are vertical fixed roof tanks. Tanks designated as T3 and T4 are flat top tanks.

(c) One (1) solvent -based adhesives production area, consisting of two (2) mixing vessels designated as M-1 and M-2, one (1) bulk product filling machine designated as F1, and exhausts to a stack designated as V1. M1 has a maximum raw material throughput of 586 pounds per hour and a maximum capacity of 300 gallons. M2 has a maximum raw material throughput of 277 pounds per hour and a maximum capacity of 275 gallons. F1 has a maximum raw material filling rate of 350 pounds per minute.

(d) One (1) polyurethane adhesive production area.

(e) One (1) water-based adhesive production area.

(f) One (1) hot melt adhesive production area.

5100 Beck Drive Building

(g) One (1) stone mixer, identified as M1 which has a rated capacity of 2,219 pounds per hour (lb/hr). This mixer can only feed one (1) line at a time, either the flat sheet molding line, FS1 or the sink/countertop molding, C1.

(h) One (1) flat sheet open molding line, identified as FS1 which has a rated capacity of 3,000 lb/hr. This facility is used to manufacture flat strips to match the countertops in line C1. From this process, the flat strip is conveyed to the sawing and sanding operation, identified as S1 for finishing as a final product. This operation is capable of sawing and sanding 105 cubic feet per minute of product.

One (1) dust collector, identified as DC1 used to control the particulate matter (PM) emissions coming from facility S1.

(i) One (1) sink/countertop closed molding line, identified as C1 which is capable of molding 34 parts per hour. From this process, the parts are conveyed to the 0.8 million Btu/hr (mmBtu/hr) natural gas-fired dryer, identified D1 for drying as a final product.

Protecta Drive Plant:

(j) One (1) rubber storage area.

(k) Four (4) vacuum former machines.

New Emission Units and Pollution Control Equipment

The source is proposing to construct and operate the following facilities/units in the Protecta Drive plant:

(a) One (1) woodworking and plastics machining area, with a maximum wood rate of 6.0 pounds per hour, a maximum plastic rate of 350.0 pounds per hour, exhausts to the atmosphere and consists of the following:

1. Ten (10) inch table saw;
2. Sixty (60) inch edge sander;
3. Two (2) fourteen (14) inch band saws;
4. Ten (10) inch swing saw;
5. Three (3) router tables;
6. One (1) vacuum former machine;
7. One (1) CNC router;
8. Miscellaneous hand operated saws, grinders and drills; and
9. One (1) hydraulic press.

(b) Four (4) natural gas-fired ovens, with a maximum heat input capacity of 2.5 mmBtu/hr each and exhaust to stacks designetd as OVN-001 thru OVN-004.

(c) Ten (10) natural gas-fired infrared heater tubes, with a maximum heat input capacity of 0.1 mmbtu/hr each and exhaust to stacks designated as TH-001 thru TH-010.

(d) One (1) marble top mold booth, designated as #1, with a maximum throughput of 0.125 units per hour, consisting of gel coat and resin application, controlled by dry filters for particulate matter overspray and exhausts to one (1) stack designated as SV-001.

(e) One (1) glue line for polycarbonate skylights, with a maximum throughput of 37.7 units per hour and exhausts to the atmosphere.

(f) Ten (10) thirty (30) inch comfort fans.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) MSOP 039-11066-00504, issued on October 6, 1999; and

(b) R 039-9958-00001-00504, issued on November 19, 1998.

All conditions from previous approvals were incorporated into this permit.

Changes Proposed

The Office of Air Management (OAM) has reviewed an application from Alpha Systems, Inc. , relating to the first minor permit revision to their MSOP. This application was reviewed as a minor permit revision because the potential to emit of particulate matter is greater than 5 tons per year, but less than 25 tons per year. The minor permit revision consists of the addition of one (1) marble top mold booth, a woodworking and plastic machining area, one (1) glue line, four (4) natural gas-fired ovens, ten (10) natural gas-fired infrared tube heaters, and ten (10) comfort fans. This minor permit revision also consists of the addition of the existing equipment permitted and listed under Registration No. 039-9958-0054, issued November 19, 1998. The source is proposing the following changes (changes are bolded and stricken out for emphasis):

1. The emission units' descriptions, listed under Section A.2, page 3 of 16, are revised as follows to reflect the new units and the existing equipment permitted under Registration No. 139-9958 (changes are bolded and stricken out for emphasis):

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:

Beck Drive Plant: (consists of 5120 Beck Drive building and 5100 Beck Drive building)

5120 Beck Drive Building

(a) Nine (9) natural gas-fired heaters, designated as C1-C9, with a maximum heat input capacity of 0.2 mmBtu/hr each and exhausts to the atmosphere.

(b) Four (4) organic storage tanks, designated as T1-T4, a maximum throughput of 140, 000 gallons per year each, located above ground and exhausts to the atmosphere. Tanks designated as T1 and T2 are vertical fixed roof tanks. Tanks designated as T3 and T4 are flat top tanks.

(c) One (1) solvent -based adhesives production area, consisting of two (2) mixing vessels designated as M-1 and M-2, one (1) bulk product filling machine designated as F1, and exhausts to a stack designated as V1. M1 has a maximum raw material throughput of 586 pounds per hour and a maximum capacity of 300 gallons. M2 has a maximum raw material throughput of 277 pounds per hour and a maximum capacity of 275 gallons. F1 has a maximum raw material filling rate of 350 pounds per minute.

(d) One (1) polyurethane adhesive production area.

(e) One (1) water-based adhesive production area.

(f) One (1) hot melt adhesive production area.

5100 Beck Drive Building

(g) One (1) stone mixer, identified as M1 which has a rated capacity of 2,219 pounds per hour (lb/hr). This mixer can only feed one (1) line at a time, either the flat sheet molding line, FS1 or the sink/countertop molding, C1.

(h) One (1) flat sheet open molding line, identified as FS1 which has a rated capacity of 3,000 lb/hr. This facility is used to manufacture flat strips to match the countertops in line C1. From this process, the flat strip is conveyed to the sawing and sanding operation, identified as S1 for finishing as a final product. This operation is capable of sawing and sanding 105 cubic feet per minute of product.

One (1) dust collector, identified as DC1 used to control the particulate matter (PM) emissions coming from facility S1.

(i) One (1) sink/countertop closed molding line, identified as C1 which is capable of molding 34 parts per hour. From this process, the parts are conveyed to the 0.8 million Btu/hr (mmBtu/hr) natural gas-fired dryer, identified D1 for drying as a final product.

Protecta Drive Plant:

(j) One (1) rubber storage area.

(k) Four (4) vacuum former machines.

(l) One (1) woodworking and plastics machining area, with a maximum wood rate of 6.0 pounds per hour, a maximum plastic rate of 350.0 pounds per hour, exhausts to the atmosphere and consists of the following:

1. Ten (10) inch table saw;
2. Sixty (60) inch edge sander;
3. Two (2) fourteen (14) inch band saws;
4. Ten (10) inch swing saw;
5. Three (3) router tables;
6. One (1) vacuum former machine;
7. One (1) CNC router;
8. Miscellaneous hand operated saws, grinders and drills; and
9. One (1) hydraulic press.

(m) Four (4) natural gas-fired ovens, with a maximum heat input capacity of 2.5 mmBtu/hr each and exhaust to stacks designated as OVN-001 thru OVN-004.

(n) Ten (10) natural gas-fired infrared heater tubes, with a maximum heat input capacity of 0.1 mmBtu/hr each and exhaust to stacks designated as TH-001 thru TH-010.

(o) One (1) marble top mold booth, designated as #1, with a maximum throughout of 0.125 units per hour, consisting of gel coat and resin application, controlled by dry filters for particulate matter overspray and exhausts to one (1) stack designated as SV-001.

(p) One (1) glue line for polycarbonate skylights, with a maximum throughput of 37.7 units per hour and exhausts to the atmosphere.

(q) Ten (10) thirty (30) inch comfort fans.

2. Section D.1, page 12 of 16, is revised as follows to reflect the existing equipment at the Beck Drive Plant, listed under registration No. 039-9958-00504, issued on November 19, 1998 (changes are bolded and stricken out for emphasis):

Beck Drive Plant: (consists of 5120 Beck Drive building and 5100 Beck Drive building)

5120 Beck Drive Building

(a) Nine (9) natural gas-fired heaters, designated as C1-C9, with a maximum heat input capacity of 0.2 mmBtu/hr each and exhausts to the atmosphere.

(b) Four (4) organic storage tanks, designated as T1-T4, a maximum throughput of 140, 000 gallons per year each, located above ground and exhausts to the atmosphere. Tanks designated as T1 and T2 are vertical fixed roof tanks. Tanks designated as T3 and T4 are flat top tanks.

(c) One (1) solvent -based adhesives production area, consisting of two (2) mixing vessels designated as M-1 and M-2, one (1) bulk product filling machine designated as F1, and exhausts to a stack designated as V1. M1 has a maximum raw material throughput of 586 pounds per hour and a maximum capacity of 300 gallons. M2 has a maximum raw material throughput of 277 pounds per hour and a maximum capacity of 275 gallons. F1 has a maximum raw material filling rate of 350 pounds per minute.

(d) One (1) polyurethane adhesive production area.

(e) One (1) water-based adhesive production area.

(f) One (1) hot melt adhesive production area.

5100 Beck Drive Building

(g) One (1) stone mixer, identified as M1 which has a rated capacity of 2,219 pounds per hour (lb/hr). This mixer can only feed one (1) line at a time, either the flat sheet molding line, FS1 or the sink/countertop molding, C1.

(h) One (1) flat sheet open molding line, identified as FS1 which has a rated capacity of 3,000 lb/hr. This facility is used to manufacture flat strips to match the countertops in line C1. From this process, the flat strip is conveyed to the sawing and sanding operation, identified as S1 for finishing as a final product. This operation is capable of sawing and sanding 105 cubic feet per minute of product.

One (1) dust collector, identified as DC1 used to control the particulate matter (PM) emissions coming from facility S1.

(i) One (1) sink/countertop closed molding line, identified as C1 which is capable of molding 34 parts per hour. From this process, the parts are conveyed to the 0.8 million Btu/hr (mmBtu/hr) natural gas-fired dryer, identified D1 for drying as a final product.

3. Condition D.1.3, Particulate Matter (PM), listed on page 13 of 16, is revised as follows to reflect the addition of the existing adhesive booth that is subject to 326 IAC 6-3 (Process Operations)(changes are bolded and stricken out for emphasis):

D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]

(a) The PM emissions from the Sawing/Sanding operation, S1 shall be limited to 3.14 pound per hour emission rate established as E in the ~~following~~ formula **listed below**:

(b) The adhesive booth shall have PM allowable emissions using the following equation:

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

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

4. Section D.2, is added as follows to the MSOP as pages 15a and 15b, to reflect the new equipment and contains the following:

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Protecta Drive Plant:

(a) One (1) rubber storage area.

(b) Four (4) vacuum former machines.

(c) One (1) woodworking and plastics machining area, with a maximum wood rate of 6.0 pounds per hour, a maximum plastic rate of 350.0 pounds per hour, exhausts to the atmosphere and consists of the following:

1. Ten (10) inch table saw;
2. Sixty (60) inch edge sander;
3. Two (2) fourteen (14) inch band saws;
4. Ten (10) inch swing saw;
5. Three (3) router tables;
6. One (1) vacuum former machine;
7. One (1) CNC router;
8. Miscellaneous hand operated saws, grinders and drills; and
9. One (1) hydraulic press.

(d) Four (4) natural gas-fired ovens, with a maximum heat input capacity of 2.5 mmBtu/hr each and exhaust to stacks designated as OVN-001 thru OVN-004.

(e) Ten (10) natural gas-fired infrared heater tubes, with a maximum heat input capacity of 0.1 mmBtu/hr each and exhaust to stacks designated as TH-001 thru TH-010.

(f) One (1) marble top mold booth, designated as #1, with a maximum throughout of 0.125 units per hour, consisting of gel coat and resin application, controlled by dry filters for particulate matter overspray and exhausts to one (1) stack designated as SV-001.

(g) One (1) glue line for polycarbonate skylights, with a maximum throughput of 37.7 units per hour and exhausts to the atmosphere.

(h) Ten (10) thirty (30) inch comfort fans.

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the mold booth, woodworking and plastics machining shall be limited by the following:

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

$$E = 4.10\ P^{0.67}$$

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

D.2.2 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 its control device.

Compliance Determination Requirements

D.2.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Dry Filter Operation

The dry filter shall be in operation at all times when the mold booth is in operation.

D.2.5 Monitoring

(a) Weekly 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 while one or more of the spray equipment is in operation.

(b) Monthly inspections shall be performed of the fiberglass panel manufacturing line emissions from the stack and the presence of overspray on the rooftops and the nearby ground.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

D.2.6 Visible Emissions Notations

(a) Weekly visible emission notations of mold booth #1, at the point of exhaust, shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.2.7 Record Keeping Requirements

(a) To document compliance with Condition D.2.5, the Permitted shall maintain a log of weekly overspray observations, monthly and weekly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(b) To document compliance with D.2.6, the Permitted shall maintain records of weekly visible emission notations of mold booth #1 stack exhaust.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

5. The MSOP Annual Notification Form is added at the end of permit.

Source Definition

Alpha Systems, Inc. consists of two (2) plants:

(a) Beck Drive Plant (two (2) buildings), located at 5120 and 5100 Beck Drive, Elkhart, Indiana; and

(b) Protecta Drive Plant, located at 21680 Protecta, Elkhart, Indiana.

The two (2) plants are owned by one person, located on the same property (contiguous property) and same owner, but have different SIC codes. The Beck Drive Plant manufactures adhesives and sealants used exclusively by the motor home industry, with SIC code of 2891. The Protecta Drive Plant manufactures fiberglass countertops and sinks, with SIC code of 3088.

IDEM has determined that Alpha Systems' two (2) plants are considered **one (1)** source.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
TH-001 thru TH-010	infrared tube heaters	24.0 (each)	0.5 (each)	100 (each)	200 (each)
OVN-001 thru OVN-004	ovens	24.0 (each)	1.0 (each)	100 (each)	200 (each)
SV-001	mold booth	8.0	2.0	6799	ambient

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.

An application for the purposes of this review was received on February 8, 2000, with additional information received on February 22, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations. (Four (4) pages)

PM emission calculations for woodworking and plastics machining:

Wood - 0.048 pounds per hour (estimated particulate matter) * 8760 hours per year * ton/2000 pounds = 0.21 tons per year.

Plastic - 0.50 pounds per hour (estimated particulate matter) * 8760 hours per year * ton/2000 pounds = 2.19 tons per year.

Total potential to emit from woodworking and plastics machining = 2.40 tons per year.

Potential To Emit (New Equipment)

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	5.61
PM-10	5.61
SO_2	0.03
VOC	8.01
CO	4.04
NO_x	4.82

HAP's	Potential To Emit (tons/year)
Styrene	2.07
Dimethyl Phthalate	0.263
Methylene Chloride	3.84
MEK	4.0E-03
Benzene	1.0E-04
Dichlorobenzene	5.8E-05
Formaldehyde	3.6E-03
Hexane	8.7E-02
Toluene	1.6E-04
Lead	2.4E-05
Cadmium	5.3E-05
Chromium	6.7E-05
Manganese	1.8E-05
Nickel	1.9E-04
TOTAL	6.27

Potential To Emit (Entire Source)

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	485.8
PM-10	485.8
SO_2	0.03
VOC	71.19
CO	4.54
NO_x	6.02

HAP's	Potential To Emit (tons/year)
Styrene	48.07
Dimethyl Phthalate	0.263

Methylene Chloride	13.29
MEK	2.41
Hexane	1.65
Toluene	1.87
Dichlorobenzene	5.8E-05
Formaldehyde	3.6E-03
Cadmium	5.3E-05
Chromium	6.7E-05
Lead	2.4E-05
Manganese	1.8E-05
Nickel	1.9E-04
TOTAL	67.56

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM_{10} is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(c) The future source will be required to submit a Part 70 Operating Permit as part of 039-11066. The current source is still covered by the MSOP. It has not officially become a Title V source yet. So this change will be processed as a minor permit revision to the existing MSOP.

Actual Emissions

No previous actual emission data has been received from the source.

Limited Potential to Emit (Entire Source)

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units. (Since the units listed under Registration No. 039-9958-00504 are not limited, those units emissions are listed together under the registration number.)

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Registration No. 039-9958-00504	0.20	0.20	0.00	6.33	0.20	0.80	MEK = 2.07; Toluene = 1.87; Hexane = 1.56; and Methylene Chloride = 9.45
Countertop/Sink Molding Line	0.00	0.00	0.00	24.0	0.30	0.40	9.0 single HAP; 24.0 combination HAPs
Sawing/Sanding Operation	4.8	4.8	0.00	0.00	0.00	0.00	0.00
Mold Booth 1	0.062	0.062	0.00	7.75	0.00	0.00	MEK = 0.004; Dimethyl Phthalate = 0.263; Methylene Chloride = 3.65; and Styrene = 2.07
Glue Line	0.00	0.00	0.00	0.00	0.00	0.00	MEK = 3.66
Woodworking/ Plastic Machining	2.4	2.4	0.00	0.00	0.00	0.00	0.00
Infrared Tube Heaters	0.008	0.033	0.003	0.024	0.368	0.438	Hexane = 7.88E-03*
Ovens	0.08	0.33	0.03	0.24	3.68	4.38	Hexane = 7.88E-02; Formaldehyde = 3.28E-03*
Total Emissions	7.55	7.83	0.033	38.34	4.55	6.02	MEK = 6.07; Toluene = 1.87; Hexane = 1.65; Dimethyl Phthalate = 0.263; Styrene = 11.07; Methylene Chloride = 13.1; and Formaldehyde = 3.28E-03

* Worst case HAPs emissions from combustion units

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CAR 52.21.

(b) Elkhart County has been classified as attainment or unclassifiable for SO_2, CO and PM_{10}, PM. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CAR 52.21.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	4.8
PM10	4.8
SO_2	0.0
VOC	30.33
CO	0.5
NO_x	1.2

(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 more, and it is not in one of the 28 listed source categories.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO_2 (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO_x (ton/yr)
Proposed Modification	2.55	2.82	0.033	8.01	4.05	4.82
PSD or Offset Threshold Level	250	250	250	250	250	250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CAR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this minor permit revision 039-11874-00504, is still 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/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAM inspector assigned to the source.

Federal Rule Applicability

There are no changes in Federal rule applicability from the original MSOP.

State Rule Applicability - (New Equipment)

326 IAC 2-1-3.4 (New Source Toxics Rule) is not applicable to mold booth #1 and the glue line, because the single HAPs emission of each unit is less than 10 tons per year and the combination of HAPs of each unit is less than 25 tons per year.

326 IAC 5-1 (Visible Emissions Limitations)

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

(a) Opacity shall not exceed an average of forty percent (40%) 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 CAR 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 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the mold booth, woodworking and plastics machining shall be limited by the following:

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

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

$Ew = 4.10(6\ lb/hr * ton/2000\ lb)^{0.67} = 0.084\ lb/hr$; 0.084 lb/hr * 8760 hr/yr * ton/2000 lb = 0.368 ton/yr.

$Ep = 4.10\ (350\ lb/hr * ton/2000\ lb)^{0.67} = 1.28\ lb/hr$; 1.28 lb/hr * 8760 hr/yr * ton/2000 lb = 5.59 ton/yr.

The dust collector shall be in operation at all times the mold booth is in operation, in order to comply with this limit.

No other 326 IAC 6 rules apply.

326 IAC 8-1-6 (New facilities; general reduction requirements):

Pursuant to 326 IAC 8-1-6 (New facilities; general reduction requirements), the requirements of BACT do not apply to mold booth #1 because the potential to emit of VOC is less than 25 tons per year.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

(b) See attached calculations for detailed air toxic calculations. (Page 4 of 4)

Conclusion

The construction and operation of this plastic fabricating and mold building for marble tops operation shall be subject to the conditions of the attached proposed **First Minor Permit Revision 039-11874-00504.**

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Ten (1) natural gas-fired infrared tube heaters
Company Name: **Alpha Systems, Inc.**
Address City IN Zip: **21680 Protecta Drive, Elkhart, IN. 46516**
CP: **039-11874**
Plt ID: **039-00504**
Reviewer: NLJ
Date: 02-22-2000

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.0	8.8

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.008	0.033	0.003	0.438	0.024	0.368

*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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
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)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	9.198E-06	5.256E-06	3.285E-04	7.884E-03	1.489E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.190E-06	4.818E-06	6.132E-06	1.664E-06	9.198E-06

Methodology is the same as page 1.

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

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Four (4) natural gas-fired ovens
Company Name: Alpha Systems, Inc.
Address City IN Zip: 21680 Protecta Drive, Elkhart, IN. 46516
CP: 039-11874
Plt ID: 039-00504
Reviewer: NLJ
Date: 02-22-2000

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
10.0	87.6

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.08	0.33	0.03	4.38	0.24	3.68

*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

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
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)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	9.198E-05	5.256E-05	3.285E-03	7.884E-02	1.489E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	2.190E-05	4.818E-05	6.132E-05	1.664E-05	9.198E-05

Methodology is the same as page 1.

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

Appendix A: Emissions Calculations
VOC and Particulate
Mold Booth 1

Company Name: Alpha Systems, Inc.
Address City IN Zip: 21680 Protecta Drive, Elkhart, IN. 46516
CP: 039-11874
Plt ID: 039-00504
Reviewer: NLJ
Date: 02-22-2000

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Gel	9.08	42.30%	0.0%	42.3%	0.0%	51.00%	0.661	0.125	3.84	3.84	0.32	7.62	1.39	0.47	7.53	75%
Resin	9.58	36.00%	0.0%	36.0%	0.0%	63.00%	3.157	0.125	3.45	3.45	1.36	32.66	5.96	2.65	5.47	75%
Catalyst	9.58	100.00%	0.0%	100.0%	0.0%	0.00%	0.077	0.125	9.58	9.58	0.09	2.21	0.40	0.00	--	100%

State Potential Emissions	**Add worst case coating to all solvents**	**1.77**	**42.49**	**7.75**	**3.12**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Alpha Systems, Inc.
Address City IN Zip: 21680 Protecta Drive, Elkhart, IN. 46516
CP#: 039-11874
Plt ID: 039-00504
Permit Reviewer: NLJ
Date: 02-22-2000

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % MEK	Weight % Dimethyl Phthalate	Weight % Methylene Chloride	MEK Emissions (ton/yr)	Dimethyl Phthalate Emissions (ton/yr)	Methylene Chloride Emissions (ton/yr)
Catalyst	9.58	0.077	0.13	1.00%	65.00%	0.00%	0.004	0.263	0.000
Methylene Chloride	11.07	0.002	37.70	0.00%	0.00%	100.00%	0.000	0.000	3.839
							0.004	**0.26**	**3.84**

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Sytrene Monomer	CFA Emission Factor (%)	Styrene Emissions
Resin	9.58	3.157	0.13	36.00%	7.70%	1.28
Gel	9.08	0.661	0.13	42.97%	24.15%	0.79
						2.07

Total State Potential Emissions

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs