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

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: June 17, 2005

RE: Dynamax Corporation` / 039-19898-00536

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 13-15-5-3, this permit 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 13-15-6-1(b) or IC 13-15-6-1(a) 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 of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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
FNTVOP.dot 1/10/05

June 17, 2005

Mr. DeWayne Creighton
Dynamax Corporation
P.O. Box 1948
Elkhart, Indiana 46515

Re: **039-19898-00536**
First Significant Permit Modification to
Part 70 No.: T 039-14698-00536

Dear Mr. Creighton:

Dynamax Corporation was issued a permit on May 21, 2002 for a recreational vehicle production operation. A letter requesting changes to this permit was received on August 23, 2004. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

Specifically, Dynamax has submitted a request to construct and operate:

(a) two (2) surface coating booths, identified as PB3 and PB4, using HVLP spray guns for application and dry filters for overspray control, with all emissions exhausting through stacks S5, S6, and S7,
(b) one (1) 5.83 MMBtu/hr natural gas fired air make up unit, identified as MA3, servicing proposed surface coating booth PB3, and
(c) one (1) 1.5 MMBtu/hr natural gas fired air make up unit, identified as MA4, servicing proposed surface coating booth PB4.

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of VOC is greater than 25 tons per year, and the single and combined HAP emissions are greater than 10 and 25 tons per year, respectively. Therefore, the proposed changes shall be approved via a Significant Source Modification pursuant to 326 IAC 2-7-10.5(f)(2), (4), and (6).

The proposed changes shall be incorporated into the existing source Part 70 permit via a Significant Permit Modification Pursuant to 326 IAC 2-7-12(d) because the proposed changes do not qualify for a Minor Permit Modification pursuant to 326 IAC 2-7-12(b) or an Administrative Amendment pursuant to 326 IAC 2-7-11.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following 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 Scott Fulton, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204, or call at (800) 451-6027, and ask for Scott Fulton or extension (3-5691), or dial (317) 233-5691.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
SDF
cc: File - Elkhart County
U.S. EPA, Region V
Elkhart County Health Department
Northern Regional Office
Air Compliance Section Inspector - Paul Karkiewicz
Compliance Data Section
Administrative and Development

PART 70 OPERATING PERMIT
OFFICE OF AIR QUALITY

Dynamax Corporation
2745 Northland Drive
Elkhart, IN 46514

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T039-14698-00536	Date Issued: May 21, 2002 Expiration Date: May 21, 2007
Original Signed By: Janet McCabe, Assistant Commissioner, Office of Air Quality	

First Administrative Amendment No.: 039-17182-00536	Date Issued: April 6, 2004

Second Administrative Amendment No.: 039-19536-00536	Date Issued: January 6, 2005

First Significant Permit Modification No.: 039-19898-00536	Affected Pages: 1-5, 25 - 28, with 3a, 28a, 28b, 28c, and 33a added
Issued By: Paul Dubenetzky, Chief Permits Branch Office of Air Quality	Issued Date: June 17, 2005

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Certification
Emergency Occurrence Report
Semi-Annual Natural Gas Fired Boiler Certification
Quarterly Deviation and Compliance Monitoring Report
Quarterly Report

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 through A.4 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 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary recreational vehicle production plant which includes motor homes, campers, vans etc.

Responsible Official:	DeWayne Creighton Jr. (President)
Source Address:	2745 Northland Drive, Elkhart, Indiana, 46514
Mailing Address:	P.O. Box 1948, Elkhart, IN 46515-1948
General Source Phone Number:	574-262-3474 ex 231
SIC Code:	3716
County Location:	Elkhart
Source Location Status:	Non-attainment for VOC and NOx Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major Source, Section 112 of the Clean Air Act Minor Source, under PSD or Emission Offset Rules

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of general assembly operations and four (4) paint booths, identified as PB1, PB2, PB3, and PB4, using HVLP spray guns, using dry filters for overspray control, and exhausting to stacks S1,S2, S3, S4, S5, S6, and S7.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

Welding operation; one (1) steel MIG welding station, with a maximum wire consumption rate of 0.33 pounds of wire per hour (lb wire/hr), four (4) aluminum MIG welding stations, each with a maximum wire consumption rate of 0.50 lb wire/hr, two (2) oxyacetylene flame cutters, each with a maximum cutting rate of 28 inches per minute, and one (1) plasma cutter, with a maximum cutting rate of 155 inches per minute. [(326 IAC 6-3-2) covered under C.1]

(b) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

(c) Others activities not previously identified: [(326 IAC 6-3-2) covered under C.1]

(1) Woodworking operation with a maximum throughput of 1085 pounds of wood

per hour, which consists of various woodworking equipment; and

(2) Sanding operations.

(d) Two (2) MIG welding stations.

(e) one (1) 5.83 MMBtu/hr natural gas fired air make up unit, identified as MA3, servicing proposed surface coating booth PB3.

(f) one (1) 1.5 MMBtu/hr natural gas fired air make up unit, identified as MA4, servicing proposed surface coating booth PB4.

A.4 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) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1 FACILITY OPERATION CONDITIONS

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

This stationary source consists of general assembly operations and four (4) paint booths, identified as PB1, PB2, PB3, and PB4, using HVLP spray guns, using dry filters for overspray control, and exhausting to stacks S1,S2, S3, S4, S5, S6, and S7.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Hazardous Air Pollution (New Source Toxics Control) [326 IAC 2-4.1-1]

Pursuant to 326 IAC 2-4.1-1, any new process or production unit, which in and of itself emits or has the potential to emit (PTE) 10 tons per year of any HAP or 25 tons per year of any combination of HAPs, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT).

Pursuant to a Permit No. MSOP 039-12002-00536, issued on July 7, 2000, the Maximum Achievable Control Technology (MACT) for the two (2) paint booths (PB1 and PB2), has been determined. The permit also indicated that adherence with the MACT conditions will also satisfy BACT, so HAP/VOC were described in this section. However, New Source Toxics Control [326 IAC 2-4.1-1] governs only HAP emission, not VOC emission. Therefore, only HAP will be covered in this D.1.1 section and VOC governed by BACT will be covered in D1.3 section [Volatile Organic Compound (326 IAC 8-1-6)]

Pursuant to a Permit No. MSOP 039-12002-00536, issued on July 7, 2000, the Maximum Achievable Control Technology (MACT) for the two (2) paint booths (PB1 and PB2), has been determined as follows:

Cleaning and Prepping Motor Homes Exteriors Prior to Painting, Primer Applications, and Base Coat Applications:

Motor home and camper exteriors shall be hand-wiped with a cleaning solvent prior to the application of the first surface coating system. Cleaning solvents shall contain no more than 6.5 lbs of HAP per gallon lacquer thinners and prep cleaners.

Primer shall be applied using HVLP (high volume-low pressure) or equivalent spray equipment for better transfer efficiency.

Base Coat / Clear Coat Application:

Base coat and clear coats shall be applied using HVLP (high volume low pressure) or equivalent spray equipment. The base coat / clear coat system shall be used on motor homes and campers at this facility. Because mixing supplier coatings creates blistering, chipping, peeling and delamination problems the base coats applied shall have no more than HAP content of 6.2 lbs of HAP per gallon applied and the clear coats applied shall have no more than HAP content of 4.4 lbs of hap per gallon applied. Compliance demonstration shall be based on required parts in formula mixes.

Chassis Painting

Chassis paints shall utilize low HAP coatings and high transfer efficiency spray equipment. The equipment used shall be airless air-assisted or HVLP or equivalent.

Undercoating

Vehicles shall be undercoated with a low HAP undercoat or with a waterborne undercoat. Airless spray equipment or its equivalent shall be used for transfer efficiency.

Side Wall Lamination, Head Liners

Adhesives utilized in the side wall lamination and head liner area shall be applied with high volume low pressure (HVLP) spray systems or airless air-assisted systems. The use of hot melt adhesives systems shall be utilized in areas that do not need high force clamping or that are not contoured in such a way to prohibit proper adhesion.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2] [40 CFR Part 52, Subpart P]

(a) Pursuant to 326 IAC 6-3-2 (Process Operations), particulate matter (PM) from paint booths PB1, PB2, PB3, and PB4, shall be limited by the following:

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

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

Dry filters shall be in operation at all times the paint booths are in operation in order to comply with this limit.

(b) Pursuant to 326 IAC 6-3-2(d), the particulate matter (PM) overspray emissions from paint booths PB1, PB2, PB3, and PB4 shall be controlled by a dry particulate filter, waterwash, or an equivalent control device. Said control device shall be operated according to the manufacturer's specifications.

D.1.3 Emission Offset Minor Limit [326 IAC 2-3]

The source input VOC shall be limited to less than one hundred (100) tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit is required to limit the source potential to emit of VOC to less than the major source level of one hundred (100) tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-3 (Emission Offset) not applicable.

D.1.4 Volatile Organic Compound (VOC) [326 IAC 8-1-6]

(a) Pursuant to MSOP 039-12002-00536, dated July 7, 2000, the Best Available Control Technology (BACT) requirements for VOC for paint booths PB1 and PB2 are as follows:

(1) Use of no more than base coat colors 6.2 lb of VOC per gallon and clear coat systems 4.4 lbs of VOC per gallon
(2) Use of no more than 1.8 lbs of VOC per gallon to zero VOC undercoating systems

(3) Use of hot melt adhesives and aerosol adhesives where possible
(4) Use of HVLP or equivalent spray equipment in the painting operations
(5) Use of air-assisted airless or airless or equivalent spray equipment in adhesive applications
(6) Use of Good Housekeeping Practices:

(A) Sealed lids on containers not in use or in storage
(B) Gun and line purging into approved containers
(C) Organized spill response and cleanup
(D) Routine maintenance of spray equipment to prevent drips leaks, and spills.

(b) Pursuant to Significant Permit Modification 039-19898-00536, the Best Available Control Technology (BACT) requirements for VOC for paint booths PB3 and PB4, are as follows:

(1) Use of base coat colors with a VOC content of 6.2 pounds of VOC per gallon or less,
(2) Use of clear coats with a VOC content of 3.5 pounds of VOC per gallon or less,
(3) Use of undercoatings with a VOC content of 1.8 pounds of VOC per gallon or less,
(4) Use of primers with a VOC content of 3.5 pounds of VOC per gallon or less,
(5) Use of solvents with a VOC content of 6.5 pounds of VOC per gallon or less,
(6) Use of hot melt adhesives and aerosol adhesives where possible,
(7) Use of HVLP or equivalent spray equipment in the painting operations,
(8) Use of air-assisted airless or airless or equivalent spray equipment in adhesive applications, and
(9) Use of the following good housekeeping practices:

(A) Sealed lids on containers not in use or in storage,
(B) Gun and line purging into approved containers,
(C) Organized spill response and cleanup,
(D) Routine maintenance of spray equipment to prevent drips, leaks, and spills,
(E) Hand wipe application of solvent prior to painting, and
(F) Use of aqueous or citric cleaners where applicable.

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 the emissions units and their control devices.

Compliance Determination Requirements

D.1.6 General Provisions Relating to HAPs [326 IAC 20-1][40 CFR Part 63, Subpart A] [40 CFR Part 63, Subparts MMMM and PPPP] [40 CFR 63.3901 and 40 CFR 63.4501]

(a) The provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the affected source, except when otherwise specified by 40 CFR Part 63, Subparts MMMM and PPPP. The Permittee must comply with these requirements on and after January 2, 2004 for 40 CFR 63, Subpart MMMM and on and after April 19, 2004 for 40 CFR 63, Subpart PPPP.

(b) The permit shield applies to Condition D.1.14 and D.1.15 notification requirements.

D.1.7 National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous

Metal Parts and Products [40 CFR Part 63, Subpart MMMM] [40 CFR 63.3882] [40 CFR 63.3883] [40 CFR 63.3980] [326 IAC 20]

(a) The provisions of 40 CFR Part 63, Subpart MMMM (National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products) apply to the affected source. A copy of this rule is available on the US EPA Air Toxics Website at **http://www.epa.gov/ttn/atw/misc/miscpg.html**.

Pursuant to 40 CFR 63.3883(b), the Permittee must comply with these requirements on and after January 2, 2007.

(b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition.

(c) The affected source is the collection of all of the items listed in 40 CFR 63.3882, paragraphs (b)(1) through (4) that are used for surface coating of miscellaneous metal parts and products within each subcategory as defined in 40 CFR 63.3881(a), paragraphs (2) through (6).

(1) All coating operations as defined in 40 CFR 63.3981;
(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;
(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and
(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(d) Terminology used in this section are defined in the CAA, in 40 CFR Part 63, Section 63.2, and in 40 CFR 63.3981, and are applicable to the affected source.

D.1.8 National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Plastic Parts and Products [40 CFR Part 63, Subpart PPPP] [40 CFR 63.4482] [40 CFR 63.4483] [40 CFR 63.4580] [326 IAC 20]

(a) The provisions of 40 CFR Part 63, Subpart PPPP (National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Plastic Parts and Products) apply to the affected source. A copy of this rule is available on the US EPA Air Toxics Website at **http://www.epa.gov/ttn/atw/misc/miscpg.html**.

Pursuant to 40 CFR 63.4483(b), the Permittee must comply with these requirements on and after April 19, 2007.

(b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition.

(c) The affected source is the collection of all of the items listed in 40 CFR 63.4482, paragraphs (b)(1) through (4) that are used for surface coating of miscellaneous plastic parts and products within each subcategory as defined in 40 CFR 63.4481(a), paragraphs (2) through (5).

(1) All coating operations as defined in 40 CFR 63.4581;
(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;
(3) All manual and automated equipment and containers used for conveying coatings,

thinners and/or other additives, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(d) Terminology used in this section are defined in the CAA, in 40 CFR Part 63, Section 63.2, and in 40 CFR 63.4581, and are applicable to the affected source.

D.1.9 Volatile Organic Compounds (VOC) [326 IAC 8-1-4]

Compliance with the VOC content and usage limitations contained in Condition D.1.4. shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.10 Hazardous Air Pollutants (HAP)

Compliance with the HAP content and usage limitations contained in Conditions D.1.1. shall be determined by the manufacture's certified product data sheet or the manufacture's material safety data sheet.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.11 Particulate Matter (PM)

Pursuant to a Permit No. MSOP 039-12002-00536, issued on July 7, 2000, and Significant Permit Modification 039-19898, the dry filters for PM control shall be in operation at all times when the four (4) paint booths (PB1, PB2, PB3, and PB4) are in operation.

D.1.12 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 paint booths (PB1, PB2, PB3, and PB4) stacks (S1, S2, S3, S4, S5, S6, and S7) while 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, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(b) Monthly inspections shall be performed of the coating emissions from the stacks 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 Monitoring Plan - Failure to Take Response Steps, shall be considered a deviation from 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 2-7-5(3)] [326 IAC 2-7-19]

D.1.13 Record Keeping Requirements

(a) To document compliance with Conditions D.1.1 and D.1.4 the Permittee shall maintain records of the content of VOC and HAP of each coating material and solvent used. Records

shall include purchase orders, invoices, material safety data sheets (MSDS) and calculations necessary to verify the VOC and HAP content of each surface coating and solvent used. Records shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP material content limits established in Conditions D.1.1. and D.1.4.

(b) To document compliance with Condition D.1.3, 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 established in Condition D.1.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC content of each coating material, cleanup solvent, and dilution solvent used;
(2) The amount of coating material, cleanup solvent, and dilution solvent used on a monthly basis. Said records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used;
(3) The coating, cleanup solvent, and dilution solvent VOC usage for each month;
(4) The total VOC usage for each month; and
(5) The weight of VOCs emitted for each compliance period.

(c) To document compliance with Condition D.1.12, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

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

D.1.14 Notification Requirements [40 CFR 63.3910] [326 IAC 20]

(a) The Permittee must submit the applicable notifications in 40 CFR Part 63, Sections 63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) by the dates specified in those sections, except as provided in 40 CFR 63.3910, paragraphs (b) and (c).

(b) The Permittee must submit the initial notification no later than January 2, 2005. The initial notification was submitted on December 28, 2004.

(c) The Permittee must submit the notification of compliance status required by 40 CFR 63.9(h) no later than 30 calendar days following the end of the initial compliance period described in 40 CFR Part 63, Sections 63.3940, 63.3950, or 63.3960 that applies to the affected source. The notification of compliance status must contain the information specified in 40 CFR 63.3910(c), paragraphs (1) through (11) and any additional information specified in 40 CFR 63.9(h).

D.1.15 Notification Requirements [40 CFR 63.4510] [326 IAC 20]

(a) The Permittee must submit the applicable notifications in 40 CFR Part 63, Sections 63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) by the dates specified in those sections, except as provided in 40 CFR 63.4510, paragraphs (b) and (c).

(b) The Permittee must submit the initial notification no later than April 19, 2005. The initial notification was submitted on April 19, 2005.

(c) The Permittee must submit the notification of compliance status required by 40 CFR 63.9(h) no later than 30 calendar days following the end of the initial compliance period described in 40 CFR Part 63, Sections 63.4540, 63.4550, or 63.4560 that applies to the affected source. The notification of compliance status must contain the information specified in 40 CFR 63.4510(c), paragraphs (1) through (11) and any additional information specified in 40 CFR 63.9(h).

D.1.16 Requirement to Submit Significant Permit Modification Applications [326 IAC 2-7-12] [326 IAC 2-7-5]

The Permittee shall submit an application for a significant permit modification for 40 CFR 63, Subpart MMMM and 40 CFR 63, Subpart PPPP, to IDEM, OAQ to include information regarding which compliance option or options will be chosen in the Title V permit.

(a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Title V permit the applicable requirements of 40 CFR 63, Subparts MMMM and PPPP, a description of the affected source and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.

(b) The significant permit modification application shall be submitted as follows:

(1) no later than April 2, 2006 for 40 CFR 63, Subpart MMMM, and
(2) no later than July 19, 2006 for 40 CFR 63, Subpart PPPP.

(c) The significant permit modification application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

D.1.17 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.3 shall be submitted to the address(es) 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.

The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Dynamax Corporation
Source Address: 2745 Northland Drive, Elkhart, IN 46514
Mailing Address: P.O. Box 1948, Elkhart, IN 46515-1948
Part 70 Permit No.: T039-14698-00536
Facilities: Source VOC Emission Points
Parameter: surface coating, cleanup solvent, and dilution solvent VOC
Limit: source VOC <100 tons per consecutive twelve (12) month period

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by:
Title/Position:
Signature:
Date:
Phone:

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Source Modification and Significant Permit Modification to an Existing Part 70 Operating Permit

Source Background and Description:

Source Name:	Dynamax Corporation
Source Location:	2745 Northland Drive, Elkhart, IN 46514
County:	Elkhart
SIC Code:	3716
Operation Permit No.:	T039-14698-00536
Date Issued:	May 21, 2002
Significant Source Modification No.:	039-20623-00536
Significant Permit Modification No.:	039-19898-00536
Permit Reviewer:	SDF

The Office of Air Quality (OAQ) has reviewed an application from Dynamax Corporation requesting changes to their existing stationary recreational vehicle production operation.

Specifically, Dynamax has submitted a request to construct and operate two (2) new surface coating booths, identified as PB3 and PB4, using HVLP spray guns for application and dry filters for overspray control, with all emissions exhausting through stacks S5, S6, and S7.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
S5 and S6	Paint booth 3 w/ HVLPs	32	4	18,135, each	ambient
S7	Paint booth 4 w/HVLPs	26	2.08' X 2.08' sq	16,000	ambient

Insignificant Activities

The proposed changes also include the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) one (1) 5.83 MMBtu/hr natural gas fired air make up unit, identified as MA3, servicing proposed surface coating booth PB3; and

(b) one (1) 1.5 MMBtu/hr natural gas fired air make up unit, identified as MA4, servicing proposed surface coating booth PB4.

Existing Approvals

The source has been operating under Part 70 permit 039-14698-00536, issued on May 21, 2002, First Administrative Amendment 039-17182-00536, issued on April 6, 2004, and Second Administrative Amendment 039-19536-00536, issued on January 6, 2005.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and Significant Permit Modification 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.

Emission Calculations

The proposed booths will not affect production rates or emissions from any of the existing source emission units. Therefore, the emissions due to the proposed changes are the surface coating booth PM, PM10, VOC, and HAP emissions, and the natural gas combustion emissions from the air make up units.

The following calculations determine the unrestricted potential emissions due to the proposed changes and the estimated emissions after controls.

Unrestricted Potential Emissions:

(a) Surface Coating Booths:

The following calculations determine the unrestricted emissions from the surface coating booths based on the worst case coating combination, material properties obtained from the Material Safety Data Sheets (MSDS), a transfer efficiency of 85%, emissions before controls, and 8760 hours of operation.

Motor Home Paint Booth:

PM/PM10: lb/gal * gal/unit * unit/hr * (1 - wt frac. volatiles) * (1 - frac. transfer) * 8760 hr/yr * 1/2000 ton/lb = tons PM/yr

Coating	lb/gal	gal/unit	unit/hr	wt fraction volatiles	fraction transfer	tons PM/yr	tons PM10/yr*
Worst Case Sealer	11.28	2.00	0.04	0.42	0.85	0.34	0.34
Worst Case Paint	7.29	8.19	0.04	0.85	0.85	0.24	0.24
Chroma Clear	7.75	8.00	0.04	0.56	0.85	0.72	0.72
					Total	1.30	1.30

* PM10 is determined to be equal to PM

VOC: lb/gal * gal/unit * unit/hr * fraction VOC * 8760 hr/yr * 1/2000 ton/lb = tons VOC/yr

Coating	lb/gal	gal/unit	unit/hr	fraction VOC	tons VOC/yr
Worst Case Sealer	11.28	2.00	0.04	0.42	1.66
Worst Case Paint	7.29	8.19	0.04	0.81	8.47
Chroma Clear	7.75	8.00	0.04	0.56	6.08
				Total	16.21

HAP:

The HAPs associated with the paint booth have been combined with the other HAPs associated with the proposed changes. See Total HAPs Due to the Proposed Changes below.

Parts Paint Booth:

PM/PM10: lb/gal * gal/unit * unit/hr * (1 - wt frac. volatiles) * (1 - frac. transfer) * 8760 hr/yr * 1/2000 ton/lb = tons PM/yr

Coating	lb/gal	gal/unit	unit/hr	wt fraction volatiles	fraction transfer	tons PM/yr	tons PM10/yr*
Worst Case Sealer	11.28	0.25	2.00	0.42	0.85	2.15	2.15
Worst Case Paint	7.29	0.77	2.00	0.85	0.85	1.11	1.11
Chroma Clear	7.75	0.75	2.00	0.56	0.85	6.62	6.62
					Total	9.88	9.88

* PM10 is determined to be equal to PM

VOC: lb/gal * gal/unit * unit/hr * fraction VOC * 8760 hr/yr * 1/2000 ton/lb = tons VOC/yr

Coating	lb/gal	gal/unit	unit/hr	fraction VOC	tons VOC/yr
Worst Case Sealer	11.28	0.25	2.00	0.42	10.38
Worst Case Paint	7.29	0.77	2.00	0.81	39.83
Chroma Clear	7.75	0.75	2.00	0.56	28.51
				Total	78.72

HAP:

The HAPs associated with the paint booth have been combined with the other HAPs associated with the proposed changes. See Total HAPs Due to the Proposed Changes below.

(b) Air Make Up Units:

The following calculations determine the unrestricted combustion emissions from the air make up units based on natural gas combustion, a combined maximum capacity of 7.33 MMBtu/hr, AP-42 emission factors, emissions before controls, and 8760 hours of operation.

7.33 MMBtu/hr *1/1000 MCF/MMBtu * lb/MCF * 8760 hr/yr * 1/2000 ton/lb = tons/yr

Criteria Pollutants:

	PM 1.9 lb/mmcf	PM10 7.6 lb/mmcf	SO2 0.6 lb/mmcf	NOx 100 lb/mmcf	VOC 5.5 lb/mmcf	CO 84 lb/mmcf
tons/yr	0.10	0.20	neg.	3.20	0.20	2.70

HAP:

The HAPs associated with the paint booth have been combined with the other HAPs associated with the proposed changes. See Total HAPs Due to the Proposed Changes below.

(c) Total Unrestricted Potential Criteria Pollutant Emissions Due to the Proposed Changes:

The total unrestricted potential emissions due to the proposed changes are listed in the table below.

	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)
Motor Home Paint Booth	1.30	1.30	-	-	16.21	-
Parts Booth	9.88	9.88	-	-	78.72	-
Air Make Up Units	0.10	0.20	neg.	3.20	0.20	2.70
Total	11.28	11.38	neg.	3.20	95.13	2.70

(d) Total HAPs Due to the Proposed Changes:

The following calculations determine the individual and combined HAP emissions from all of the units associated with the proposed changes based on the estimated maximum hourly rate in pounds per hour, emissions before controls, and 8760 hours of operation.

lb/hr * 8760 hr/yr * 1/2000 ton/lb = Individual HAP (tons/yr)
Sum [individual HAP (tons/yr)] = Combined HAP (tons/yr)

HAP	lb/hr	tons/yr
Benzene	neg.	neg.
Cadmium	neg.	neg.
Chromium	neg.	neg.
Dichlorobenzene	neg.	neg.
Ethylbenzene	2.00	8.76
Ethylene Glycol	1.14	4.99
Formaldehyde	neg.	neg.
Hexane	0.0136	0.06
Lead	neg.	neg.
Manganese	neg.	neg.
MEK	0.57	2.50
Nickel	neg.	neg.
Toluene	0.28	1.23
Xylene	7.14	**31.27**

Total	**48.81**

Emissions After Controls:

The PM and PM10 emissions from the surface coating booths are controlled. The following calculations determine the after controls PM and PM10 emissions from the booths based on the estimated emissions before controls and an overall control efficiency of 95%.

PM: 11.28 tons PM/yr * (1 - 0.95) = 0.56 tons PM/yr
PM10: 11.38 tons PM10/yr * (1 - 0.95) = 0.56 tons PM10/yr

All other source emissions are uncontrolled. Therefore, the emissions after controls equal the estimated emissions before controls.

The following table lists the estimated source emissions after controls.

	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)
Motor Home Paint Booth	0.07	0.07	-	-	16.21	-
Parts Booth	0.49	0.49	-	-	78.72	-
Air Make Up Units	0.10	0.20	neg.	3.20	0.20	2.70
Total	0.66	0.76	neg.	3.20	95.13	2.70

Worst Case Single HAP (tons/yr)	Combined HAPs (tons/yr)
31.27	48.81

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source 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.”

This table reflects the PTE before controls due to the proposed changes. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	11.28
PM-10	11.38
SO_2	neg.
VOC	95.13
CO	2.70
NO_x	3.20

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Worst case Single HAP	31.27
TOTAL	48.81

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of VOC is greater than 25 tons per year, and the single and combined HAP emissions are greater than 10 and 25 tons per year, respectively.

Therefore, the proposed changes shall be approved via a Significant Source Modification pursuant to 326 IAC 2-7-10.5(f)(2), (4), and (6).

(b) The proposed changes shall be incorporated into the existing source Part 70 permit via a Significant Permit Modification pursuant to 326 IAC 2-7-12(d) because the proposed changes do not qualify for a Minor Permit Modification pursuant to 326 IAC 2-7-12(b) or an Administrative Amendment pursuant to 326 IAC 2-7-11.

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

County Attainment Status

The source is located in Elkhart County.

Pollutant	**Status**
PM_{10}	attainment
SO_2	attainment
NO_2	attainment
1-hour Ozone	attainment
8-hour Ozone	nonattainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Elkhart County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Existing Source Emissions

Existing source federal major source definition (emissions after controls, based upon 8760 hours of

operation per year at rated capacity and/or as otherwise limited, as obtained from the Technical Support Document (TSD) of Part 70 permit 039-14698-00536, issued on May 21, 2002):

Unit	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Single HAP (tons/yr)	Comb. HAPs (tons/yr)
Existing Source	2.5	2.51	neg.	neg.	233.05	neg.	43.43	143.96
Major Source Levels	250	250	250	100	100	250	-	-
Part 70 Major Levels		100	100	100	100	100	10	25

(a) Elkhart County has been redesignated as nonattainment for VOC and NOx. Therefore, the major source level for these pollutants has been changed from 250 tons per year to 100 tons per year.

(b) This existing source is now determined to be an existing PSD major source for VOC because the source allowable VOC emissions exceed the newly established major source level of 100 tons per year.

(c) This existing source is determined to be a Title V major stationary source because the allowable VOC emissions exceed the applicable major source level of 100 tons per year and the single and combined HAP emissions exceed their respective applicable levels of 10 and 25 tons per year.

Potential to Emit After Issuance
The table below summarizes the source potential to emit after the proposed changes, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 operating permit.

Unit	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Single HAP (tons/yr)	Comb. HAPs (tons/yr)
Source	2.5	2.51	neg.	neg.	<100[(a)]	neg.	**43.43**	>25, <100
Proposed Changes	0.6	0.76	neg.	3.2	-[(a)]	2.1	31.27	>25, <100
Total	**3.1**	**3.27**	**neg.**	**3.2**	**<100**	**2.1**	**-**	**>25, <100**
Fed. Major Source Levels	250	250	250	100	100	250	-	-
Part 70 Major Levels		100	100	100	100	100	10	25

(a) Dynamax Corporation has requested that the source VOC emissions be limited to less than 100 tons per year including this modification. Therefore, the source after the modification is now determined to be an existing minor source for VOC for the purposes of 326 IAC 2-3.

(b) The source after the proposed modification is not a 326 IAC 2-2 major PSD stationary source for any of the other criteria pollutants because none of the remaining pollutant emissions exceed their respective applicable major source levels and the source is not one of the 28 listed source categories.

(c) Limiting the source VOC emissions to less than 100 tons per year will result in combined source HAP

emissions that are greater than 25 tons per year, but less than 100 tons per year.

(d) The source after the proposed modification is still determined to be a Title V major stationary source because the single and combined HAP emissions exceed their respective applicable levels of 10 and 25 tons per year.

Federal Rule Applicability

(a) 40 CFR 60, New Source Performance Standards (NSPS):

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

(b) 40 CFR 63, Subpart MMMM:

The proposed surface coating booths are subject to 40 CFR 63, Subpart MMMM because the metal parts coated are of the kind listed in 63.3881 and the source is a major source of HAPs.

Pursuant to 63.3882, Subpart MMMM applies to each new, reconstructed, and existing affected source.

Pursuant to 63.3882(c), an affected source is considered a new source if construction of the source commenced after August 13, 2002 and the new coating equipment is used to coat metal parts and products at a source where no metal parts and products surface coating was previously performed.

The proposed surface coating booths will be constructed after the applicable date of August 13, 2002. However, the source does have existing metal parts surface coating equipment in operation. Thus, the proposed booths are not considered a new source for the purpose of this subpart. The proposed booths are also not reconstructed because the proposed units are “new”.

Pursuant to 63.3882(e), an affected source is existing if it is not new or reconstructed. Therefore, since the proposed booths are neither a new or reconstructed source, the proposed booths shall be considered an existing source for the purposes of this Subpart.

Pursuant to 63.3883(b), for an affected source, the compliance date is the date three (3) years after January 2, 2004, or January 2, 2007. In order to establish the applicability of the requirements of Subpart MMMM, conditions stating what the owner or operator must do to comply with the applicable requirements, shall be added to the permit. These conditions will apply to both the existing and proposed booths because all of the booths are determined to be subject to the requirements of 40 CFR 63, Subpart MMMM (see the “Changes” section of this Technical Support Document for the revised language).

(c) 40 CFR 63, Subpart PPPP:

The proposed surface coating booths are subject to 40 CFR 63, Subpart PPPP because the plastic parts are of the kind listed in 63.4481 and the source is a major source of HAPs.

Pursuant to 63.4482, Subpart PPPP applies to each new, reconstructed, and existing affected source.

Pursuant to 63.4482(c), an affected source is considered a new source if construction of the source commenced after December 4, 2002 and either the new coating equipment is used to coat plastic

parts and products at a source where no plastic parts surface coating was previously performed or the new coating equipment is used to perform plastic parts and products coating in a subcategory that was not previously performed.

The proposed surface coating booths will be constructed after the applicable date of December 4, 2002. However, the source does have existing plastic parts surface coating equipment in operation and the proposed booths will be coating plastic parts and products in a subcategory that is already performed at the existing source.

Thus, the proposed booths are not considered a new source for the purposes of this subpart. The proposed booths are also not reconstructed because the proposed units are “new”.

Pursuant to 63.4482(e), an affected source is existing if it is not new or reconstructed. Therefore, since the proposed booths are neither a new or reconstructed source, the proposed booths shall be considered an existing source for the purposes of this Subpart.

Pursuant to 63.4483(b), for an affected source, the compliance date is the date three (3) years after April 19, 2004, or April 19, 2007. In order to establish the applicability of the requirements of Subpart PPPP, conditions stating what the owner or operator must do to comply with the applicable requirements, shall be added to the permit. These conditions will apply to both the existing and proposed booths because all of the booths are determined to be subject to the requirements of 40 CFR 63, Subpart PPPP (see the “Changes” section of this Technical Support Document for the revised language).

State Rule Applicability - Entire Source

(a) 326 IAC 2-3:

The major source requirements of 326 IAC 2-3 do not apply to the proposed surface coating booths because the source has proposed limiting the source VOC usage to less than the applicable level of 100 tons per year.

(b) 326 IAC 2-6 (Emission Reporting):

This source is still subject to the requirements of 326 IAC 2-6 because it is a Title V source.

(c) 326 IAC 4:

The proposed modification will not affect the applicability or result in any changes to the requirements of 326 IAC 4.

(d) 326 IAC 5:

The proposed modification will not affect the applicability or result in any changes to the requirements of 326 IAC 5.

(e) 326 IAC 6-4:

The proposed modification will not affect the applicability or result in any changes to the requirements of 326 IAC 6-4.

State Rule Applicability - Individual Facilities

(a) 326 IAC 2-4.1:

The proposed modification is not subject to the MACT requirements of 326 IAC 2-4.1 because pursuant to 326 IAC 2-4.1-1(b)(2), the requirements of 326 IAC 2-4.1 do not apply to a major source of HAPs specifically regulated, or exempted from regulation, by a standard (NESHAP) issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act. The equipment of the proposed modification are subject to NESHAPs 40 CFR 63, Subpart MMMM and 40 CFR 63, Subpart PPPP.

(b) 326 IAC 6-3-2:

The proposed surface coating booths are subject to the requirements of 326 IAC 6-3-2 because the surface coating booths generate particulate matter emissions, the booths are not subject to any of the exemptions listed in 326 IAC 6-3-1(b), and no limitations are established in any of the determinations listed in 326 IAC 6-3-1(c).

Pursuant to 326 IAC 6-3-2(d), surface coating, reinforced plastics composites manufacturing processes, and graphic arts manufacturing processes, shall be controlled by a dry particulate filter, waterwash, or an equivalent control device. The source shall operate the control device in accordance with the manufacturer's specifications.

The requirements of 326 IAC 6-3-2(d)(2) do not apply to the existing and proposed booths because pursuant to 326 IAC 6-3-2(d)(3)(A), sources that operate according to a valid permit pursuant to 326 IAC 2-7 are not subject to the requirements of 326 IAC 6-3-2(d)(2).

The existing 326 IAC 6-3 requirements reflect the old version of the rule. The new 326 IAC 6-3 requirements have not been included in the state implementation plan (SIP) and must be referenced using 40 CFR 52, Subpart P. Therefore, the existing requirements shall remain the same and the new current language added (see the "Changes" section of this Technical Support Document for the revised language).

The requirements will apply to both the existing and proposed affected units.

(c) 326 IAC 8-2-9 (Miscellaneous Metal Parts Coating Requirements):

Although coatings are applied to metal parts, the requirements of 326 IAC 8-2-9 do not apply to the proposed surface coating booths because the coating conducted is determined to be customized top coating of automobiles and trucks with a production rate less than thirty-five (35) vehicles per day, one of the exemptions listed in 326 IAC 8-2-9(b).

(d) 326 IAC 8-1-6 (New Facilities, General Reduction Requirements):

Surface coating booths (PB3 and PB4) are subject to the requirements of 326 IAC 8-1-6 because the VOC potential to emit from the booths (95.13 tons per year) is greater than the applicable level of 25 tons per year.

To satisfy the requirements of 326 IAC 8-1-6, a VOC BACT analysis was conducted to establish the limits and standards that achieve the maximum degree of reduction of VOC from the surface coating booths (See the attached BACT analysis for a detailed report on the analysis performed).

Based on this analysis, BACT is determined to be the following:

(1) Use of base coat colors with a VOC content of 6.2 pounds of VOC per gallon or less,
(2) Use of clear coats with a VOC content of 3.5 pounds of VOC per gallon or less,
(3) Use of undercoatings with a VOC content of 1.8 pounds of VOC per gallon or less,
(4) Use of primers with a VOC content of 3.5 pounds of VOC per gallon or less,
(5) Use of solvents with a VOC content of 6.5 pounds of VOC per gallon or less,
(6) Use of hot melt adhesives and aerosol adhesives where possible,
(7) Use of HVLP or equivalent spray equipment in the painting operations,
(8) Use of air-assisted airless or airless or equivalent spray equipment in adhesive applications, and
(9) Use of the following good housekeeping practices:

(A) Sealed lids on containers not in use or in storage,
(B) Gun and line purging into approved containers,
(C) Organized spill response and cleanup,
(D) Routine maintenance of spray equipment to prevent drips, leaks, and spills,
(E) Hand wipe application of solvent prior to painting, and
(F) Use of aqueous or citric cleaners where applicable.

The revised language can be found in the “changes” section of this Technical Support Document.

Changes

In order to incorporate the proposed changes into the existing source permit, the following changes shall be made. All added language is indicated in bold type. All deleted language is struck-out.

(a) Condition A.1:

Condition A.1 shall be changed as follows to change the attainment status for VOC and NOx from attainment or unclassifiable to non-attainment.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]
The Permittee owns and operates a stationary recreational vehicle production plant which includes motor homes, campers, vans etc.

Responsible Official:	DeWayne Creighton Jr. (President)
Source Address:	2745 Northland Drive, Elkhart, Indiana, 46514
Mailing Address:	P.O. Box 1948, Elkhart, IN 46515-1948
General Source Phone Number:	574-262-3474 ex 231
SIC Code:	3716
County Location:	Elkhart
Source Location Status:	**Non-attainment for VOC and NOx**
	Attainment for all **other** criteria pollutants

.....

(b) Condition A.2:

Condition A.2 shall be changed as follows to include the descriptions associated with the proposed surface coating booths.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]
This stationary source consists of general assembly operations and ~~two~~ **four** (~~2~~**4**) paint booths, identified as PB1**,** ~~and~~ PB2, **PB3, and PB4,** using HVLP spray guns, using dry filters for overspray control, and exhausting to stacks S1,S2, S3**,** ~~and~~ S4**, S5, S6, and S7**.

(c) Condition A.3:

Condition A.3 shall be changed as follows to include the descriptions of the proposed air make-up units.

A.3 ~~Specifically Regulated~~ Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]
This stationary source also includes the following insignificant activities ~~which are specifically regulated,~~ as defined in 326 IAC 2-7-1(21):

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
.....

(e) one (1) 5.83 MMBtu/hr natural gas fired air make up unit, identified as MA3, servicing proposed surface coating booth PB3.

(f) one (1) 1.5 MMBtu/hr natural gas fired air make up unit, identified as MA4, servicing proposed surface coating booth PB4.

(d) Unit Description of Section D.1:

The unit description of Section D.1 shall be changed as follows to include the descriptions associated with the proposed surface coating booths.

SECTION D.1 FACILITY OPERATION CONDITIONS

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

This stationary source consists of general assembly operations and ~~two~~ **four** (~~2~~**4**) paint booths, identified as PB1**,** ~~and~~ PB2, **PB3, and PB4,** using HVLP spray guns, using dry filters for overspray control, and exhausting to stacks S1,S2, S3**,** ~~and~~ S4**, S5, S6, and S7**.

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

(e) Existing Condition D.1.2:

Condition D.1.2 shall be updated to include the proposed surface coating booths and update the requirements to reflect the most recent version of 326 IAC 6-3-2.

D.1.2 Particulate Matter (PM) **[326 IAC 6-3-2] [40 CFR Part 52, Subpart P]**
(a) Pursuant to 326 IAC 6-3-2 (Process Operations), particulate matter (PM) from ~~the two (2)~~ paint booths~~, identified as~~ PB1**,** ~~and~~ PB2, **PB3, and PB4,** 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

Dry filters shall be in operation at all times the paint booths ~~(PB1 and PB2)~~ are in operation in order to comply with this limit.

(b) Pursuant to 326 IAC 6-3-2(d), the particulate matter (PM) overspray emissions from paint booths PB1, PB2, PB3, and PB4 shall be controlled by a dry particulate filter, waterwash, or an equivalent control device. Said control device shall be operated according to the manufacturer's specifications.

(f) New Condition D.1.3:

New Condition D.1.3 shall be added as follows to include the 100 tons per year VOC limit added to establish the source as an existing minor source for the purposes of 326 IAC 2-3.

D.1.3 Emission Offset Minor Limit [326 IAC 2-3]
The source input VOC shall be limited to less than one hundred (100) tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit is required to limit the source potential to emit of VOC to less than the major source level of one hundred (100) tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-3 (Emission Offset) not applicable.

(g) Existing Condition D.1.3:

Existing Condition D.1.3 (now Condition D.1.4) shall be changed as follows to include the BACT requirements associated with proposed paint booths PB3 and PB4.

D.1.~~3~~**4** Volatile Organic Compound (VOC) [326 IAC 8-1-6]

(a) Pursuant to ~~a Permit No.~~ MSOP 039-12002-00536, dated July 7, 2000, the Best ~~Achievable~~ **Available** Control Technology (BACT) requirement**s** for VOC for ~~the two~~ paint booths~~;~~ PB1 and PB2, are as follows:

(~~a~~**1**) Use of no more than base coat colors 6.2 lb of VOC per gallon and clear coat systems 4.4 lbs of VOC per gallon
(~~b~~**2**) Use of no more than 1.8 lbs of VOC per gallon to zero VOC undercoating systems
(~~c~~**3**) Use of hot melt adhesives and aerosol adhesives where possible
(~~d~~**4**) Use of HVLP or equivalent spray equipment in the painting operations
(~~e~~**5**) Use of air-assisted airless or airless or equivalent spray equipment in adhesive applications
(~~f~~**6**) Use of Good Housekeeping Practices:

(~~1~~**A**) Sealed lids on containers not in use or in storage
(~~2~~**B**) Gun and line purging into approved containers
(~~3~~**C**) Organized spill response and cleanup
(~~4~~**D**) Routine maintenance of spray equipment to prevent drips leaks, and spills.

(b) Pursuant to Significant Permit Modification 039-19898-00536, the Best Available Control Technology (BACT) requirements for VOC for paint booths PB3 and PB4, are as follows:

(1) Use of base coat colors with a VOC content of 6.2 pounds of VOC per gallon or less,
(2) Use of clear coats with a VOC content of 3.5 pounds of VOC per gallon or less,
(3) Use of undercoatings with a VOC content of 1.8 pounds of VOC per gallon or less,
(4) Use of primers with a VOC content of 3.5 pounds of VOC per gallon or less,
(5) Use of solvents with a VOC content of 6.5 pounds of VOC per gallon or less,
(6) Use of hot melt adhesives and aerosol adhesives where possible,
(7) Use of HVLP or equivalent spray equipment in the painting operations,
(8) Use of air-assisted airless or airless or equivalent spray equipment in adhesive applications, and
(9) Use of the following good housekeeping practices:

(A) Sealed lids on containers not in use or in storage,
(B) Gun and line purging into approved containers,
(C) Organized spill response and cleanup,
(D) Routine maintenance of spray equipment to prevent drips, leaks, and spills,
(E) Hand wipe application of solvent prior to painting, and
(F) Use of aqueous or citric cleaners where applicable.

(h) Existing Condition D.1.4:

Existing Condition D.1.4 shall be changed to Condition D.1.5.

(i) New Condition D.1.6:

New Condition D.1.6 shall be added to apply the new 40 CFR 63, Subpart MMMM and PPPP general provisions to paint booths PB1, PB2, PB3, and PB4.

D.1.6 General Provisions Relating to HAPs [326 IAC 20-1][40 CFR Part 63, Subpart A] [40 CFR Part 63, Subparts MMMM and PPPP] [40 CFR 63.3901 and 40 CFR 63.4501]

(a) The provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the affected source, except when otherwise specified by 40 CFR Part 63, Subparts MMMM and PPPP. The Permittee must comply with these requirements on and after January 2, 2004 for 40 CFR 63, Subpart MMMM and on and after April 19, 2004 for 40 CFR 63, Subpart PPPP.
(b) The permit shield applies to Condition D.1.14 and D.1.15 notification requirements.

(j) New Condition D.1.7:

New Condition D.1.7 shall be added to apply the new 40 CFR 63, Subpart MMMM model requirements to paint booths PB1, PB2, PB3, and PB4.

D.1.7 National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products [40 CFR Part 63, Subpart MMMM] [40 CFR 63.3882] [40 CFR 63.3883] [40 CFR 63.3980] [326 IAC 20]

(a) The provisions of 40 CFR Part 63, Subpart MMMM (National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products) apply to the affected source. A copy of this rule is available on the US EPA Air Toxics Website at http://www.epa.gov/ttn/atw/misc/miscpg.html.
Pursuant to 40 CFR 63.3883(b), the Permittee must comply with these requirements on and after January 2, 2007.

(b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition.

(c) The affected source is the collection of all of the items listed in 40 CFR 63.3882, paragraphs (b)(1) through (4) that are used for surface coating of miscellaneous metal parts and products within each subcategory as defined in 40 CFR 63.3881(a), paragraphs (2) through (6).

(1) All coating operations as defined in 40 CFR 63.3981;
(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;
(3) All manual and automated equipment and containers used for conveying coatings, thinners and/or other additives, and cleaning materials; and
(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(d) Terminology used in this section are defined in the CAA, in 40 CFR Part 63, Section 63.2, and in 40 CFR 63.3981, and are applicable to the affected source.

(k) New Condition D.1.8:

New Condition D.1.8 shall be added to apply the new 40 CFR 63, Subpart PPPP model requirements to paint booths PB1, PB2, PB3, and PB4.

D.1.8 National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Plastic Parts and Products [40 CFR Part 63, Subpart PPPP] [40 CFR 63.4482] [40 CFR 63.4483] [40 CFR 63.4580] [326 IAC 20]

(a) The provisions of 40 CFR Part 63, Subpart PPPP (National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Plastic Parts and Products) apply to the affected source. A copy of this rule is available on the US EPA Air Toxics Website at http://www.epa.gov/ttn/atw/misc/miscpg.html.

Pursuant to 40 CFR 63.4483(b), the Permittee must comply with these requirements on and after April 19, 2007.

(b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by the B section of this permit in the condition titled Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition.

(c) The affected source is the collection of all of the items listed in 40 CFR 63.4482, paragraphs (b)(1) through (4) that are used for surface coating of miscellaneous plastic parts and products within each subcategory as defined in 40 CFR 63.4481(a), paragraphs (2) through (5).

(1) All coating operations as defined in 40 CFR 63.4581;
(2) All storage containers and mixing vessels in which coatings, thinners and/or other additives, and cleaning materials are stored or mixed;
(3) All manual and automated equipment and containers used for conveying coatings,

thinners and/or other additives, and cleaning materials; and

(4) All storage containers and all manual and automated equipment and containers used for conveying waste materials generated by a coating operation.

(d) Terminology used in this section are defined in the CAA, in 40 CFR Part 63, Section 63.2, and in 40 CFR 63.4581, and are applicable to the affected source.

(l) Existing Condition D.1.5:

Existing Condition D.1.5 (now Condition D.1.9) shall be changed as follows to reflect the condition numbering changes and update the requirements.

D.1.~~5~~**9** Volatile Organic Compounds (VOC) [326 IAC 8-1-4]
Compliance with the VOC content and usage limitations contained in Condition D.1.~~3~~**4**. shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) ~~using formulation data supplied by the coating manufacturer. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.~~ **by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.**

(m) Existing Condition D.1.6:

Existing Condition D.1.6 shall be changed to Condition D.1.10.

(n) Existing Condition D.1.7:

Existing Condition D.1.7 (now Condition D.1.11) shall be changed as follows to include proposed paint booths PB3 and PB4.

D.1.~~7~~**11** Particulate Matter (PM)
Pursuant to a Permit No. MSOP 039-12002-00536, issued on July 7, 2000, **and Significant Permit Modification 039-19898,** the dry filters for PM control shall be in operation at all times when the **four** ~~two~~ (~~2~~**4**) paint booths (PB1**,** ~~and~~ PB2**, PB3, and PB4**) are in operation.

(o) Existing Condition D.1.8:

Existing Condition D.1.8 (now Condition D.1.12) shall be changed as follows to include proposed paint booths PB3 and PB4 and to update the requirements.

D.1.~~8~~**12** 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 paint booths (PB1**,** ~~and~~ PB2**, PB3, and PB4**) stacks (S1, S2, S3**,** ~~and~~ S4**, S5, S6, and S7**) while 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 ~~Monitoring~~ **Response** Plan - ~~Failure to Take Response Steps~~ **Preparation, Implementation, Records, and Reports**, shall be considered a ~~violation~~ **deviation from** ~~of~~ this permit.

(b) Monthly inspections shall be performed of the coating emissions from the stacks 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 Monitoring Plan - Failure to Take Response Steps, shall be considered a ~~violation~~ **deviation from** ~~of~~ this permit.

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

(p) Existing Condition D.1.9:

The record keeping requirements of existing Condition D.1.9 (now Condition D.1.13) shall be changed as follows to include the new record keeping requirements associated with the 100 tons per year VOC limit of new Condition D.1.3.

D.1.~~9~~**13** Record Keeping Requirements

(a) To document compliance with Conditions D.1.1 and D.1.~~3~~**4** the Permittee shall maintain records of the content of VOC and HAP of each coating material and solvent used. Records shall include purchase orders, invoices, material safety data sheets (MSDS) and calculations necessary to verify the VOC and HAP content of each resin or gel coat and cleaning solutions used. Records shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP material content established in Condition**s** D.1.1. and D1.~~3~~**4**.

(b) To document compliance with Condition D.1.3, 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 established in Condition D.1.3. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC content of each coating material, cleanup solvent, and dilution solvent used;
(2) The amount of coating material, cleanup solvent, and dilution solvent used on a monthly basis. Said records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used;
(3) The coating, cleanup solvent, and dilution solvent VOC usage for each month;
(4) The total VOC usage for each month; and
(5) The weight of VOCs emitted for each compliance period.

(~~b~~**c**) To document compliance with Condition D.1.~~8~~**12**, 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~~**d**) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

(q) New Condition D.1.14:

New Condition D.1.14 shall be added as follows to include the notification requirements associated with 40 CFR 63, Subpart MMMM.

D.1.14 Notification Requirements [40 CFR 63.3910] [326 IAC 20]

(a) The Permittee must submit the applicable notifications in 40 CFR Part 63, Sections 63.7(b)

and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) by the dates specified in those sections, except as provided in 40 CFR 63.3910, paragraphs (b) and (c).

(b) The Permittee must submit the initial notification no later than January 2, 2005.

(c) The Permittee must submit the notification of compliance status required by 40 CFR 63.9(h) no later than 30 calendar days following the end of the initial compliance period described in 40 CFR Part 63, Sections 63.3940, 63.3950, or 63.3960 that applies to the affected source. The notification of compliance status must contain the information specified in 40 CFR 63.3910(c), paragraphs (1) through (11) and any additional information specified in 40 CFR 63.9(h).

(r) New Condition D.1.15:

New Condition D.1.15 shall be added as follows to include the notification requirements associated with 40 CFR 63, Subpart PPPP.

D.1.15 Notification Requirements [40 CFR 63.4510] [326 IAC 20]

(a) The Permittee must submit the applicable notifications in 40 CFR Part 63, Sections 63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (e) and (h) by the dates specified in those sections, except as provided in 40 CFR 63.4510, paragraphs (b) and (c).

(b) The Permittee must submit the initial notification no later than April 19, 2005.

(c) The Permittee must submit the notification of compliance status required by 40 CFR 63.9(h) no later than 30 calendar days following the end of the initial compliance period described in 40 CFR Part 63, Sections 63.4540, 63.4550, or 63.4560 that applies to the affected source. The notification of compliance status must contain the information specified in 40 CFR 63.4510(c), paragraphs (1) through (11) and any additional information specified in 40 CFR 63.9(h).

(s) New Condition D.1.16:

New Condition D.1.16 shall be added as follows to include the requirement to submit requests for significant permit modifications to incorporate the requirements of 40 CFR 63, Subparts MMMM and PPPP.

D.1.16 Requirement to Submit Significant Permit Modification Applications [326 IAC 2-7-12][326 IAC 2-7-5]

The Permittee shall submit an application for a significant permit modification for 40 CFR 63, Subpart MMMM and 40 CFR 63, Subpart PPPP, to IDEM, OAQ to include information regarding which compliance option or options will be chosen in the Title V permit.

(a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Title V permit the applicable requirements of 40 CFR 63, Subparts MMMM and PPPP, a description of the affected source and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.

(b) The significant permit modification application shall be submitted as follows:

(1) no later than April 2, 2006 for 40 CFR 63, Subpart MMMM, and

(2) no later than July 19, 2006 for 40 CFR 63, Subpart PPPP.

(c) The significant permit modification application shall be submitted to:

Indiana Department of Environmental Management

Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

(t) New Condition D.1.17:

New Condition D.1.17 shall be added to include the reporting requirements associated with the new source wide limit.

D.1.17 Reporting Requirements
A quarterly summary of the information to document compliance with Condition D.1.3 shall be submitted to the address(es) 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.

The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(u) Reporting Form:

A new reporting form shall be added to provide the form required in new Condition D.1.17.

(v) Table of Contents:

The Table of Contents shall be changed to reflect the changes that have been made under this modification.

Conclusion

The motor home production plant shall be operated according to requirements of Operating Permit T039-14698-00536, issued on May 21, 2002, First Administrative Amendment 039-17182-00536, issued on April 6, 2004, Second Administrative Amendment 039-19536-00536, issued on January 6, 2005, and the requirements specified in Significant Permit Modification 039-19898-00536.

BACT ANALYSIS REPORT

Source Background and Description

Source Name:	Dynamax Corporation
Source Location:	2745 Northland Drive, Elkhart, IN 46514
County:	Elkhart
SIC Code:	3716
Operation Permit No.:	T039-14698-00536
Date Issued:	May 21, 2002
Significant Source Modification No.:	039-20623-00536
Significant Permit Modification No.:	039-19898-00536
Permit Reviewer:	SDF

Detailed Project Description

The Office of Air Quality (OAQ) has reviewed an application from Dynamax Corporation requesting changes to their existing motor home production operation.

Specifically, Dynamax Corporation has submitted a request to construct and operate two (2) surface coating booths, identified as PB3 and PB4, and two natural gas fired air make up units, identified as MA3 and MA4. The air make up units will be used to service the proposed surface coating booths. Each surface coating booth will be equipped with high volume low pressure (HVLP) spray guns, dry filters will be used to control the particulate matter overspray, and all emissions will be exhausted through stacks S5, S6, and S7. The OAQ has determined that the installation of these emission units should be considered a single modification for the purposes of determining PSD applicability.

The proposed booths will be used for applying under, primer, base, top, and clear coatings, and adhesives to both metal and plastic RV parts.

The proposed equipment will not affect the production rates or emissions from any of the existing source emission units. Therefore, the emissions associated with the proposed modification are the emissions generated by the proposed surface coating booths and air make up units. The emissions from the proposed equipment will be the surface coating booth PM and PM10 overspray, VOC, and HAP emissions generated by applying the surface coatings, and natural gas combustion emissions from the air make up units.

The IDEM has used manufacturer information and the estimated maximum usage and production rates to estimate the coating emissions from the proposed booths. The IDEM has determined the air make up unit combustion emissions using the maximum capacity, manufacturer's information, and AP-42 emission factors. The PM, PM10, SO2, NOx, VOC, CO, single HAP, and combined HAP unrestricted emissions due to the proposed modification are estimated to be 11.28, 11.38, less than 0.01 (negligible), 3.20, 95.13, 2.70, 31.27, and 48.81 tons per year, respectively.

Dynamax Corporation has proposed limiting the source VOC usage to less than the 326 IAC 2-3 major source level of 100 tons per year. Therefore, the source is determined to be a minor source for the purposes of 326 IAC 2-3.

The proposed modification is not subject to the MACT requirements of 326 IAC 2-4.1 because pursuant to 326 IAC 2-4.1-1(b)(2), the requirements of 326 IAC 2-4.1 do not apply to a major source of HAPs specifically regulated, or exempted from regulation, by a standard (NESHAP) issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act. The equipment of the proposed modification are subject to NESHAPs 40 CFR 63, Subpart MMMM and 40 CFR 63, Subpart PPPP.

The proposed surface coating booths are subject to the 326 IAC 8-1-6 BACT requirements because the combined VOC PTE from these units exceed the 326 IAC 8-1-6 applicable level of 25 tons per year.

BACT Requirements for this Project

Since the proposed surface coating booths are subject to the requirements of 326 IAC 8-1-6, the following BACT review was conducted. 326 IAC 8-1-6 BACT is an emission limitation based on the maximum degree of reduction of VOC. IDEM conducts BACT analyses under 326 IAC 8-1-6 in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft USEPA *New Source Review Workshop Manual*, (NSR Manual) which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below.

(1) Identify all potentially available control options;
(2) Eliminate technically infeasible control options;
(3) Rank remaining control technologies by control effectiveness;
(4) Evaluate the most effective controls and document the results; and
(5) Select BACT.

Also, in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft USEPA *New Source Review Workshop Manual*, BACT analyses take into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to air pollution thereby protecting public health and the environment.

The following BACT determination is based on the following information:

(1) The permit application submitted by Dynamax Corporation on August 23, 2004;
(2) Additional documentation provided by Dynamax Corporation subsequent to the submittal of the application;
(3) Information from other vendors/suppliers;
(4) Information IDEM gained from other regulatory agencies;
(5) Other IDEM permits and permits from other regulatory agencies;
(6) The OAQPS control cost manual and trade journals; and
(7) The EPA RACT/BACT/LAER (RBLC) Clearinghouse.

BACT Analysis for VOCs from the surface coating booths

The surface coating booths will generate VOC emissions by the application of various surface coatings and use of solvents for dilution and cleanup. Dynamax Corporation proposes the following as BACT for the proposed modification.

(1) Use of base coat colors with a VOC content less than or equal to 6.2 lb/voc per gallon and Clear coat colors with a VOC content less than or equal to 4.4 lbs/voc per gallon,
(2) Use of undercoats with a VOC content less than or equal to 1.8 lbs/voc per gallon,
(3) Use of hot melt adhesives and aerosol adhesives where possible,
(4) Use of HVLP or equivalent spray equipment in the painting operations,
(5) Use of Air-assisted airless or airless or equivalent spray equipment in adhesive applications, and
(6) Use of the following good housekeeping practices:

    (a) Sealed lids on containers not in use or in storage
    (b) Gun and line purging into approved containers
    (c) Organized spill response and cleanup
    (d) Routine maintenance of spray equipment to prevent drips, leaks, and spills.

The content limits and standards proposed by Dynamax Corporation reflect the limits and standards established in a 326 IAC 8-1-6 BACT determination for identical booths proposed under Minor Source Operating Permit 039-12002-00536, issued on July 7, 2002.

The content limits established in the BACT were obtained from a Monaco Coach permit issued for a plant located in Coburg, Oregon. These content limits were verified by the original permit reviewer and were determined to be the most stringent limits at that time.

The standards established in the BACT were obtained from various permits, all of which more or less consisted of the same emission reduction techniques and work practice standards. These standards were verified by the original permit reviewer and were determined to be the most stringent standards at that time.

Step 1 - Identify Control Options (Including inherently lower-emitting processes)

The NSR Manual states that potentially applicable control alternatives can include inherently lower-emitting processes, including the use of materials and production processes and work practices that prevent emissions and result in lower “production-specific” emissions. Accordingly, IDEM has reviewed Dynamax Corporation’s proposed control options for the proposed surface coating booths.

Control Options Identified - Eight (8) available control technologies were evaluated to further reduce VOC emissions from the surface coating booths:

(1) Regenerative thermal oxidation
(2) Thermal oxidation, matrix bed
(3) Carbon absorption/thermal oxidation
(4) Catalytic oxidation
(5) Adsorption
(6) Biofiltration
(7) Process changes
(8) Proposed limits and standards

Step 2 - Eliminate technically infeasible control options

Catalytic Oxidation - is not technically feasible for the two proposed surface coating booths. The adhesives contain varnishes and the polyurethane paints contain isocyanates that will "poison" or blind the catalyst. Without proper catalyst performance, the operating temperature is not adequate for efficient destruction of VOC. Based on the susceptibility of zeolite contamination or fouling, this option was eliminated from further evaluation.

Adsorption - is not technically feasible for the two proposed surface coating booths. The adhesives contain varnishes and the polyurethane paints contain isocyanates that will polymerize on the surface of either carbon or zeolite adsorber surfaces, effectively destroying that surface's ability to adsorb or desorb the rest of the VOC. The limitations discussed above eliminate this option from further evaluation.

Biofiltration - is a relatively new technology in the United States. This system is a land intensive setup in which contaminated air is fed under an active bed of soil containing microorganisms. As the air rises through the soil, the microorganisms consume and convert the chemicals to carbon dioxide and water. Biofiltration has been used successfully to control odors in Europe. However, there are only a few applications of biofilters for odor control in the United States.
There are some recent applications of Biofiltration for the removal of VOCs from paint exhaust streams. Biofilters are usually associated with much lower air volumes to increase the amount of contamination fed to the microorganisms. The proposed operation will have two paint booths with 61,500 CFM. Also, this

operation is intended to run only eight (8) hours a day five (5) days a week. The microorganisms need to be fed contaminated air consistently to keep these bugs alive. Start up and shut down over weekends and at the end of the working day would prohibit the life of the microorganisms. Many times in active soil beds other bacteria begin to thrive and spread disease among the microorganisms intended on converting the chemicals to carbon dioxide and water. For these reasons, Biofiltration was eliminated from future consideration.

Process Changes - Dynamax has identified two process changes that can be used to lower the overall surface coating VOC emissions generated by the proposed booths; the use of waterborne and high solids coatings instead of the solvent based coatings currently proposed for the booths.

The use of waterborne and high solids coatings are not technically feasible for this operation because these alternative coatings are not designed to meet the coating needs associated with the use of recreational vehicles.

Specifically, waterborne and high solids coatings are much more likely to fade, chip, and/or peel, and will lose gloss and color over time much more quickly than their solvent based counterparts, resulting in a final product that cannot meet the quality demands of the customer. The diminished quality resulting from the use of waterborne and high solids coatings will diminish customer satisfaction and reduce the demand for the product which will ultimately result in severely diminished ability to compete with other similar sources which are allowed to use the more dependable solvent based coatings. For these reasons, use of waterborne and high solids coatings were eliminated from further consideration.

Regenerative and Matrix Bed Thermal Oxidation - Regenerative and matrix bed thermal oxidation are both determined to be technically feasible options available for controlling the surface coating booth VOC emissions.

Carbon Absorption/Thermal Oxidiation - Carbon absorption/thermal oxidation is determined to be a technically feasible option available for controlling the surface coating booth VOC emissions.

Proposed Limits and Standards - The limits and standards proposed by Dynamax are determined to be technically feasible options available for minimizing the surface coating booth VOC emissions.

Step 3 - Rank remaining control technologies by control effectiveness

Dynamax Corporation has demonstrated that matrix bed regenerative thermal oxidation, thermal oxidation, carbon absorption/thermal oxidation, and the limits and standards proposed by Dynamax Corporation are all technically feasible options for reducing and/or minimizing the VOC emissions from the proposed surface coating booths. These options are evaluated and ranked as follows.

The following table summarizes the information on the three remaining add-on control options. The proposed limits and standards are not included in the table. Although application of the limits and standards proposed by Dynamax Corporation will result in a reduction in the surface coating booth VOC potential to emit (PTE), it is not possible to quantify the exact impact the option will have.

Table 2
(Ranking of Control Options for VOCs from Surface Coating Booths)

VOC Emissions from the Surface Coating Booths Before Application of Controls and Limits	Control Option	Booth Emissions After Controls/Limits	Estimated Control Efficiencies

(tons/yr)		(tons/yr)	(%)
95.11	matrix bed regenerative thermal oxidation	4.76	95%
95.11	thermal oxidation	4.76	95%
95.11	Carbon absorption/thermal oxidation	4.76	95%

As indicated by the information in Table 2 above, the three remaining add-on control systems are equally ranked. The Office of Air Quality has determined that the proposed limits and standards will result in reductions that are less than 95%. Therefore, the proposed limits and standards are ranked below the three add-on control options.

Step 4 - Evaluate the most effective controls and document results

Selection of Control Option

Dynamax Corporation completed cost analyses for the matrix bed regenerative thermal oxidation, thermal oxidation, and carbon absorption/thermal oxidation control options.

No cost analysis was performed for the proposed limits and standards option because Dynamax Corporation acknowledges that this option is economically feasible.

The cost analyses were completed using information from the OAQPS manual and associated trade journals. The purchase cost for the options were, as applicable, determined based on the OAQPS manual and associated trade journals, along with some specific information from vendors. The detailed analyses are included as an attachment to this document.

Dynamax Corporation also evaluated the environmental and energy impacts of the control options. The table below summarizes the economic, environmental, and energy impacts of the two remaining technically feasible control options.

Table 3
Economic, Environmental and Energy Impacts for VOC Control Options for the Coating Booths

Control Option	VOC Emissions Before Controls and Limits (tons/yr)	Emissions Reduction (tons/yr)	Overall Control Efficiency (%)	Economic Impacts		Collateral Environmental Impacts	Energy Impacts
				Total annualized cost ($/yr)	Average cost effectiveness ($/ton)		
matrix bed regenerative thermal oxidation	95.11	90.35	95.0	**1,944,881**	**21,526.08**	Addl. Emissions Due to Combustion PM: 0.215 T/Y PM10: 0.215 T/Y SO2: 0.043 T/Y NOx: 0.718 T/Y VOC: 0.057 T/Y CO: 0.001 T/Y	3.59 MMBtu/hr nat. gasr 309 KWH
thermal oxidation	95.11	90.35	95.0	**1,869,666**	**20,693.59**	Addl. Emissions Due to Combustion PM: 0.215 T/Y PM10: 0.215 T/Y SO2: 0.043 T/Y NOx: 0.718 T/Y VOC: 0.057 T/Y	3.59 MMBtu/hr nat. gas 91.15 KWH

						CO: 0.001 T/Y	
carbon absorption/ thermal oxidation	95.11	90.35	95.0	**1,423,510**	**15,755.51**	Addl. Emissions Due to Combustion PM: 0.096 T/Y PM10: 0.096 T/Y SO2: 0.003 T/Y NOx: 0.487 T/Y VOC: 0.039 T/Y CO: 0.001 T/Y	2.39 MMBtu/hr nat. gas 114 KWH

Thermal Oxidizer Analysis

Upon completion of review of the information submitted, it is determined that matrix bed regenerative thermal oxidation, thermal oxidation, and carbon absorption/thermal oxidation are not economically feasible because the respective average cost effectiveness of each option is too high.

Proposed Limits and Standards

In addition to the RBLC data, Dynamax Corporation submitted the following information regarding the level of control required of similar sources.

Limit/Standard	Monaco (Wakarusa, IN)	Supreme (Goshen, IN)	Monaco (Elkhart, IN)	Monaco (Coburg, OR)	Limits/Standards Proposed By Dynamax
Add-on Controls	No	No	No	No	No
Air Atomization:	No	No	Yes	No	No
HVLP:	Yes	Yes	No	Yes	Yes
Good Houskeeping:	Yes	No	No	Yes	Yes
Basecoat:	6.5 lb/gal	6.5 lb/gal	No Limit	6.2 lb/gal	6.2 lb/gal
Clearcoat:	3.5 lb/gal	5.1 lb/gal	No Limit	4.4 lb/gal	4.4 lb/gal
Undercoat:	Waterborne (low VOC)	No Limit	No Limit	1.8 lb/gal	1.8 lb/gal
Primer:	3.5 lb/gal	No Limit	No Limit	No Limit	No Limit
Sealer:	3.5 lb/gal	No Limit	No Limit	No Limit	No Limit
Solvents:	6.5 lb/gal	No Limit	No Limit	No Limit	No Limit

Good Housekeeping Requirements	Monaco (Wakarusa, IN)	Monaco (Coburg, OR)	Good Housekeeping Requirements Proposed By Dynamax
Seals on lids	Yes	Yes	Yes
Purge guns into containers	Yes	Yes	Yes
Spill response and cleanup operation	Yes	No	Yes
Routine equipment Maintenance	Yes	Yes	Yes
Hand wipe solvent prior to painting	Yes	Yes	No
Use of aqueous or citric cleaners where effective and practical	Yes	No	No

The basecoats and undercoats proposed by Dynamax are equal to or less than the limits established for the other sources, the proposal to use HVLP is consistent with the most stringent application requirements of the other sources, and none of the other similar sources are using add-on controls.

However, the BACT proposed by Dynamax:

(a) does not contain any content limits for the primers and solvents,
(b) the clearcoat content limit established for Monaco Wakarusa is less than the BACT limit proposed by Dynamax, and
(c) the good house keeping requirements proposed by Dynamax do not include hand wipe application of

solvent prior to painting or use of aqueous or citric cleaners where applicable.

Dynamax also did not propose a content limit for sealers as was required for Monaco Wakarusa, but that is because Dynamax will not be applying any sealers in the proposed booths.

Conclusion of Selection of Control Options

Since matrix bed regenerative thermal oxidation, thermal oxidation, and carbon absorption/thermal oxidation are determined to be not economically feasible, BACT for the proposed surface coating booths is determined to be:

(a) the limits and standards proposed by Dynamax with a revised clearcoat content limit of 3.5 lb/gal,
(b) new primer and solvent VOC content limits of 3.5 and 6.5 lb/gal, respectively, and
(c) additional good housekeeping requirements including the use hand wipe application of solvent prior to painting and the use aqueous or citric cleaners where applicable.

Thermal Oxidizer

(Detailed Cost Analysis)

Basic Equipment Capital Cost: **$3,234,516.00**

Cost Elements	Unit Cost Factor	Current $
Purchase Costs:		
(a) Instruments and Controls:	10% Capital Cost[a]	$323,452.00
(b) Taxes:	5% Capital Cost[b]	$161,726.00
(c) Freight:	5% Capital Cost	$161,726.00
Total Purchase Costs:	Sum (Basic Equipment Capital Cost and Individual Purchase Costs)	**$3,881,420.00**
Direct Costs:		
(d) Support Installation:	8% Total Purchase Cost	$310,514.00
(e) Ducting:	15% Total Purchase Cost[c]	$582,213.00
(f) Erection and Handling:	14% Total Purchase Cost	$543,399.00
(g) Electrical:	4% Total Purchase Cost	$155,257.00
(h) Piping:	2% Total Purchase Cost	$77,628.00
(i) Insulation:	1% Total Purchase Cost	$38,814.00
(j) Painting:	1% Total Purchase Cost	$38,814.00
Total Direct Costs:	Sum (Individual Direct Costs)	**$1,746,639.00**
Indirect Costs:		
(k) Engineering:	10% Total Purchase Cost	$388,142.00
(l) Construction Expense:	5% Total Purchase Cost	$194,071.00
(m) Construction Fee:	10% Total Purchase Cost	$388,142.00
(n) Startup Fee:	2% Total Purchase Cost	$77,628.00
(o) Performance Test:	1% Total Purchase Cost	$38,814.00
(p) Contingency:	3% Total Purchase Cost	$116,443.00
Total Indirect Costs:	Sum (Individual Indirect Costs)	**$1,203,240.00**
Total Capital Costs:	Sum (Total Purchase, Direct, and Indirect Costs)	**$6,831,299.00**
Direct Operating Costs:		
(q) Natural Gas:	3.59 MMBtu/hr, $11.82/MMBtu, 8760 hr	$371,720.00
(r) Electricity:	91.15 KWH, $0.11/KWH, 8760 hr	$87,832.00
(s) Operator Labor:	$20.00 per hour, 200 hours	$4,000
(t) Supervisor Labor:	15% Operator Labor	$600.00
(u) Maintenance Labor:	$20.00 per hour, 250 hours[d]	$5.000.00
(v) Maintenance Materials:	100% Maintenance Labor	$5,000.00
Total Direct Operating Costs:	Sum (Individual Direct Operating Costs)	**$474,152.00**
Indirect Operating Costs:		
(w) Overhead:	60% of Labor Costs	$8,760.00
(x) Property Tax:	1% Capital Cost	$68,313.00
(y) Insurance:	1% Capital Cost	$68,313.00
(z) Administration:	2% Capital Cost	$136,626.00
(aa) Capital Recovery:	Capital Cost * 0.163CRF(10%/10yr)[e]	$1,113,502.00
Total Indirect Operating Costs:	Sum (Individual Indirect Operating Costs)	**$1,395,514.00**
Net Annualized Costs	Sum (Direct and Indirect Operating Costs)	**$1,869,666.00**

(a) The instrument and control costs are not included in the basic equipment capital cost and thus are itemized with the purchase costs.

(b) The sales tax used is based on the sales tax for the state of Indiana.

(c) The duct work costs are not included in the basic capital equipment cost and thus are itemized with the purchase costs. The Compliance Data Section has determined that the estimate submitted by Dynamax for ducting is reasonable.

(d) The maintenance labor is determined based on Dynamax's pay scale and estimated time for maintenance.

(e) The capital recovery is determined based on Dynamax's standard business accounting practice for capital recovery of ten percent (10%) over a ten (10) year equipment life expectancy.

Matrix Bed Regenerative Thermal Oxidizer

(Detailed Cost Analysis)

Basic Equipment Capital Cost: $2,927,327.00

Cost Elements	Unit Cost Factor	Current $
Purchase Costs:		
(a) Instruments and Controls:	10% Capital Cost[a]	$292,732.00
(b) Taxes:	5% Capital Cost[b]	$146,366.00
(c) Freight:	5% Capital Cost	$146,366.00
Total Purchase Costs:	Sum (Basic Equipment Capital Cost and Individual Purchase Costs)	**$3,512,791.00**
Direct Costs:		
(d) Support Installation:	8% Total Purchase Cost	$281,023.00
(e) Ducting:	15% Total Purchase Cost[c]	$526,919.00
(f) Erection and Handling:	14% Total Purchase Cost	$491,791.00
(g) Electrical:	4% Total Purchase Cost	$140,512.00
(h) Piping:	2% Total Purchase Cost	$70,256.00
(i) Insulation:	1% Total Purchase Cost	$35,127.00
(j) Painting:	1% Total Purchase Cost	$35,127.00
Total Direct Costs:	Sum (Individual Direct Costs)	**$1,580,755.00**
Indirect Costs:		
(k) Engineering:	10% Total Purchase Cost	$351,279.00
(l) Construction Expense:	5% Total Purchase Cost	$175,640.00
(m) Construction Fee:	10% Total Purchase Cost	$351,279.00
(n) Startup Fee:	2% Total Purchase Cost	$70,256.00
(o) Performance Test:	1% Total Purchase Cost	$35,128.00
(p) Contingency:	3% Total Purchase Cost	$105,384.00
Total Indirect Costs:	Sum (Individual Indirect Costs)	**$1,088,966.00**
Total Capital Costs:	Sum (Total Purchase, Direct, and Indirect Costs)	**$6,182,512.00**
Direct Operating Costs:		
(q) Natural Gas:	3.59 MMBtu/hr, $11.82/MMBtu, 8760 hr	$371,720.00
(r) Electricity:	309 KWH, $0.11/KWH, 8760 hr	$297,752.00
(s) Operator Labor:	$20.00 per hour, 200 hours	$4,000.00
(t) Supervisor Labor:	15% Operator Labor	$600.00
(u) Maintenance Labor:	$20.00 per hour, 250 hours[d]	$5,000.00
(v) Maintenance Materials:	100% Maintenance Labor	$5,000.00
Total Direct Operating Costs:	Sum (Individual Direct Operating Costs)	**$684,072.00**
Indirect Operating Costs:		
(w) Overhead:	60% of Labor Costs	$5,760.00
(x) Property Tax:	1% Capital Cost	$61,825.00
(y) Insurance:	1% Capital Cost	$61,825.00
(z) Administration:	2% Capital Cost	$123,650.00
(aa) Capital Recovery:	Capital Cost * 0.163CRF(10%/10yr)[e]	$1,007,749.00
Total Indirect Operating Costs:	Sum (Individual Indirect Operating Costs)	**$1,260,809.00**
Net Annualized Costs	Sum (Direct and Indirect Operating Costs)	**$1,944,881.00**

(a) The instrument and control costs are not included in the basic equipment capital cost and thus are itemized with the purchase costs.

(b) The sales tax used is based on the sales tax for the state of Indiana.

(c) The duct work costs are not included in the basic capital equipment cost and thus are itemized with the purchase costs. The Compliance Data Section has determined that the estimate submitted by Dynamax for ducting is reasonable.

(d) The maintenance labor is determined based on Dynamax's pay scale and estimated time for maintenance.

(e) The capital recovery is determined based on Dynamax's standard business accounting practice for capital recovery of ten percent (10%) over a ten (10) year equipment life expectancy.

Carbon Absorption/Thermal Oxidizer Combination

(Detailed Cost Analysis)

Basic Equipment Capital Cost: $2,348,133.00

Cost Elements	Unit Cost Factor	Current $
Purchase Costs:		
(a) Instruments and Controls:	10% Capital Cost[a]	$234,813.00
(b) Taxes:	5% Capital Cost[b]	$117,407.00
(c) Freight:	5% Capital Cost	$117,407.00
Total Purchase Costs:	Sum (Basic Equipment Capital Cost and Individual Purchase Costs)	**$2,817,760.00**
Direct Costs:		
(d) Support Installation:	8% Total Purchase Cost	$225,421.00
(e) Ducting:	15% Total Purchase Cost[c]	$422,664.00
(f) Erection and Handling:	14% Total Purchase Cost	$394,486.00
(g) Electrical:	4% Total Purchase Cost	$112,710.00
(h) Piping:	2% Total Purchase Cost	$56,355.00
(i) Insulation:	1% Total Purchase Cost	$28,178.00
(j) Painting:	1% Total Purchase Cost	$28,178.00
Total Direct Costs:	Sum (Individual Direct Costs)	**$1,267,992.00**
Indirect Costs:		
(k) Engineering:	10% Total Purchase Cost	$281,776.00
(l) Construction Expense:	5% Total Purchase Cost	$140,888.00
(m) Construction Fee:	10% Total Purchase Cost	$281,776.00
(n) Startup Fee:	2% Total Purchase Cost	$56,355.00
(o) Performance Test:	1% Total Purchase Cost	$28,178.00
(p) Contingency:	3% Total Purchase Cost	$84,533.00
Total Indirect Costs:	Sum (Individual Indirect Costs)	**$873,506.00**
Total Capital Costs:	Sum (Total Purchase, Direct, and Indirect Costs)	**$4,959,258.00**
Direct Operating Costs:		
(q) Natural Gas:	2.39 MMBtu/hr, $11.82/MMBtu, 8760 hr	$247,468.00
(r) Electricity:	114 KWH, $0.11/KWH, 8760 hr	$109,850.00
(s) Filter Rejuvenation:	12 changes/yr, $302.50/change	$3,630.00
(t) Carbon Replacement:	$2.81/hr, 8760 hours	$24,616.00
(u) Replacement Labor:	100% Replacement Cost[d]	$24,616.00
(v) Operator Labor:	$20.00 per hour, 75 hours	$1,500.00
(w) Supervisor Labor:	15% Operator Labor	$225.00
(x) Maintenance Labor:	$20.00 per hour, 60 hours[e]	$1,200.00
(y) Maintenance Materials:	100% Maintenance Labor	$1,200.00
Total Direct Operating Costs:	Sum (Individual Direct Operating Costs)	**$414,305.00**
Indirect Operating Costs:		
(w) Overhead:	60% of Labor Costs	$2475.00
(x) Property Tax:	1% Capital Cost	$49,593.00
(y) Insurance:	1% Capital Cost	$49,593.00
(z) Administration:	2% Capital Cost	$99,185.00
(aa) Capital Recovery:	Capital Cost * 0.163CRF(10%/10yr)[f]	$808,359.00
Total Indirect Operating Costs:	Sum (Individual Indirect Operating Costs)	**$1,009,205.00**
Net Annualized Costs	Sum (Direct and Indirect Operating Costs) $1,411,202	**$1,423,510.00**

(a) The instrument and control costs are not included in the basic equipment capital cost and thus are itemized with the purchase costs.

(b) The sales tax used is based on the sales tax for the state of Indiana.

(c) The duct work costs are not included in the basic capital equipment cost and thus are itemized with the purchase costs. The Compliance Data Section has determined that the estimate submitted by Dynamax for ducting is reasonable.

(d) Dynamax determined the carbon replacement labor costs based using 100% of the carbon replacement cost. The OAQPS manual does not provide any specific guidance as to how to establish the labor cost associated with carbon replacement. In order to ensure that the amount proposed by Dynamax does not change the BACT determination, the Office of Air Quality determined the average cost effectiveness using a labor cost of $0. The results are listed below.

Labor Cost Used ($)	Total Direct Annual Operating Cost ($)	Total Indirect Annual Operating Cost ($)	Total Annual Operating Cost ($)	Average Cost Effectiveness ($/ton)
$24,616	$414,305	$1,009,205	$1,423,510	$15,755.51
$0	$389,689	$1,009,205	$1,398,894	$15,483.05

Eliminating the carbon replacement cost reduces the average cost effectiveness to $15,483.05 which is still not economically feasible. Therefore, it is determined that the labor cost submitted by Dynamax will not affect the outcome of the BACT determination.

(e) The maintenance labor is determined based on Dynamax's pay scale and estimated time for maintenance.

(f) The capital recovery is determined based on Dynamax's standard business accounting practice for capital recovery of ten percent (10%) over a ten (10) year equipment life expectancy.