

**ANALYSIS AND PRELIMINARY DETERMINATION FOR  
OPERATION PERMIT FOR THE CONVERSION OF SPRAY APPLICATION SYSTEMS  
TO A VARIETY OF SOLVENT-LESS THERMOFORMING PLASTIC TECHNIQUES THAT  
HAVE RESULTED IN A REDUCTION IN VOC EMISSIONS  
BY  
DESIGN HOUSE, INC.,  
LOCATED AT  
14700 W COMMERCE STREET,  
MENOMONEE FALLS, WAUKESHA COUNTY, WISCONSIN**

Permit # 01-JCH-036-OP

Facility I.D. # 268117850

This review was performed by the Wisconsin Department of Natural Resources, Bureau of Air Management, P.O. Box 7921, Madison, Wisconsin 53707, (608)266-7718 in accordance with Chapter 285, Wis. Stats., and Sections NR 400 to NR 499, Wis. Adm. Code.

Reviewed by: Jeffrey C. Hanson Initials: JCH Date: 7/30/01

Peer review conducted by: /s/ Raj V Date: 7/30/01

Preliminary Determination Approved by:	Signature	Date
Regional Supervisor or Central Office Designee	/s/ Daniel Johnston	7/31/01

cc: Southeast Region Air Program  
Maude Shunk Public Library, W156 N8446 Pilgrim Rd., Menomonee Falls WI 53051-3140

## **INTRODUCTION**

Stationary sources seeking to operate under an emission reduction option, as defined by s. 285.01(17), Wis. Stats, must apply for an obtain an elective operation permit from the department, per s. 285.60(2)(b), Wis. Stats. Emission reduction options must meet restrictions laid out under s. 285.63(9), Wis. Stats. And be approvable under s. NR 408.06(7), Wis. Adm. Code. A reduction in emissions which is detailed under an emission reduction option may be reserved as credit against future emissions from the same or another stationary source. If a person elects to apply for an operation permit under s. 285.60(2)(b), Wis. Stats., the election may not be withdrawn and the stationary source may not be operated without the operation permit beginning on the date that the operation permit is first issued. An operation permit may be issued after the applicant demonstrates that the sources included in the construction permit are in compliance with the applicable rules, emission limits and the conditions.

Subject sources are to be reviewed with respect to the equipment and facility description provided in the application and for the resulting impact upon the air quality. The review ensures compliance with all applicable rules and statutory requirements. The plan review will show why the source(s) should be approved, conditionally approved, or disapproved. It will encompass emission calculations and an air quality analysis using U.S. EPA models, if applicable. As a precautionary note, the emission estimates are based on U.S. EPA emission factors (AP-42) or theoretical data and can vary from actual stack test data.

## **GENERAL APPLICATION INFORMATION**

Owner/Operator: Design House, Inc.  
c/o Michael S. Polsky; Beck, Chaet, Molony & Bamberger, S.C.  
330 E. Kilbourn Avenue #1085  
Milwaukee, WI 53202-3146

Contact: Patric Caracciolo  
Management Consultant  
(708) 814-7028

Responsible Official: Michael S. Polsky  
Receiver  
(414) 273-4200

Submitted By: RSV Engineering, Inc.  
(920) 674-3411

Date of Complete Application: July 27, 2001

## **PROJECT DESCRIPTION**

Design House, Inc. is a manufacturer of plastic parts used as building products such as window shutters and bathtub enclosures. Design House, Inc. has undergone several process changes designed to improve product performance, primarily ultra violet (UV) light protection, which have resulted in decreased use of solvent based coatings, and thus reduced VOC emissions. Design House, Inc. has submitted information intend to quantify the level of emission reduction to be used as emission reduction option, per s. 285.01(17), Wis. Stats.

## **HISTORY OF PROCESS CHANGES AND EMISSION REDUCTIONS**

Design House, Inc. is a plastic products manufacturing facility whose activities include thermal forming and painting of plastic building products, including fiberglass window shutters and bathtub enclosures. Shutters are manufactured from colored sheets of polystyrene plastic, which are heated and vacuum formed into the appropriate shape. After cutting and trimming, a reinforced shape is sonically welded to the back of the shutter. An additional UV protective coating is then applied to prevent deterioration of the shutters from sun exposure during use. The coatings used are a solvent based mixture of VM&P Naphtha, 50-75%, and xylene, 1-2%, and the process requires the use of solvent based clean-up materials. Peak production of shutters using the above spray UV protective coating was used as the sole production technique up to 1993, with resulting VOC actual emission levels ranging from 88.13 to 171.25 tons per year from 1990 to 1993.

Beginning in 1994, the company experimented with other UV inhibitor techniques, to further improve the UV resistant properties of the product. This included the addition of a UV inhibitor to the plastic formulation for the primary shutter colors (white, black and brown). The use of the UV inhibitor eliminated the need for the solvent based spray-on UV coating for these colors. Use of the UV inhibitor plastic began in mid-1994 for the primary shutter colors, and continued to the end of the year. This process change resulted in reduced VOC emissions for 1994 to 37.80 tons per year from 88.13 as reported in 1993.

In 1995, the company continued to use UV additive plastic for the three primary shutter colors, in place of spray applied UV protective coating. Spray application of UV coating to low volume colors continued during this period of time. VOC annual emissions in 1995, following a full year of this technique, were reported at 18.63 tons per year.

In 1996, Design House, Inc. began testing another UV inhibitor technique: the use of a thermoformed clear acrylic film called Korad, as an overcoat to the shutter. The initial use of the Korad overcoat was on the brown shutters. Spray coating of low volume shutter colors continued.

In 1997, due to the success of the Korad overcoat process on the brown shutters, overcoating was extended to the other shutter colors. In addition, the company began selling an injection molded shutter product that was produced by another company. The injection molded shutters were spray coated for UV protection by Design House, Inc. prior to shipping.

In 1998, use of the Korad over coating continued and the company also had the injection molded shutter coated by the supplier, further reducing the use of spray coatings by Design House, Inc. Following this change, the only product receiving a spray UV protective coating was a consumer painted shutter that received a cream colored primer coat prior to shipping. Shutter production continued to operate with the Korad overcoat, injection molded shutters supplied precoated and limited spray coating (primer coating) from 1998 to the present. VOC emissions in 1998 and 1999 were reported as 0.296 and 0.441 tons per year respectively.

As a result of the process changes, Design House, Inc. removed two coating lines in 1997 and 1998. The department has drafted a Part 70 Operation Permit for the facility, estimating potential VOC emissions to be 351.30 tons per year.

## **EMISSION CALCULATIONS**

Design House, Inc. had under gone process changes from 1994 to 1998 that have resulted in reductions

in VOC emissions. Emission Reduction Credits for VOC are available up to either the allowable emission rate, the representative actual emission rate or the amount of VOC that was included in the nonattainment area baseline from the facility, whichever is the lesser value of the three.

Actual emissions for the purposes of this review are determined using the representative actual emission rate which consists of the 24 months preceding the initiation of the process changes, from January 1992 through December of 1993. An annual average over this period is determined using emission inventory. The following table provides a comparison of allowable and actual emissions.

Representative Actual Emissions		
Actual VOC Emissions Reported in 1992	Actual VOC Emissions Reported in 1993	Representative Actual Emissions
108.69	88.13	98.41

According to the plan the Air Management Program submitted to USEPA that quantified VOC emissions from each facility within the ozone nonattainment area and thus established the baseline, the Design House, Inc. facility emitted 108.84 tons of VOC. Since these emissions were by and large made up of emissions from the application of solvent based UV protective coatings, these will be considered the baseline rate for this process.

There is one coating booth that is currently regulated by an air pollution control permit. This permit did not establish facility limitations on VOC emissions.

Design House, Inc. has proposed to restrict allowable VOC emissions from the facility to five tons per year.

Design House, Inc. has proposed to restrict the annual hours of operation of the spray booth to 645. This annual restriction coupled with additional process restrictions of 1.97 gallons applied per hour a maximum coating VOC content of 5.170 pounds per gallon will make the requested limitation enforceable as a practicable matter.

$$645 / 12 = 53.75 \text{ hours per month}$$

$$53.75 \text{ hours / month} \times 12 \text{ months / year} \times 1.97 \text{ gallons / hour} \times 5.17 \text{ lb VOC / gallon} \times \text{ton} / 2000 \text{ lb} = 3.29 \text{ tons / year}$$

VOCs emitted from the use of clean-up solvent, thermoforming and natural gas usage must also be restricted, to account for the remaining VOC emission potential.

Use of clean up solvents has been proposed to be restricted to the use of methyl ethyl ketone, 0.37 gallons per hour, 645 hours per year. This equates to an annual usage rate of methyl ethyl ketone of 238.65 gallons per year.

$$0.37 \text{ gallons / hour} \times 645 \text{ hours / year} = 238.65 \text{ gallons per year} / 12 \text{ months / year} = 19.8 \text{ gallons / month}$$

$$19.8 \text{ gallons / month} \times 12 \text{ months / year} \times 8.65 \text{ pounds / gallon} \times \text{ton} / 2000 \text{ pounds} = 1.03 \text{ tons / year}$$

VOC emissions from thermoforming have been proposed to be restricted by limiting the hours of operation the process to 2080 hours per year. This results in a potential emission rate of 0.135 tons per year.

$$500 \text{ sheets/hour} \times 2.6 \text{ pounds plastic / sheet} \times 0.0001 \text{ pound VOC / pound plastic} \times 2080 \text{ hours / year} \times \text{ton} / 2000 \text{ pounds} = 0.135 \text{ tons per year}$$

Emissions from process natural gas usage has been calculated at an unrestricted potential emission rate of 0.114 tons per year and no further restrictions have been proposed.

Total potential VOC emissions are therefore equal 4.57 tons per year.

The amount of emission reduction is defined as the lesser of the following reduction schemes:

$$\text{Allowable to future potential: } 351 - 5 = 346 \text{ tons}$$

$$\text{Baseline to future potential: } 108 - 5 = 103 \text{ tons}$$

Representative actual to future potential:  $98 - 5 = 93$  tons.

Since the representative actual to future potential scheme provides the lesser reduction rate, the process changes can be allotted up to 93 tons of emission reduction credit, should the applicable criteria be met.

### **EMISSION REDUCTION OPTION**

s. 285.01(17) defines an "Emission reduction option" as either:

- (a) An offsetting of greater emissions from a stationary source against lower emissions from the same or another stationary source;
- (b) A reduction in emissions from a stationary source which is reserved as a credit against future emissions from the same or another stationary source; or
- (c) Other arrangements for emission reduction, trade-off, credit or offset permitted by rule by the department.

Design House, Inc. has undergone process changes that have resulted in VOC emission reductions. Design Homes, Inc. seeks to establish an emission reduction option program in accordance with the definition above, for either use at the facility or for possible sale to another stationary source within the same nonattainment area.

To be eligible for use, emission reduction credits (emission offsets) must meet the criteria set forth under s. NR 408.06, Wis. Adm. Code, that establishes rules that govern the achievement of emission reduction options. Since the emission reduction credits sought by Design House, Inc. are the result of process changes, the following requirements are applicable at this time:

S. NR 408.06(1)(g), Wis. Adm. Code: *Offsets shall be surplus, permanent, quantifiable and federally enforceable at the time of their use (in order to meet this criteria at the time of their use, these offsets must meet this criteria initially)*

- Surplus* - The emission reductions are surplus because they represent a decrease in emissions at the Design House, Inc. facility below the levels required by law. In addition, Design House, Inc. acknowledges that a VOC reduction from the process changes were not made as a compliance strategy for a regulatory standard, they were made for product quality reasons. Should plastic parts coating be implemented by the department in the future, the emission reductions will need to be reevaluated to determine whether they remain surplus. This type of analysis would be performed at the time of the use of any emission reduction credit associated with these reductions.
- Permanent* - Design House, Inc. has ceased operating two coating booths at the facility, because they are no longer needed under the current operational scheme and the booths are not included in the facility's operation permit application. Reconstruction of the equipment necessary to resume solvent based UV coating will require permitting under Wisconsin regulations.
- Quantifiable* - Emission reductions have been quantified above under the **EMISSION CALCULATIONS SECTION**.
- Enforceable* - Emission reductions will be made enforceable as a result of the permit issued subsequent to this review document. Any resumption of operations will require an analysis under the New Source Review program.

S. 408.06(8), Wis. Adm. Code - *No emissions reduction credit may be allowed for reductions in any organic compound specifically excluded from the definition of "VOC" in s. NR 400.02(100), Wis. Adm. Code.*

None of the VOC which has been sought credit for is excluded from the definition of VOC.

S. NR 408.06(9), Wis. Adm. Code - *Credit for an emissions reduction may be claimed to the extent that the department has not relied on it in issuing any permit under ch. NR 405, 406, 407 or 408, Wis. Adm. Code or the state has not relied on it in demonstrating attainment or reasonable further progress.*

The department has not relied upon the reductions in another permit nor have these reductions been relied upon in demonstrating attainment or reasonable further progress.

Since the emission reductions meet the requirements of the establishment of an emission reduction option program, 93 tons of emission reduction credits are available to Design House, Inc., pending the issuance of the operation permit. However, these emission reduction credits may only be used in accordance with the requirements of s. NR 408.06, Wis. Adm. Code.

### **COMPLIANCE AND TECHNOLOGY REVIEW**

Potential emissions will be restricted using the following restrictions:

- Coating usage 53.75 hours per month, based upon a 12 month rolling average
- No more than 1.97 gallons of coating may be applied in any hour
- VOC content of coatings may not exceed 5.17 pounds per gallon
- Clean-up solvent usage may not exceed 19.8 gallons per month
- VOC content of clean-up solvent may not exceed 8.65 pounds per gallon
- No more than 500 plastic sheets may be thermoformed in any hour
- No more than 2.6 pounds of plastic may be used for each thermoformed sheet
- The thermoforming process may not be operated more than 173.3 hours per month, based on a 12 month rolling average

The above restrictions will be supported with monthly records of material usage, material safety data sheets and monthly records of hours of operation.

### **CRITERIA FOR PERMIT APPROVAL**

Section 285.63, Wis. Stats., sets forth the specific language for permit approval criteria. The Department finds that:

1. The source will meet emission limitations.
2. The source will not cause nor exacerbate a violation of an air quality standard or ambient air increment.
3. The source is operating or seeks to operate under an emission reduction option.
4. The source will not preclude the construction or operation of another source for which an air pollution control permit application has been received.

### **DETERMINATION**

The preliminary determination of the DNR Air Management Program is that this project when constructed or modified and operated consistent with the application and subsequent information submitted will be able to meet the emission limits and conditions included in the attached Draft Permit. A final decision regarding emission limits and conditions will be made after the Department has reviewed and evaluated all comments received during the comment period. The proposed emission limits and other proposed conditions in the Draft Permit are written in the same form that they will appear in the construction permit and, where applicable, the operation permit. These proposed conditions may be changed as a result of public comments or further evaluation by the Department.

DRAFT AIR POLLUTION CONTROL OPERATION PERMIT

EI FACILITY NO. 268117850

PERMIT NOS. 01-JCH-036-OP

STACK NO.(S). S01

SOURCE NO.(S). P01

THIS OPERATION PERMIT EXPIRES SIXTY (60) MONTHS FROM THE DATE OF ISSUANCE.

In compliance with the provisions of Chapter 285, Wis. Stats., and Chapters NR 400 to NR 499, Wis. Adm. Code,

Name of Source: Design House, Inc.

Street Address: 14700 W Commerce Street  
Menomonee Falls, Wisconsin

Responsible Official & Title: Jim Garrity, Plant Manager

is authorized to construct/operate process changes that have resulted in a reduction in VOC emissions described in the plans and specifications dated March 7 and July 20, 2001 in conformity with the conditions herein.

This authorization requires compliance by the permit holder with the emission limitations, monitoring requirements and other terms and conditions set forth in Parts I and II hereof.

Dated at Madison, Wisconsin this \_\_\_\_\_ day of \_\_\_\_\_.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
For the Secretary

By                     DRAFT                      
Daniel H. Schramm, Air Management Supervisor  
Southeast Region Air Program

Note: Part II contains general requirements for all stationary sources. Part II is not attached to the Draft Permit and is available upon request.

## **PART I: APPLICABLE LIMITATIONS**

1. Paint Booth, P01 may not be operated more than 53.75 hours per month, based upon a 12 month rolling average. (s. 285.65(7), Wis. Stats.)
2. No more than 1.97 gallons of coating may be applied in any hour within Paint Booth P01. (s. 285.65(7), Wis. Stats)
3. The VOC content of coatings by paint booth P01 may not exceed 5.17 pounds per gallon. (s. 285.65(7), Wis. Stats.)
4. Clean-up solvent usage by the facility may not exceed 19.8 gallons per month, based upon a 12 month rolling average. (s. 285.65(7), Wis. Stats.)
5. The VOC content of clean-up solvents used by the facility may not exceed 8.65 pounds per gallon. (s. 285.65(7), Wis. Stats.)
6. No more than 500 plastic sheets may be thermoformed in any hour by the facility. (s. 285.65(7), Wis. Stats)
7. No more than 2.6 pounds of plastic may be used for each thermoformed sheet. (s. 286.65(3), Wis. Stats.)
8. The thermoforming process may not be operated more than 173.3 hours per month, based on a 12 month rolling average. (s. 285.65(7), Wis. Stats.)
9. The facility shall keep and maintain monthly records of the hours of operation of paint booth P01 and the thermoforming processes. Hours of operation shall be compiled by the 14<sup>th</sup> day of the month for the preceding month. (s. NR 439.04(1)(d), Wis. Adm. Code)
10. The facility shall keep and maintain material safety data sheets and product formulations that provide VOC contents of coatings and solvents used and the plastic product weight of pre-thermoformed sheets. (s. NR 439.04(1)(d), Wis. Adm. Code)
11. Design House, Inc. may not operate any volatile organic compound emitting emission units that would not comply with conditions 1 through 10 of this permit. These condition have the effect of quantifying 93 tons of emissions which may be included within an emission reduction option program. [s. 285.85(7), Wis. Stats.]
- 12) Use of emission reduction credits quantified by condition 11 are subject to the limitations of s. NR 408.06(7)(b), Wis. Adm. Code. [s. NR 408.06(7)(b), Wis. Adm. Code]
- 13) Emission reductions credits quantified by condition 11 shall be reported annually on the facility's air emission inventory until such time that they are no longer the property of the permittee so that the amount available to the permittee remains quantifiable. [s. NR 408.06(7)(a)1, Wis. Adm. Code]
- 14) Renewal of Operation Permit  
A renewal application for this permit must be submitted at least 12 months, but not more than 18 months, prior to the expiration date of this permit. No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely and complete application for renewal of the permit. [s. 285.66(3), Wis. Stats. and s. NR 407.04(2), Wis. Adm. Code].

**BEFORE THE DEPARTMENT OF NATURAL RESOURCES AIR MANAGEMENT PROGRAM**

Wisconsin Department of Natural Resources, Air Management Program, Preliminary Determination on an Air Pollution Control Permit to Operate an Air Contaminant Source at Menomonee Falls, Waukesha County, Wisconsin.

Air Pollution Operation Permit No. 01-JCH-036-OP

Design House, Inc., 14700 W Commerce Street has submitted to the Department of Natural Resources (DNR) permit applications including plans and specifications for an elective operation permit acknowledging process changes in order to create an emission reduction option program under s. 285.60(2)(b), Wis. Stats. Emission reduction credits generated under this program are subject the criteria for their use of s. NR 408.06(7)(b), Wis. Adm. Code.

The Bureau of Air Management of the DNR has analyzed these materials and has preliminarily determined that the project should meet applicable criteria for permit approval as stated in s. 285.63, Wis. Stats., including both the emission limits and the ambient air standards and should, therefore, be approved.

An operation permit allows continued operation of a source. An operation permit may be issued after the permittee demonstrates compliance with the applicable requirements.

This type of proposal normally does not have the potential to cause significant adverse environmental effects and the DNR has not prepared an Environmental Assessment of the proposal. This preliminary determination does not constitute approval from the Air Management Program or any other DNR sections which may also require a review of the project.

The DNR hereby solicits written comments from the public regarding the preliminary determination to approve the construction and operation permit application. These comments will be considered in the DNR's final decision regarding this proposal. Information, including plans and the DNR's preliminary analysis, is available for public inspection at the Department of Natural Resources Bureau of Air Management Headquarters, Seventh Floor, 101 South Webster Street, Madison, Wisconsin, at the Southeast Region Air Program, 2300 North Martin Luther King, Jr. Drive, P.O. Box 12436, Milwaukee, WI 53212, phone (414) 263-8500 and at the Maude Shunk Public Library, W156 N8446 Pilgrim Rd., Menomonee Falls WI 53051-3140 or contact Jeffrey C. Hanson at (608) 266-6876. This information is also available for downloading from the internet using a world wide web browser at: <http://www.dnr.state.wi.us/org/aw/air/reg/regs.htm>

Interested persons wishing to comment on the proposal and preliminary determinations should submit written comments within 30 days to:

Wisconsin Department of Natural Resources, Bureau of Air Management, P.O. Box 7921, Madison, Wisconsin 53707, (608)266-7718 Attn: Jeffrey C. Hanson.

A public hearing may be requested by individuals if the project is of significant concern to them. The request for hearing should indicate the interest of the party filing the request and reasons why a hearing is warranted. The DNR may then hold a public hearing if it determines that there is a significant public interest in holding a hearing.

Reasonable accommodation, including the provision of informational material in an alternative format, will be provided for qualified individuals with disabilities upon request.

Dated at Madison, Wisconsin July 31, 2001.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
For the Secretary

By /s/ Daniel Johnston  
Daniel L. Johnston, Chief, Printing and Coating Section  
Bureau of Air Management

Michael S. Polsky, Receiver  
Design House, Inc.  
c/o Michael S. Polsky; Beck, Chaet, Molony & Bamberger, S.C.  
330 E. Kilbourn Avenue #1085  
Milwaukee, WI 53202-3146

File Code: 4560  
FID# 268117850  
Permit Number: 01-JCH-036

Dear Mr. Polsky:

The Bureau of Air Management of the Department of Natural Resources has preliminarily reviewed the elective air pollution control permit application regarding the conversion of spray application systems to a variety of solvent-less thermoforming plastic techniques that have resulted in a reduction in VOC emissions as part of an emission reduction option program.

The Bureau of Air Management has prepared an analysis of the proposed project and has made a preliminary determination that it is approvable. The proposed permit limitations and conditions are included in the attached Draft Permit.

The Department will now accept public comments on the proposed project as required by ss. 285.61(6) and (7) and 285.62(4) and (5), Wis. Stats. Comments will be received for 30 days after publication of a Class I Legal notice. Please review the Draft Permit and provide your comments within the same 30 day period.

As requested, a copy of this public notice is attached so you may expedite the permitting process. It should be published for one day in the **Milwaukee Journal-Sentinel**. In return, you must provide me a notarized proof of publication prior to permit issuance.

The public input, if any, will also be reviewed to note if significant public interest in the project exists and whether a public hearing is warranted. If a hearing is warranted, it would be held within 60 days from the end of the public comment period. Finally, all public input will be used to render a final decision within another 60 days unless compliance with Wisconsin's Environmental Policy Act requires a longer time.

Please be advised that this is only a preliminary determination. If you have any questions regarding this matter, please feel free to contact me at (608) 266-6876.

Sincerely,

Jeffrey C. Hanson, P.E.  
Construction Permit Team Leader  
Bureau of Air Management

Attachment

File Code: 4560-1  
FID #: 268117850  
Permit Number: 01-JCH-036-OP

Maude Shunk Public Library  
W156 N8446 Pilgrim Rd.  
Menomonee Falls WI 53051-3140

Dear Librarian:

By Wisconsin law, the Department of Natural Resources is required to allow thirty (30) days of public comment, starting on the day of public notice, on draft air pollution construction and operation permits. In addition, the public notices related to such permits are sent to a public library located in the area of the facility requesting the permit.

Enclosed is the public notice, the preliminary determination and the draft permit for Design House, Inc. located in Waukesha County, Wisconsin. Please retain these documents in the library for sixty (60) days for public viewing. Thank you.

Sincerely,

Jeffrey C. Hanson, P.E.  
Construction Permit Team Leader  
Bureau of Air Management

Enclosure

cc: Southeast Region Air Program

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

FILE CODE: 4530-1  
FID# 268117850  
Permit Number: 01-JCH-036

Michael S. Polsky, Receiver  
Design House, Inc.  
c/o Michael S. Polsky; Beck, Chaet, Molony & Bamberger, S.C.  
330 E. Kilbourn Avenue #1085  
Milwaukee, WI 53202-3146

Dear Mr. Polsky:

Your application for an air pollution control operation permit has been processed in accordance with s. 285.62, Wis. Stats. The enclosed operation permit is issued to provide authorization for your source to operate equipment shut-down in accordance with the requirements and conditions set forth within Parts I and II of the permit. Please read it carefully. The operation permit expires 5 years from the date of issuance. Application for renewal of an operation permit must be submitted no later than 12 months and no earlier than 18 months before the expiration date. No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely and complete application for the renewal of the permit.

A copy of the permit should be available at the source for inspection by any authorized representative of the Department. Questions about this permit should be directed to the Southeast Region Air Program, 2300 North Martin Luther King, Jr. Drive, P.O. Box 12436, Milwaukee, WI 53212, phone (414) 263-8500 .

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes establish time periods within which requests to review Department decisions must be filed.

To request a contested case hearing pursuant to s. 285.81, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for a contested case hearing on the Secretary of the Department of Natural Resources. Any such petition for hearing shall set forth specifically the issue sought to be reviewed, the interest of the petitioner, the reasons why a hearing is warranted and the relief desired.

For judicial review of a decision pursuant to ss. 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

This notice is provided pursuant to s. 227.48(2), Wis. Stats.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

Jeffrey C. Hanson, P.E.  
Construction Permit Team Leader  
Bureau of Air Management

cc: Southeast Region Air Program  
Air Enforcement Branch - EPA, Region V

Enclosure

**BEFORE THE DEPARTMENT OF NATURAL RESOURCES  
AIR MANAGEMENT PROGRAM  
FINDINGS OF FACT  
CONCLUSIONS OF LAW  
AND DECISION**

**Findings of Fact**

The Department of Natural Resources (DNR) finds that:

- 1) Design House, Inc., 14700 W Commerce Street, Menomonee Falls, Wisconsin, has applied for an air pollution control operation permit. The authorized representative of the facility is Michael S. Polsky, Receiver.
- 2) Design House, Inc. submitted an air pollution control permit application and plans and specifications and any additional information describing the air pollution source dated March 7 and July 20, 2001.
- 3) DNR has reviewed Design House, Inc.'s air permit application, plans, specifications and other information available to DNR.
- 4) DNR has prepared an analysis and a Preliminary Determination on the approvability of the operation permit application.
- 5) This permit is for the operation of an air pollution source.
- 6) DNR has complied with the procedures set forth in s. 285.62, Wis. Stats.
- 7) The proposed air pollution source meets all of the applicable criteria in s. 285.63 and 285.64, Wis. Stats.
- 8) DNR has complied with the requirements of s. 1.11, Wis. Stats., and ch. NR 150, Wis. Adm. Code.

**Conclusions of Law**

DNR concludes that:

- 1) DNR has authority under sec. 285.11(1), Wis. Stats., to promulgate rules contained in chs. NR 400-499, Wis. Adm. Code, including but not limited to rules containing emission limits, compliance schedules and compliance determination methods.
- 2) DNR has the authority under ss. 285.11(1), (5), and (6), 285.27(1) and (2) and 285.65, Wis. Stats., and chs. NR 400-499, Wis. Adm. Code, to establish emission limits for sources of air pollution.
- 3) DNR has the authority to issue air pollution control permits and to include conditions in such permits under ss. 285.60, 285.62, 285.63, 285.64 and 285.65, Wis. Stats.
- 4) The emission limits included in this permit are authorized by ss. 285.65, Wis. Stats., and NR 400-499, Wis. Adm. Code.
- 5) DNR is required to comply with sec. 1.11, Wis. Stats., and ch. NR 150, Wis. Adm. Code, in conjunction with issuing an air pollution control permit.

**Decision**

Design House, Inc. is authorized to operate process changes that have resulted in a reduction in VOC emissions as described in plans and specifications dated March 7 and July 20, 2001 in conformity with the emission limits, monitoring, recordkeeping and reporting requirements and specific and general conditions set forth in this permit.

AIR POLLUTION CONTROL OPERATION PERMIT

EI FACILITY NO. 268117850

PERMIT NO. 01-JCH-036-OP

STACK NO.(S). S01

SOURCE NO.(S). P01

THIS OPERATION PERMIT EXPIRES SIXTY (60) MONTHS FROM THE DATE OF ISSUANCE.

In compliance with the provisions of Chapter 285, Wis. Stats., and Chapters NR 400 to NR 499, Wis. Adm. Code,

Name of Source: Design House, Inc.

Street Address: 14700 W Commerce Street  
Menomonee Falls, Wisconsin

Responsible Official & Title: Michael S. Polsky, Receiver

is authorized to operate process changes that have resulted in a reduction in VOC emissions described in the plans and specifications dated March 7 and July 20, 2001 in conformity with the conditions herein.

This authorization requires compliance by the permit holder with the emission limitations, monitoring requirements and other terms and conditions set forth in Parts I and II hereof.

Dated at Madison, Wisconsin this 4th day of September, 2001.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
For the Secretary

By /s/ Patrick L Kirsop for Daniel H Schramm  
Daniel H. Schramm, Air Management Supervisor  
Southeast Region Air Program

## **PART I: APPLICABLE LIMITATIONS**

1. Paint Booth, P01 may not be operated more than 53.75 hours per month, based upon a 12 month rolling average. (s. 285.65(7), Wis. Stats.)
2. No more than 1.97 gallons of coating may be applied in any hour within Paint Booth P01. (s. 285.65(7), Wis. Stats)
3. The VOC content of coatings by paint booth P01 may not exceed 5.17 pounds per gallon. (s. 285.65(7), Wis. Stats.)
4. Clean-up solvent usage by the facility may not exceed 19.8 gallons per month, based upon a 12 month rolling average. (s. 285.65(7), Wis. Stats.)
5. The VOC content of clean-up solvents used by the facility may not exceed 8.65 pounds per gallon. (s. 285.65(7), Wis. Stats.)
6. No more than 500 plastic sheets may be thermoformed in any hour by the facility. (s. 285.65(7), Wis. Stats)
7. No more than 2.6 pounds of plastic may be used for each thermoformed sheet. (s. 286.65(3), Wis. Stats.)
8. The thermoforming process may not be operated more than 173.3 hours per month, based on a 12 month rolling average. (s. 285.65(7), Wis. Stats.)
9. The facility shall keep and maintain monthly records of the hours of operation of paint booth P01 and the thermoforming processes. Hours of operation shall be compiled by the 14<sup>th</sup> day of the month for the preceding month. (s. NR 439.04(1)(d), Wis. Adm. Code)
10. The facility shall keep and maintain material safety data sheets and product formulations that provide VOC contents of coatings and solvents used and the plastic product weight of pre-thermoformed sheets. (s. NR 439.04(1)(d), Wis. Adm. Code)
11. Design House, Inc. may not operate any volatile organic compound emitting emission units that would not comply with conditions 1 through 10 of this permit. These condition have the effect of quantifying 93 tons of emissions which may be included within an emission reduction option program. [s. 285.85(7), Wis. Stats.]
- 12) Use of emission reduction credits quantified by condition 11 are subject to the limitations of s. NR 408.06(7)(b), Wis. Adm. Code. [s. NR 408.06(7)(b), Wis. Adm. Code]
- 13) Emission reductions credits quantified by condition 11 shall be reported annually on the facility's air emission inventory until such time that they are no longer the property of the permittee so that the amount available to the permittee remains quantifiable. [s. NR 408.06(7)(a)1, Wis. Adm. Code]
- 14) Renewal of Operation Permit  
A renewal application for this permit must be submitted at least 12 months, but not more than 18 months, prior to the expiration date of this permit. No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely and complete application for renewal of the permit. [s. 285.66(3), Wis. Stats. and s. NR 407.04(2), Wis. Adm. Code].