

**AIR EMISSION PERMIT NO. 14500102- 001
IS ISSUED TO**

VIKING WATERBEDS, INC.
38169 County Road 2
St. Joseph, Stearns County, Minnesota 56374

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date
Total Facility Operating Permit	04/11/95 and 9/27/96

This permit authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit and with all general conditions listed in Minn. R.. 7007.0800, subp. 16, which are incorporated by reference. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: State; Syn Min Part 70

Issue Date: April 15, 1997

Expiration: Permit does not expire
All Title I Conditions do not expire.

Michael J. Sandusky
Acting Division Manager
Air Quality Division

for Peder A. Larson
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) Solid Waste, Hazardous Waste, and Water Quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(612)296-6300
Outside Metro Area	1-800-657-3864
TTY	(612)282-5332

The rule governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Any requirements which have been determined not to apply are listed in Table A of this permit.

The permit shield, however does not apply to: Minn. R. ch. 7030 (Noise Pollution Control).

FACILITY DESCRIPTION:

Viking Waterbeds, Inc. is a wood furniture manufacturer. The emission units at the facility include two spraybooths and a wood fired boiler. Insignificant activities located at the facility include thirteen wood milling equipment machines that are connected to a central dust collection system (fabric filter) that is vented inside the building 100 percent of the time. Processes at the facility include sanding and shaping precut components, assembly and spray finishing with stains, sealer, and lacquer.

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/15/97

Facility Name: Viking Waterbeds Inc

Permit Number: 14500102 - 001

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item: Total Facility

What to do	Why to do it
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Shutdowns: Notify the Commissioner at least 24 hours in advance of shutdown of any process or control equipment if the shutdown would cause an increase in the emission of air contaminants. At the time of notification, notify the Commissioner of the cause of the shutdown and the estimated duration. Notify the Commissioner again when the shutdown is over.	Minn. R. 7019.1000, subp. 1
Breakdowns: Notify the Commissioner immediately of a breakdown of more than one hour duration of any process or control equipment if the breakdown causes an increase in the emission of air contaminants. At the time of notification or as soon thereafter as possible, the permittee shall also notify the Commissioner of the cause of the breakdown and the estimated duration. Notify the Commissioner again when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Oral Notification of Deviations Endangering Human Health or the Environment: Within 24 hours of discovery, orally notify the Commissioner of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7007.0800, subp. 6(A)
Discovery of Deviations Endangering Human Health or the Environment Report (written): due two working days after discovery of deviation, submit a written description of any deviation endangering human health or the environment to the Commissioner. Include the following information in this written description: cause of the deviation; exact dates of the period of the deviation; if the deviation has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7007.0800, subp. 6(A)
Application for Permit Amendment: If you need a permit amendment, submit application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises, to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
Record keeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/15/97

Facility Name: Viking Waterbeds Inc

Permit Number: 14500102 - 001

Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Extension Requests: The permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not federally enforceable.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/15/97

Facility Name: Viking Waterbeds Inc

Permit Number: 14500102 - 001

Subject Item: GP 001 VOC Emission Sources**Associated Items:** EU 002 Spray Booth #1

EU 003 Spray Booth #2

SV 002

SV 003

What to do	Why to do it
VOC Usage: less than or equal to 50 tons/year using 12 Month Rolling Sum calculated monthly. Monthly usage and the total usage for the previous 12 months shall be calculated and recorded by the 15th day of the following calendar month. VOC content shall be determined as described under Material Content.	Title I Condition: Limit to avoid major source classification under 40 CFR 52.21; to avoid major source classification under 40 CFR 70.2
Total HAP Usage: less than or equal to 20 tons/year using 12 Month Rolling Sum calculated monthly. Monthly Total HAP usage and the and the Total HAP usage for the previous 12 months shall be calculated and recorded by the 15th day of the following calendar month. HAP content shall be determined as described under Material Content.	To avoid major source classification under 40 CFR 70.2 and 40 CFR 63.2
Single HAP Usage: less than or equal to 9.5 tons/year using 12 Month Rolling Sum calculated monthly. Monthly Single HAP usage and the total Single HAP usage for the previous 12 months shall be calculated and recorded by the 15th day of the following calendar month. HAP content shall be determined as described under Material Content.	To avoid major source classification under 40 CFR 70.2 and 40 CFR 63.2
Material Content: HAP and VOC content shall be determined by the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the MSDS, the highest number in the range shall be used in all compliance calculations. Other alternative methods approved by the MPCA may be used to determine the VOC and HAP content for demonstrating compliance with VOC and HAP usage limits. The Division Manager reserves the right to require the Permittee to take samples of the VOC and HAP content as per EPA reference methods for the purposes of compliance demonstration. If the EPA reference method is used, it shall supersede the MSDS.	Title I Condition: Monitoring for limit to avoid major source classification under 40 CFR 52.21; and to avoid major source classification under 40 CFR 70.2 and 40 CFR 63.2
For the first eleven months after permit issuance, compliance with the 12 month rolling sum emission limits for VOC Usage, Total HAP Usage and Single HAP Usage shall be determined based on the Permittees actual operating history prior to issuance of this permit.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/15/97

Facility Name: Viking Waterbeds Inc

Permit Number: 14500102 - 001

Subject Item: SV 001**Associated Items:** EU 001 Boiler (Plant Heating System) Manufacturer no longer in business, Manufactured between 1949 & 1955

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.6 lbs/million BTU heat input	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except that a maximum of 60% opacity shall be permissible for four minutes in any 60 minute period and that a maximum of 40% opacity shall be permissible for four additional minutes in any 60 minute period.	Minn. R. 7011.0510, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/15/97

Facility Name: Viking Waterbeds Inc

Permit Number: 14500102 - 001

Subject Item: SV 002**Associated Items:** EU 002 Spray Booth #1

GP 001 VOC Emission Sources

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/15/97

Facility Name: Viking Waterbeds Inc

Permit Number: 14500102 - 001

Subject Item: SV 003**Associated Items:** EU 003 Spray Booth #2

GP 001 VOC Emission Sources

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/15/97

Facility Name: Viking Waterbeds Inc

Permit Number: 14500102 - 001

Subject Item: CE 001 Fiberglass Filter w/o Cardboard Frame**Associated Items:** EU 002 Spray Booth #1

What to do	Why to do it
The Permittee shall use filters with a manufacturers guarantee of at least 96.5 % collection efficiency for particulate matter and particulate matter less than 10 microns.	To avoid major source classification under 40 CFR 70.2; Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14
Operate and maintain control equipment to ensure equal to or greater than 80 % capture efficiency of particulate matter and particulate matter less than 10 microns.	To avoid major source classification under 40 CFR 70.2; Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14
Monitoring and recordkeeping (Paint Filters): Visually inspect condition of filters, including but not limited to alignment, saturation, and tears and holes. Record filter(s) condition every 24 hours if in operation. Recordkeeping shall include any action taken in response to the observed filter condition, including the date and the time the filter is replaced.	Minn. R. 7011.0080; Minn. R. 7007.0800, subp. 14
The permittee shall operate the control equipment monitoring equipment at all times the control equipment is required to operate.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4
Inspect monthly, or as required by the manufacturing specification, components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14
Inspect quarterly, or as required by the manufacturing specification, components that are not subject to wear including structural components, housings, ducts and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14
Calibrate each pressure gauge annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

04/15/97

Facility Name: Viking Waterbeds Inc

Permit Number: 14500102 - 001

Subject Item: CE 002 Fiberglass Filter w/o Cardboard Frame**Associated Items:** EU 003 Spray Booth #2

What to do	Why to do it
The Permittee shall use filters with a manufacturers guarantee of at least 96.5 % collection efficiency for particulate matter and particulate matter less than 10 microns.	To avoid major source classification under 40 CFR 70.2; Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14
Operate and maintain control equipment to ensure equal to or greater than 80 % capture efficiency of particulate matter and particulate matter less than 10 microns.	To avoid major source classification under 40 CFR 70.2; Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14
Monitoring and recordkeeping (Paint Filters): Visually inspect condition of filters, including but not limited to alignment, saturation, and tears and holes. Record filter(s) condition every 24 hours if in operation. Recordkeeping shall include any action taken in response to the observed filter condition, including the date and the time the filter is replaced.	Minn. R. 7011.0080; Minn. R. 7007.0800, subp. 14
The permittee shall operate the control equipment monitoring equipment at all times the control equipment is required to operate.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4
Inspect monthly, or as required by the manufacturing specification, components that are subject to wear or plugging. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14
Inspect quarterly, or as required by the manufacturing specification, components that are not subject to wear including structural components, housings, ducts and hoods. Maintain a written record of the inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14
Calibrate each pressure gauge annually, or as often as required by manufacturing specifications and maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14

TABLE B: SUBMITTALS

04/15/97

Facility Name: Viking Waterbeds Inc
Permit Number: 14500102 - 001

Table B lists the submittals you must send to the Commissioner. Table B is divided into two sections, for source-specific submittal requirements and for submittals required of all permittees. Source-specific submittals are further organized as either one-time only or recurrent requirements. You may also be subject to additional reporting requirements contained in the compliance schedule located in Table C of this permit. All submittals must be postmarked or received by the date specified in the table, and certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Submittals which must be provided on standardized forms approved by the Commissioner are noted in Tables B and C.

Send any application for a permit or permit amendment to: Permit Information Coordinator, Permit Section, Air Quality Division, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4914. Also send the Permit Information Coordinator notices of: accumulated insignificant activities, installation of control equipment, replacement of an emissions unit, and changes that contravene a permit term.

Send all other submittals to: Compliance Tracking Coordinator, Compliance Determination Unit, Air Quality Division, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

TABLE B: RECURRENT SUBMITTALS

04/15/97

Facility Name: Viking Waterbeds Inc

Permit Number: 14500102 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance . The first report covers January 1 - June 30. The second report covers July 1 - December 31.	Total Facility
Compliance Certification	due 30 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner. The report covers all deviations experienced during the calendar year.	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

TECHNICAL SUPPORT DOCUMENT
For
DRAFT AIR EMISSION PERMIT NO. 14500102-001

This technical support document is for all the interested parties of the draft permit and to meet the requirements that have been set forth by the federal regulations and Minnesota Rules (40 CFR, Section 70.7(a)(5) and Minn. R. 7007.0850, subp. 1.) The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the draft permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 2511)
Viking Waterbeds, Inc.	Viking Waterbeds, Inc.
38169 County Road 2	38169 County Road 2
St. Joseph, Minnesota 56374	St. Joseph, Minnesota 56374

1.2. Description Of The Permit Action

This permit is a non-expiring State Total Facility Operating Permit. Emission units at the existing facility include two spraybooths with fiberglass filters and a boiler used for plant heating. Insignificant activities, as defined in Minn. R. 7007.0500, subpart 2, item C, subitem 2, include 13 wood milling machines. Exhaust from these milling machines is collected by a fabric filter dust collection system that is vented indoors. The permit action is a synthetic minor for Volatile Organic Compounds (VOCs) under 40 CFR 52.21 and 40 CFR 70.2 and for Hazardous Air Pollutants (HAPs) under 40 CFR 70.2 and 40 CFR 63.2. Neither an Environmental Assessment Worksheet (EAW) nor an Environmental Impact Statement (EIS) is required. A complete permit application was received by the Minnesota Pollution Control Agency on September 27, 1996.

1.3. Emissions of the Facility

Table 1. Total Facility Potential to Emit Summary and Attainment Status:

Pollutant	Potential to Emit (Tons/year =TPY)	Attainment or Unclassified? (Yes or No)
Particulate Matter (PM)	34.7	N/A
Particulate Matter less than 10 micron (PM ₁₀)	34.2	Yes
Sulfur Dioxide (SO ₂)	0.1	Yes
Nitrogen Oxides (NO _x)	1.3	Yes
Volatile Organic Compounds (VOCs)/Ozone	50.7	Yes
Carbon Monoxide (CO)	1.9	Yes
Lead	0.0	Yes
Hazardous Air Pollutants (Total HAP)	20.0	N/A
Hazardous Air Pollutants (each individual HAP)	9.5	N/A

Table 2. Facility Classification

Classification	Major	Synthetic Minor	Minor	N/A
Prevention of Significant Deterioration		X		
Non Attainment Area (list pollutant)				X
Operating Permit Program		X		

2. Regulatory and/or Statutory Basis of Emission Limit

Overall Facility Requirements:

All general requirements are listed at the total facility level. See attached CD-01 forms for specific limits. The Permittee is required to submit an annual compliance certification which evaluates the compliance status of the facility. The Permittee must determine and certify that the facility is in compliance with all permit limits and requirements, all applicable requirements and Minn. R. 7007.0100 to 7007.1850.

Summary of Emission Limit and Regulatory and/or Statutory Basis of the Emission Limit:

Control Equipment I.D.	N/A
Stack/Vent I.D.:	SV002, 003
Emission Unit I.D./	EU 002, 003
Description:	VOC Emission Sources (GP 001): Spray Booth #1 and Spray Booth #2
Emission Limit and/or Special Conditions:	See CD-01 forms for limits and basis
Factual and legal basis for above:	See CD-01 forms for limits and basis
Comments:	The usage of VOC and HAPs are limited to below major source thresholds using a 12 month rolling sum calculated monthly. Records will be kept using purchase records.
Control Equipment I.D.	N/A
Stack/Vent I.D.:	SV 001
Emission Unit I.D.	EU 001
Description:	Boiler (plant heating system)
Emission Limit and/or Special Conditions:	See CD-01 forms for limits and basis
Factual and legal basis for above:	See CD-01 forms for limits and basis
Control Equipment I.D.	CE 001
Stack/Vent I.D.:	SV 002
Emission Unit I.D./	EU 002
Description:	Spray Booth #1
Emission Limit and/or Special Conditions:	See CD-01 forms for limits and basis
Factual and legal basis for above:	See CD-01 forms for limits and basis
Comments:	The spraybooth is required to achieve 80% capture and 96.5% collection efficiency of Total Particulate Matter and Particulate Matter less than 10 microns. The spraybooth must be maintained as shown under the "What to do" column for Subject Item: CE 001 in the draft permit. The grain loading limit on this stack/vent will be met with the fiberglass filter.

Control Equipment I.D.	CE 002
Stack/Vent I.D.:	SV 003
Emission Unit I.D./	EU 003
Description:	Spray Booth #2
Emission Limit and/or Special Conditions:	See CD-01 forms for limits and basis
Factual and legal basis for above:	See CD-01 forms for limits and basis
Comments:	The spraybooth is required to achieve 80% capture and 96.5% collection efficiency of Total Particulate Matter and Particulate Matter less than 10 microns. The spraybooth must be maintained as shown under the "What to do" column for Subject Item: CE 002 in the draft permit. The grain loading limit on this stack/vent will be met with the fiberglass filter.

3. Conclusion

Based on the information provided by Viking Waterbeds, Inc., the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 14500102-001, and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Attachments:

1. GI-07 Facility Emission Summary
2. MPCA emission calculations

Need further information?

Permit Engineer: Jolene K. Durand
Telephone No.: (612)296-7773