CONSTRUCTION PERMIT and
MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR MANAGEMENT

Trail Lite Division of R-Vision Inc.
2666 S. Country Club Road
Warsaw, Indiana 46580

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

Operation Permit No.: MSOP 085-11470-00078	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary travel trailer and camper manufacturing source.

Authorized Individual:	William J. Devos
Source Address:	2666 S. Country Club Road, Warsaw, Indiana 46580
Mailing Address:	2666 S. Country Club Road, Warsaw, Indiana 46580
Phone Number:	219-268-2111
SIC Code:	3792
County Location:	Kosciusko
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD; Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

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

(a) Line 1 installed in August 1997, consisting of the following equipment:

(1) One (1) woodworking area consisting of four (4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood1.1, controlled by a cyclone known as W1.1, exhausted to stack W1.1, capacity: 1,460 pounds of wood per hour.

(2) One (1) assembly area consisting of laminating, painting, coating and adhesive application, known as Assembly1, exhausted to GV1.1, capacity: 2.5 trailers per hour.

(3) One (1) MIG welding station, known as MIG1.1, exhausted inside the plant, capacity: 1.0 pound of wire per hour.

(4) One (1) oxyacetylene flame cutter, known as FC1.1, exhausted inside the plant, capacity: 40.0 inches per minute.

(5) Four (4) natural gas fired space heaters, known as H1.1 - H1.4, exhausted to stacks H1.1 - H1.4, capacity: 0.225, 0.125, 0.10, and 0.075 million British thermal units per hour, respectively.

(b) Line 2 installed in April 1998, consisting of the following equipment:

(1) One (1) woodworking area consisting of four(4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood2, controlled by a cyclone known as W2.1, exhausted to stack W2.1, capacity: 1,500 pounds of wood per hour.

(2) One (1) assembly and touch-up area, consisting of, various aerosol cans, caulk guns, and hand-held cup guns, known as Assembly2, exhausted to general ventilation, capacity: 2.5 trailers per hour.

(3) One (1) roll coating lamination process, known as L2.1, exhausted to stack L2.1, capacity: 2.5 trailers per hour.

(4) One (1) MIG welding station, known as MIG2.1, exhausted through general ventilation, capacity: 0.5 pounds of wire per hour.

(5) Four (4) natural gas fired space heaters, known as H2.1 - H2.4, exhausted to stacks H2.1 - H2.4, capacity: 0.125 million British thermal units per hour, each.

(6) Five (5) natural gas fired space heaters, known as H2.5 - H2.9, exhausted to stacks H2.5 - H2.9, capacity: 0.20 million British thermal units per hour, each.

(c) Line 3 installed in November 1998, consisting of the following equipment:

(1) One (1) woodworking area, consisting of four (4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood3, controlled by a cyclone known as W3.1, exhausted to stack W3.1, capacity: 1,500 pounds of wood per hour.

(2) One (1) assembly and touch-up area, consisting of various aerosol cans, caulk guns, and hand-held cup guns, known as Assembly3, exhausted to general ventilation, capacity: 2.5 trailers per hour.

(3) One (1) roll coating lamination process, known as L3.1, exhausted to general ventilation, capacity: 2.5 trailers per hour.

(4) Two (2) MIG welding stations, known as MIG3.1 and MIG3.2, exhausted through general ventilation, capacity: 1.0 pound of wire per hour, each.

(5) Five (5) natural gas fired space heaters, known as H3.1 - H3.3, H3.5, and H3.6, exhausted to stacks H3.1 - H3.3, H3.5, and H3.6, capacity: 0.15 million British thermal units per hour, each.

(6) Seven (7) natural gas fired space heaters, known as H3.4 and H3.7 - H3.12, exhausted to stacks H3.1 - H3.3 and H3.5 and H3.6, capacity: 0.125 million British thermal units per hour, each.

(d) Line 4 installed in September 1999, consisting of the following equipment:

(1) One (1) woodworking area consisting of four (4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood4, controlled by a cyclone known as W4.1, exhausted to stack W4.1, capacity: 1,500 pounds of wood per hour.

(2) One (1) assembly area, consisting of various aerosol cans, brushing and spraying applications, known as Assembly4, exhausted to general ventilation, capacity: 2.0 trailers per hour.

(3) Eight (8) natural gas fired space heaters, known as H4.1 - H4.8, exhausted to stack H4.1 - H4.8, rated at 0.10 million British thermel unit per our, each.

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled "Minor Source Operating Permit", all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section.

(1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section prior to beginning operation of the facilities.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).

(e) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

(a) The total source potential to emit of all criteria pollutants is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

(b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM prior to making the change.

(c) Any change or modification which may increase potential to emit to 10 tons per year of any single hazardous air pollutant, twenty-five tons per year of any combination of hazardous air pollutants, or 100 tons per year of any other regulated pollutant from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAM prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.
[326 IAC 2-7-6(6)]

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)]:

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAM, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Testing Requirements

C.9 Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Maintenance of Monitoring Equipment [IC 13-14-1-13]

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.12 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.13 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within “normal” parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

Record Keeping and Reporting Requirements

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.16 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-Annual Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(d) Unless otherwise specified in this permit, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) A malfunction as described in 326 IAC 1-6-2; or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.18 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Line 1 through Line 4

(a) Line 1 installed in August 1997, consisting of the following equipment:
- (1) One (1) woodworking area consisting of four (4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood1.1, controlled by a cyclone known as W1.1, exhausted to stack W1.1, capacity: 1,460 pounds of wood per hour.
- (2) One (1) assembly area consisting of laminating, painting, coating and adhesive application, known as Assembly1, exhausted to GV1.1, capacity: 2.5 trailers per hour.
- (3) One (1) MIG welding station, known as MIG1.1, exhausted inside the plant, capacity: 1.0 pound of wire per hour.
- (4) One (1) oxyacetylene flame cutter, known as FC1.1, exhausted inside the plant, capacity: 40.0 inches per minute.
- (5) Four (4) natural gas fired space heaters, known as H1.1 - H1.4, exhausted to stacks H1.1 - H1.4, capacity: 0.225, 0.125, 0.10, and 0.075 million British thermal units per hour, respectively.

(b) Line 2 installed in April 1998, consisting of the following equipment:
- (1) One (1) woodworking area consisting of four(4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood2, controlled by a cyclone known as W2.1, exhausted to stack W2.1, capacity: 1,500 pounds of wood per hour.
- (2) One (1) assembly and touch-up area, consisting of, various aerosol cans, caulk guns, and hand-held cup guns, known as Assembly2, exhausted to general ventilation, capacity: 2.5 trailers per hour.
- (3) One (1) roll coating lamination process, known as L2.1, exhausted to stack L2.1, capacity: 2.5 trailers per hour.
- (4) One (1) MIG welding station, known as MIG2.1, exhausted through general ventilation, capacity: 0.5 pounds of wire per hour.
- (5) Four (4) natural gas fired space heaters, known as H2.1 - H2.4, exhausted to stacks H2.1 - H2.4, capacity: 0.125 million British thermal units per hour, each.
- (6) Five (5) natural gas fired space heaters, known as H2.5 - H2.9, exhausted to stacks H2.5 - H2.9, capacity: 0.20 million British thermal units per hour, each.

(c) Line 3 installed in November 1998, consisting of the following equipment:
- (1) One (1) woodworking area, consisting of four (4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood3, controlled by a cyclone known as W3.1, exhausted to stack W3.1, capacity: 1,500 pounds of wood per hour.
- (2) One (1) assembly and touch-up area, consisting of various aerosol cans, caulk guns, and hand-held cup guns, known as Assembly3, exhausted to general ventilation, capacity: 2.5 trailers per hour.
- (3) One (1) roll coating lamination process, known as L3.1, exhausted to general ventilation, capacity: 2.5 trailers per hour
- (4) Two (2) MIG welding stations, known as MIG3.1 and MIG3.2, exhausted through general ventilation, capacity: 1.0 pound of wire per hour, each.
- (5) Five (5) natural gas fired space heaters, known as H3.1 - H3.3, H3.5, and H3.6, exhausted to stacks H3.1 - H3.3, H3.5, and H3.6, capacity: 0.15 million British thermal units per hour, each.
- (6) Seven (7) natural gas fired space heaters, known as H3.4 and H3.7 - H3.12, exhausted to stacks H3.1 - H3.3 and H3.5 and H3.6, capacity: 0.125 million British thermal units per hour, each.

(d) Line 4 installed in September 1999, consisting of the following equipment:
- (1) One (1) woodworking area consisting of four (4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood4, controlled by a cyclone known as W4.1, exhausted to stack W4.1, capacity: 1,500 pounds of wood per hour.
- (2) One (1) assembly area, consisting of various aerosol cans, brushing and spraying applications, known as Assembly4, exhausted to general ventilation, capacity: 2.0 trailers per hour.
- (3) Eight (8) natural gas fired space heaters, known as H4.1 - H4.8, exhausted to stack H4.1 - H4.8, rated at 0.10 million British thermel unit per our, each.

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

Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3]

(a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from:

(1) Wood1 shall not exceed 3.32 pounds per hour when operating at a process weight rate of 1,460 pounds per hour.

(2) Wood2, Wood3 and Wood4 shall not exceed 3.38 pounds per hour, each when operating at a process weight rate of 1,500 pounds per hour, each.

The pounds per hour limitations were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 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.

(b) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from Assembly 1 through Assembly4 and welding operations 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

or

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

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour.

D.1.2 Volatile Organic Compounds (VOC)

The input VOC usage in Assembly1 through Assembly4, shall be limited to less than fifteen (15) pounds per day, each. Therefore, 326 IAC 8-2-9 and 326 IAC 8-2-12 do not apply.

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control devices.

Compliance Determination Requirements [326 IAC 2-1.1-11]

D.1.4 Testing Requirements [326 IAC 2-1.1-11]

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

D.1.5 Volatile Organic Compounds (VOC)

Compliance with the VOC content limitation contained in Conditions D.1.2 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, OAM, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.6 Particulate Matter (PM)

The cyclones for PM control shall be in operation at all times when the woodworking units are in operation.

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

D.1.7 Visible Emissions Notations

(a) Daily visible emission notations of the Wood1.1, Wood2.1, Wood3.1 and Wood4.1 stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.8 Cyclone Inspections

An inspection shall be performed each calender quarter of all cyclones controlling the woodworking operations when venting to the atmosphere. A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.

D.1.9 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.10 Record Keeping Requirement

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

(1) The amount of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The cleanup solvent usage for each day;

(4) The total VOC usage for each day; and

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

(b) To document compliance with Condition D.1.7, the Permittee shall maintain records of daily visible emission notations of the all the cyclones stack exhaust.

(c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8 and the dates the vents are redirected.

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
Monthly Report

Source Name: Trail Lite Division of R-Vision
Source Address: 2666 S. Country Club Road, Warsaw, Indiana 46580
Mailing Address: 2666 S. Country Club Road, Warsaw, Indiana 46580
Permit No.: MSOP 085-11470-00078
Facility: Assembly1, Assembly2, Assembly3 and Assembly4
Parameter: VOC usage
Limit: Less than fifteen (15) pounds per day, each on metal

Month: _____ **Year:** _____

Day	Facility____ (lbs/day)	Facility____ (lbs/day)	Facility____ (lbs/day)	Day	Facility____ (lbs/day)	Facility____ (lbs/day)	Facility____ (lbs/day)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				no. of deviations			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on:

Submitted by:

Title/Position:

Signature:

Date:

Phone:

Indiana Department of Environmental Management

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES ?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: Trail Lite Division of R-Vision Inc. PHONE NO. : 219 - 268 - 2111
LOCATION: (CITY AND COUNTY) Warsaw / Kosciusko
PERMIT NO. MSOP 035-11470 AFS PLANT ID: 11470-00078 AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM / PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

*** Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____

_____

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

MINOR SOURCE OPERATING PERMIT ANNUAL NOTIFICATION

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

Company Name:	**Trail Lite Division of R-Vision Inc.**
Address:	**2666 S Country Club Road**
City:	**Warsaw, Indiana 46580**
Phone #:	**219-268-2111**
MSOP #:	**085-11470-00078**

I hereby certify that Trail Lite Division of R-Vision Inc is

9 still in operation.
9 no longer in operation.

I hereby certify that Trail Lite Division of R-Vision Inc is

9 in compliance with the requirements of MSOP **085-11470-00078**.
9 not in compliance with the requirements of MSOP **085-11470-00078**.

Authorized Individual (typed):	**William Devos**
Title:	
Signature:	
Date:	

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

Noncompliance:

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

PART 70 OPERATING PERMIT
SEMI-ANNUAL COMPLIANCE MONITORING REPORT

Source Name: Trail Lite Division of R-Vision Inc
Source Address: 2666 S. Country Club Road, Warsaw, Indiana 46580
Mailing Address: 2666 S. Country Club Road, Warsaw, Indiana 46580
Permit No.: 085-11470-0007

Months: _____ **to** _____ **Year:** _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted semi-annually. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (e.g. Permit Condition D.1.3)	**Number of Deviations**	**Date of each Deviation**

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for New Construction and Operation

Source Name:	**Trail Lite Division of R-Vision Inc.**
Source Location:	**2666 S. Country Club Road, Warsaw, Indiana 46580**
County:	**Kosciusko**
Construction Permit No.:	**MSOP 085-11470-00078**
SIC Code:	**3792**
Permit Reviewer:	**Paula M. Miano**

On January 8, 2000, the Office of Air Management (OAM) had a notice published in the Times Union, Warsaw, Indiana, stating that Trail Lite Division of R-Vision Inc. had applied for a construction permit to construct and operate a travel trailer and camper manufacturing source with control. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On February 4, 2000, Sara R. Cupp of Triad Engineering Inc. submitted comments on the proposed construction permit. The comments and corresponding responses are as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded.**

Comment 1:

Section A.1 (page 4 of 24) incorrectly states the source's phone number as 219-168-2111. Please correct the phone number to 219-268-2111.

Response 1:

The following change has been made:

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

The Permittee owns and operates a stationary travel trailer and camper manufacturing source.

Authorized Individual:	William J. Devos
Source Address:	2666 S. Country Club Road, Warsaw, Indiana 46580
Mailing Address:	2666 S. Country Club Road, Warsaw, Indiana 46580
Phone Number:	~~219-168-2111~~ **219-268-2111**
SIC Code:	3792
County Location:	Kosciusko
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD; Minor Source, Section 112 of the Clean Air Act

Comment 2:

Section D.1.10 (page 19 of 24) indicates that various record keeping is required on a daily basis in order to demonstrate that each assembly area has actual volatile organic compound (VOC) emissions less than 15 pounds per day in order to avoid the requirement of 326 IAC 8-2-9. 326 IAC 8-2-9 requires coatings applied to metal contain 3.5 pounds or less of VOC per gallon minus water.

Trial Lite uses numerous coatings adhesives and cleaners in their final product assembly areas. There are 20 -25 materials used per line which consist of aerosol can products, caulking guns, etc. Tracking these items on a daily basis will be overly burdensome for the facility as it will require a great deal of time and effort to reach a known conclusion, that each line emits less than 15 pounds per day.

Trial requests that Trail Lite be allowed to calculate daily emissions on a monthly basis using purchase records and other available information at the plant.

Response 2:

The source has agreed to limit their VOC emissions from each assembly area to 15 pounds per day in order to avoid the requirement of 326 IAC 8-2-9. The limit is based on daily usage and not monthly usage; therefore, a monthly average can not be used to comply with this limit. The attached report form was inadvertently left out and has been added.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
Monthly Report

Source Name: Trail Lite Division of R-Vision
Source Address: 2666 S. Country Club Road, Warsaw, Indiana 46580
Mailing Address: 2666 S. Country Club Road, Warsaw, Indiana 46580
Permit No.: MSOP 085-11470-00078
Facility: Assembly1, Assembly2, Assembly3 and Assembly4
Parameter: VOC usage
Limit: Less than fifteen (15) pounds per day, each on metal

Month: _____ **Year:** _____

Day	Facility____ (lbs/day)	Facility____ (lbs/day)	Facility____ (lbs/day)	Day	Facility____ (lbs/day)	Facility____ (lbs/day)	Facility____ (lbs/day)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				no. of deviations			

9 **No deviation occurred in this month.**

9 **Deviation/s occurred in this month.**

Deviation has been reported on:

Submitted by:

Title/Position:

Signature:

Date:

Phone:

Indiana Department of Environmental Management
Office of Air Management

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

Source Background and Description

Source Name:	**Trail Lite Division of R-Vision Inc.**
Source Location:	**2666 S. Country Club Road, Warsaw, Indiana 46580**
County:	**Kosciusko**
SIC Code:	**3792**
Operation Permit No.:	**MSOP 085-11470-00078**
Permit Reviewer:	**Paula M. Miano**

The Office of Air Management (OAM) has reviewed an application from Trail Lite Division of R-Vision Inc. relating to the construction and operation of a travel trailer and camper manufacturing source.

History

On October 18, 1999, Trail Lite Division of R-Vision Inc. submitted an application to the OAM requesting to add Line 4. Trail Lite Division of R-Vision Inc. was issued CP 085-10349-00078, on February 24, 1999, CP 085-9682-00078, on June 10, 1998; and CP 085-8946-00073, issued on May 21, 1998 for Lines 1 through 3. Since Line 4 has been constructed and the entire source will keep its minor source status, this MSOP is proposed for the entire source.

The potential to emit of the total source would fall under registration levels. Thus a total source registration could be issued. However, 326 IAC 2-5.1-2(i) will not allow registrations to limit potential to emit. The woodworking operations require rule 326 IAC 6-3 to apply. This limits the source's potential to emit. Therefore, an MSOP is issued.

Permitted Emission Units and Pollution Control Equipment

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

(a) Line 1 installed in August 1997, consisting of the following equipment:

(1) One (1) woodworking area consisting of four (4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood1.1, controlled by a cyclone known as W1.1, exhausted to stack W1.1, capacity: 1,460 pounds of wood per hour.

(2) One (1) assembly area consisting of laminating, painting, coating and adhesive application, known as Assembly1, exhausted to GV1.1, capacity: 2.5 trailers per hour.

(3) One (1) MIG welding station, known as MIG1.1, exhausted inside the plant, capacity: 1.0 pound of wire per hour.

(4) One (1) oxyacetylene flame cutter, known as FC1.1, exhausted inside the plant, capacity: 40.0 inches per minute.

(5) Four (4) natural gas fired space heaters, known as H1.1 - H1.4, exhausted to stacks H1.1 - H1.4, capacity: 0.225, 0.125, 0.10, and 0.075 million British thermal units per hour, respectively.

(b) Line 2 installed in April 1998, consisting of the following equipment:

(1) One (1) woodworking area consisting of four(4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood2, controlled by a cyclone known as W2.1, exhausted to stack W2.1, capacity: 1,500 pounds of wood per hour.

(2) One (1) assembly and touch-up area, consisting of, various aerosol cans, caulk guns, and hand-held cup guns, known as Assembly2, exhausted to general ventilation, capacity: 2.5 trailers per hour.

(3) One (1) roll coating lamination process, known as L2.1, exhausted to stack L2.1, capacity: 2.5 trailers per hour.

(4) One (1) MIG welding station, known as MIG2.1, exhausted through general ventilation, capacity: 0.5 pounds of wire per hour.

(5) Four (4) natural gas fired space heaters, known as H2.1 - H2.4, exhausted to stacks H2.1 - H2.4, capacity: 0.125 million British thermal units per hour, each.

(6) Five (5) natural gas fired space heaters, known as H2.5 - H2.9, exhausted to stacks H2.5 - H2.9, capacity: 0.20 million British thermal units per hour, each.

(c) Line 3 installed in November 1998, consisting of the following equipment:

(1) One (1) woodworking area, consisting of four (4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood3, controlled by a cyclone known as W3.1, exhausted to stack W3.1, capacity: 1,500 pounds of wood per hour.

(2) One (1) assembly and touch-up area, consisting of various aerosol cans, caulk guns, and hand-held cup guns, known as Assembly3, exhausted to general ventilation, capacity: 2.5 trailers per hour.

(3) One (1) roll coating lamination process, known as L3.1, exhausted to general ventilation, capacity: 2.5 trailers per hour.

(4) Two (2) MIG welding stations, known as MIG3.1 and MIG3.2, exhausted through general ventilation, capacity: 1.0 pound of wire per hour, each.

(5) Five (5) natural gas fired space heaters, known as H3.1 - H3.3, H3.5, and H3.6, exhausted to stacks H3.1 - H3.3, H3.5, and H3.6, capacity: 0.15 million British thermal units per hour, each.

(6) Seven (7) natural gas fired space heaters, known as H3.4 and H3.7 - H3.12, exhausted to stacks H3.1 - H3.3 and H3.5 and H3.6, capacity: 0.125 million British thermal units per hour, each.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

(d) Line 4 installed in September 1999, consisting of the following equipment:

(1) One (1) woodworking area consisting of four (4) table saws, three (3) cut-off saws, one (1) band saw and one (1) belt sander, known as Wood4, controlled by a cyclone known as W4.1, exhausted to stack W4.1, capacity: 1,500 pounds of wood per hour.

(2) One (1) assembly area, consisting of various aerosol cans, brushing and spraying applications, known as Assembly4, exhausted to general ventilation, capacity: 2.0 trailers per hour.

(3) Eight (8) natural gas fired space heaters, known as H4.1 - H4.8, exhausted to stack H4.1 - H4.8, rated at 0.10 million British thermel unit per our, each.

New Emission Units and Pollution Control Equipment

There are no new emission units at the source.

Existing Approvals

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

(a) CP 085-10349-00078, issued on February 24, 1999; and

(b) CP 085-9682-00078, issued on June 10, 1998; and

(c) CP 085-8946-00073, issued on May 21, 1998.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
Unpermitted W4.1	Woodworking	27.0	1.67	4500	Ambient
Unpermitted H4.1 - H4.8	Space heaters	27.0	0.33	Nat draft	100
Existing W3.1	Woodworking	25.0	1.67	4500	Ambient
Existing H3.1 - H3.4	Space heaters	24.0	0.33	Nat draft	100
Existing H3.5 - H3.9	Space heaters	27.0	0.33	Nat draft	100
Existing H3.10 - H3.12	Space heaters	24.0	0.33	Nat draft	100

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
Existing W2.1	Woodworking	25.0	1.67	4500	Ambient
Existing L2.1	Lamination	21.0	0.75	516	Ambient
Existing H2.1 - H2.6	Space heaters	28.0	0.33	Nat draft	100
Existing H2.7 - H2.9	Space heaters	15.0	0.33	Nat draft	100
Existing H1.1	Space heater	30.0	0.67	2000	100
Existing H1.2 - H1.4	Space heaters	36.0	0.5	2000	100
Existing W1.1	Woodworking	25.0	1.67	4500	Ambient
Existing GV1.1	Assembly	13.0	3.0	Unknown	70

Enforcement Issue

(a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled *Unpermitted Emission Units and Pollution Control Equipment.*

(b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 18, 1999, with additional information received on November 22, and December 16, 1999.

Emission Calculations

See Appendix A pages 1 through 8 of 8, of this document for detailed emissions calculations.

Potential To Emit - Unpermitted Equipment

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit for the unpermitted equipment is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	**Potential To Emit** (tons/year)
PM	11.8
PM_{10}	11.9
SO_2	0.002
VOC	5.15
CO	0.290
NO_X	0.350

HAPs	**Potential To Emit** (tons/year)
MEK	less than ten
Glycol Ethers	less than ten
Toluene	less than ten
Vinyl Acetate	less than ten
Manganese	less than ten
Nickel	less than ten
Chromium	less than ten
Benzene	less than ten
Dichlorobenzene	less than ten
Formaldehyde	less than ten
Hexane	less than ten
Lead	less than ten
Cadmium	less than ten
TOTAL	less than twenty-five

The potentials to emit (as defined in 326 IAC 2-5.1-2) of PM and PM_{10} are equal to or less than twenty-five (25) tons per year and greater than five (5) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2.

Potential To Emit - Entire Source

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit for the entire source is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	**Potential To Emit** (tons/year)
PM	59.5
PM_{10}	59.6
SO_2	0.012
VOC	23.6
CO	1.63
NO_X	1.94

HAPs	**Potential To Emit** (tons/year)
MEK	less than ten
Glycol Ethers	less than ten
Toluene	less than ten
Vinyl Acetate	less than ten
Manganese	less than ten
Nickel	less than ten
Chromium	less than ten
Benzene	less than ten
Dichlorobenzene	less than ten
Formaldehyde	less than ten
Hexane	less than ten
Lead	less than ten
Cadmium	less than ten
TOTAL	less than twenty-five

(a) The potentials to emit (as defined in the Indiana Rule) of PM_{10} are equal to or greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5 and 326 IAC 2-6.

(b) 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 particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits and controls, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM_{10}	SO_2	VOC	CO	NO_X	HAPS
Existing Line 1	6.33	6.35	0.001	2.75	0.190	0.230	1.97
Existing Line 2	2.83	2.87	0.004	2.78	0.550	0.660	2.29
Existing Line 3	2.99	3.03	0.004	2.78	0.600	0.710	2.29
New Line 4	2.46	2.48	0.002	2.76	0.290	0.35	1.79
Total Emissions	14.6	14.7	0.011	11.1	1.63	1.95	8.34

Note: VOC emissions from surface coating operations are limited to less than 15 pounds per day for each line. HAPS emissions were proportioned to reflect the 15 pounds per day VOC limit for each line.

County Attainment Status

The source is located in Kosciusko County.

Pollutant	**Status**
PM_{10}	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

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

(b) Kosciusko County has been classified as attainment or unclassifiable for all criteria. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

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

Pollutant	**Emissions** (ton/yr)
PM	12.2
PM_{10}	12.3
SO_2	0.009
VOC	18.4
CO	1.34
NO_X	1.60

(a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions were based on calculations of the PSD definition potential emissions for the existing permitted emission units.

Proposed Modification

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

Pollutant	PM (ton/yr)	PM_{10} (ton/yr)	SO_2 (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO_X (ton/yr)
Proposed Modification	2.46	2.48	0.002	2.76	1.63	0.350
PSD Threshold Levels	250	250	250	250	250	250

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

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit CP 085-11470-00078, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPS is less than 25 tons/year.

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

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Kosciusko County and the potential to emit any criteria pollutants is less than one-hundred (100) tons per year tons per year; therefore, 326 IAC 2-6 does not apply.

The source will be required to annually submit a statement of the actual emissions of all federally regulated pollutants from the source, for the purpose of fee assessment.

326 IAC 5-1 (Opacity Limitations)

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

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

(a) The particulate matter (PM) from the welding operations 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

or

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

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour.

(b) The particulate matter (PM) from the woodworking operations shall be limited by the following:

(1) The allowable PM emission rate from the woodworking operations controlled by cyclone W1.1 shall not exceed 3.32 pounds per hour when operating at a process weight rate of 1,460 pounds per hour.

The cyclone shall be in operation at all times the woodworking equipment is in operation, in order to comply with this limit.

(2) The allowable PM emission rate from each of the woodworking operations controlled by cyclones W2.1. W3.1 and W4.1 shall not exceed 3.38 pounds per hour, each when operating at a process weight rate of 1,560 pounds per hour, each.

The cyclones shall be in operation at all times that the woodworking equipment is in operation, in order to comply with this limit.

(c) The particulate matter (PM) from the assembly and touch-up operations 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

or

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

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

Assembly1 through Assembly4 are not subject to the requirements of this rule because the potential VOC potential emissions are less than 25 tons per year, each.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Assembly1 through Assembly4 are not subject to the requirements of this rule because the potential VOC emissions are limited to less than 15 pounds per day, each.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

Assembly1 through Assembly4 are not subject to the requirements of this rule because the potential VOC emissions are limited to less than 15 pounds per day, each.

Air Toxic Emissions

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

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

(b) See attached calculations, pages 3 and 4 of 8 of Appendix A for detailed air toxic calculations.

Conclusion

The construction and operation of the construction and operation of travel trailer and camper manufacturing operation shall be subject to the conditions of the attached proposed Minor Source Operating Permit 085-11470-00078.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations
Assembly and Touch-Up Booth

Company Name: Trail Lite Division of R-Vision Inc.
Address City IN Zip: 2666 S. Country Club Road, Warsaw, Indiana 46580
MSOP: 085-11470
Plt ID: 085-00078
Reviewer: Paula M. Miano
Date: October 18, 1999

Material	Density (lbs/gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency	Material
Line 1																	
Acrylic Laquer Thinner, 3613S	6.61	100.00%	0.0%	100.0%	0.0%	0.00%	0.00133	2.500	6.61	6.61	0.02	0.53	0.10	0.00	n/a	100%	fiberglass
Adhesive Spray, 3M 90	5.84	89.00%	0.0%	89.0%	0.0%	11.00%	0.00063	2.500	5.20	5.20	0.01	0.20	0.04	0.00	47.25	50%	wood
Body Filler 6370	9.95	26.00%	0.0%	26.0%	0.0%	74.00%	0.00273	2.500	2.59	2.59	0.02	0.42	0.08	0.11	3.50	50%	fiberglass
Rubbing Compound 711-G	10.00	56.00%	0.0%	56.0%	0.0%	6.90%	0.00273	2.500	5.60	5.60	0.04	0.92	0.17	0.07	81.16	50%	fiberglass
Paint B8951-L	8.88	57.70%	0.0%	57.7%	0.0%	27.90%	0.00297	2.500	5.12	5.12	0.04	0.91	0.17	0.06	18.36	50%	fiberglass
Glass Cleaner	8.26	99.00%	87.9%	12.0%	85.0%	0.10%	0.04688	2.500	6.61	0.99	0.12	2.79	0.51	0.02	991.20	50%	m,p,f
ABS Pipe Cement	7.26	78.00%	0.0%	78.0%	0.0%	22.00%	0.02344	2.500	5.66	5.66	0.33	7.96	1.45	0.00	25.74	100%	plastic
Crazy Clean Cleaner	8.17	93.10%	85.2%	7.9%	85.3%	0.40%	0.02992	2.500	4.39	0.65	0.05	1.16	0.21	0.09	161.36	50%	m,p,f
Acrylic Color Blender DXA100	7.11	96.50%	0.0%	96.5%	2.5%	48.00%	0.00391	2.500	7.04	6.86	0.07	1.61	0.29	0.01	14.29	50%	fiberglass
Gelcoat, Black GV30763	9.37	38.00%	0.0%	38.0%	0.0%	52.60%	0.00039	2.500	3.56	3.56	0.00	0.08	0.02	0.01	6.77	50%	fiberglass
Gelcoat, White GV42000	10.68	35.00%	0.0%	35.0%	0.0%	50.40%	0.00078	2.500	3.74	3.74	0.01	0.17	0.03	0.03	7.42	50%	fiberglass
Methyl Ethyl Ketone Peroxide	9.26	3.00%	0.0%	3.0%	0.0%	97.00%	0.00039	2.500	0.28	0.28	0.00	0.01	0.00	0.00	0.29	100%	fiberglass
Silicone Caulk SM5731	11.84	3.30%	0.0%	3.3%	0.0%	96.70%	0.07813	2.500	0.39	0.39	0.08	1.83	0.33	0.00	0.40	100%	m,p,f
Silicone Caulk SM5732	8.67	3.10%	0.0%	3.1%	0.0%	96.90%	0.04688	2.500	0.27	0.27	0.03	0.76	0.14	0.00	0.28	100%	m,p,f
Silicone Caulk SM5770	10.73	0.00%	0.0%	0.0%	0.0%	100.00%	0.21875	2.500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	m,p,f
Polyurethane Sealant SM7100	13.34	3.00%	0.0%	3.0%	0.0%	97.00%	0.37109	2.500	0.40	0.40	0.37	8.91	1.63	0.00	0.41	100%	m,p,f
Wood Glue, Wood Lock 40-0294	9.30	52.00%	51.8%	0.2%	51.8%	48.00%	0.25000	2.500	0.04	0.02	0.01	0.28	0.05	0.00	0.04	100%	wood
Clear PVC Solvent Cement	7.51	88.00%	0.0%	88.0%	0.0%	12.00%	0.00781	2.500	6.61	6.61	0.13	3.10	0.57	0.00	55.07	100%	plastic
Subtotal												**31.64**	**5.77**	**0.40**			
Line 2																	
Acrylic Laquer Thinner, 3613S	6.61	100.00%	0.0%	100.0%	0.0%	0.00%	0.00133	2.500	6.61	6.61	0.02	0.53	0.10	0.00	n/a	100%	fiberglass
Adhesive Spray, 3M 90	5.84	89.00%	0.0%	89.0%	0.0%	11.00%	0.00063	2.500	5.20	5.20	0.01	0.20	0.04	0.00	47.25	50%	wood
Body Filler 6370	9.95	26.00%	0.0%	26.0%	0.0%	74.00%	0.00273	2.500	2.59	2.59	0.02	0.42	0.08	0.11	3.50	50%	fiberglass
Rubbing Compound 711-G	10.00	56.00%	0.0%	56.0%	0.0%	6.90%	0.00273	2.500	5.60	5.60	0.04	0.92	0.17	0.07	81.16	50%	fiberglass
Paint B8951-L	8.88	57.70%	0.0%	57.7%	0.0%	27.90%	0.00297	2.500	5.12	5.12	0.04	0.91	0.17	0.06	18.36	50%	fiberglass
Glass Cleaner	8.26	99.00%	87.9%	12.0%	85.0%	0.10%	0.04688	2.500	6.61	0.99	0.12	2.79	0.51	0.02	991.20	50%	m,p,f
ABS Pipe Cement	7.26	78.00%	0.0%	78.0%	0.0%	22.00%	0.04063	2.500	5.66	5.66	0.58	13.80	2.52	0.00	25.74	100%	plastic
Crazy Clean Cleaner	8.17	93.10%	85.2%	7.9%	85.3%	0.40%	0.02992	2.500	4.39	0.65	0.05	1.16	0.21	0.09	161.36	50%	m,p,f
Acrylic Color Blender DXA100	7.11	96.50%	0.0%	96.5%	2.5%	48.00%	0.00391	2.500	7.04	6.86	0.07	1.61	0.29	0.01	14.29	50%	fiberglass
Gelcoat, Black GV30763	9.37	38.00%	0.0%	38.0%	0.0%	52.60%	0.00039	2.500	3.56	3.56	0.00	0.08	0.02	0.01	6.77	50%	fiberglass
Gelcoat, White GV42000	10.68	35.00%	0.0%	35.0%	0.0%	50.40%	0.00078	2.500	3.74	3.74	0.01	0.17	0.03	0.03	7.42	50%	fiberglass
Methyl Ethyl Ketone Peroxide	9.26	3.00%	0.0%	3.0%	0.0%	97.00%	0.00039	2.500	0.28	0.28	0.00	0.01	0.00	0.00	0.29	100%	fiberglass
Silicone Caulk SM5731	11.84	3.30%	0.0%	3.3%	0.0%	96.70%	0.07813	2.500	0.39	0.39	0.08	1.83	0.33	0.00	0.40	100%	m,p,f
Silicone Caulk SM5732	8.67	3.10%	0.0%	3.1%	0.0%	96.90%	0.04688	2.500	0.27	0.27	0.03	0.76	0.14	0.00	0.28	100%	m,p,f
Silicone Caulk SM5770	10.73	0.00%	0.0%	0.0%	0.0%	100.00%	0.21875	2.500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	m,p,f
Polyurethane Sealant SM7100	13.34	3.00%	0.0%	3.0%	0.0%	97.00%	0.37109	2.500	0.40	0.40	0.37	8.91	1.63	0.00	0.41	100%	m,p,f
Wood Glue, Wood Lock 40-0294	9.30	52.00%	51.8%	0.2%	51.8%	48.00%	0.25000	2.500	0.04	0.02	0.01	0.28	0.05	0.00	0.04	100%	wood
Subtotal												**34.38**	**6.27**	**0.40**			

Company Name: **Trail Lite Division of R-Vision Inc.**
Address City IN Zip: **2666 S. Country Club Road, Warsaw, Indiana 46580**
MSOP: **085-11470**
Plt ID: **085-00078**
Reviewer: **Paula M. Miano**
Date: **October 18, 1999**

Assembly and Touch-Up Booth

Material	Density (lbs/gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency	Material
Line 3																	
Acrylic Laquer Thinner, 3613S	6.61	100.00%	0.0%	100.0%	0.0%	0.00%	0.00133	2.500	6.61	6.61	0.02	0.53	0.10	0.00	n/a	100%	fiberglass
Adhesive Spray, 3M 90	5.84	89.00%	0.0%	89.0%	0.0%	11.00%	0.00063	2.500	5.20	5.20	0.01	0.20	0.04	0.00	47.25	50%	wood
Body Filler 6370	9.95	26.00%	0.0%	26.0%	0.0%	74.00%	0.00273	2.500	2.59	2.59	0.02	0.42	0.08	0.11	3.50	50%	fiberglass
Rubbing Compound 711-G	10.00	56.00%	0.0%	56.0%	0.0%	6.90%	0.00273	2.500	5.60	5.60	0.04	0.92	0.17	0.07	81.16	50%	fiberglass
Paint B8951-L	8.88	57.70%	0.0%	57.7%	0.0%	27.90%	0.00297	2.500	5.12	5.12	0.04	0.91	0.17	0.06	18.36	50%	fiberglass
Glass Cleaner	8.26	99.00%	87.9%	12.0%	85.0%	0.10%	0.04688	2.500	6.61	0.99	0.12	2.79	0.51	0.02	991.20	50%	m,p,f
ABS Pipe Cement	7.26	78.00%	0.0%	78.0%	0.0%	22.00%	0.04063	2.500	5.66	5.66	0.58	13.80	2.52	0.00	25.74	100%	p
Crazy Clean Cleaner	8.17	93.10%	85.2%	7.9%	85.3%	0.40%	0.02992	2.500	4.39	0.65	0.05	1.16	0.21	0.09	161.36	50%	m,p,f
Acrylic Color Blender DXA100	7.11	96.50%	0.0%	96.5%	2.5%	48.00%	0.00391	2.500	7.04	6.86	0.07	1.61	0.29	0.01	14.29	50%	fiberglass
Gelcoat, Black GV30763	9.37	38.00%	0.0%	38.0%	0.0%	52.60%	0.00039	2.500	3.56	3.56	0.00	0.08	0.02	0.01	6.77	50%	fiberglass
Gelcoat, White GV42000	10.68	35.00%	0.0%	35.0%	0.0%	50.40%	0.00078	2.500	3.74	3.74	0.01	0.17	0.03	0.03	7.42	50%	fiberglass
Methyl Ethyl Ketone Peroxide	9.26	3.00%	0.0%	3.0%	0.0%	97.00%	0.00039	2.500	0.28	0.28	0.00	0.01	0.00	0.00	0.29	100%	fiberglass
Silicone Caulk SM5731	11.84	3.30%	0.0%	3.3%	0.0%	96.70%	0.07813	2.500	0.39	0.39	0.08	1.83	0.33	0.00	0.40	100%	m,p,f
Silicone Caulk SM5732	8.67	3.10%	0.0%	3.1%	0.0%	96.90%	0.04688	2.500	0.27	0.27	0.03	0.76	0.14	0.00	0.28	100%	m,p,f
Silicone Caulk SM5770	10.73	0.00%	0.0%	0.0%	0.0%	100.00%	0.21875	2.500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	m,p,f
Polyurethane Sealant SM7100	13.34	3.00%	0.0%	3.0%	0.0%	97.00%	0.37109	2.500	0.40	0.40	0.37	8.91	1.63	0.00	0.41	100%	m,p,f
Wood Glue, Wood Lock 40-0294	9.30	52.00%	51.8%	0.2%	51.8%	48.00%	0.25000	2.500	0.04	0.02	0.01	0.28	0.05	0.00	0.04	100%	wood
Subtotal												**34.38**	**6.27**	**0.40**			
Line 4																	
Adhesive Spray, 3M 90	5.84	89.00%	0.0%	77.0%	0.0%	11.00%	0.00063	2.000	4.50	4.50	0.01	0.14	0.02	0.00	40.88	50%	wood
Glass Cleaner	8.26	99.90%	87.9%	12.0%	0.0%	0.10%	0.04688	2.000	0.99	0.99	0.09	2.23	0.41	0.00	991.20	50%	m/p/f
ABS Pipe Cement	7.26	78.00%	0.0%	78.0%	0.0%	22.00%	0.04844	2.000	5.66	5.66	0.55	13.17	2.40	0.00	25.74	100%	p
Crazy Clean Cleaner	8.34	93.10%	85.2%	7.9%	85.3%	6.90%	0.02992	2.000	4.48	0.66	0.04	0.95	0.17	0.08	9.55	50%	m/p/f
Silicone Caulk SM5731	11.84	3.30%	0.0%	3.3%	0.0%	96.70%	0.07813	2.000	0.39	0.39	0.06	1.47	0.27	0.00	0.40	100%	m/p/f
Silicone Caulk SM5732	8.67	3.10%	0.0%	3.1%	0.0%	96.90%	0.21875	2.000	0.27	0.27	0.12	2.82	0.52	0.00	0.28	100%	m/p/f
Silicone Caulk SM5770	10.73	0.00%	0.0%	0.0%	0.0%	100.00%	0.04688	2.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%	m/p/f
Polyurethane Sealant SM7100	13.34	3.00%	0.0%	3.0%	0.0%	97.00%	0.37109	2.000	0.40	0.40	0.30	7.13	1.30	0.00	0.41	100%	m/p/f
Wood Glue, Wood Lock 40-0294	9.30	52.00%	51.8%	0.2%	51.8%	48.00%	0.25000	2.000	0.04	0.02	0.01	0.22	0.04	0.00	0.04	100%	wood
Subtotal												**28.12**	**5.13**	**0.08**			
								VOC/PM	Control Efficiency	0.00%							
State Potential Emissions			**Add worst case coating to all solvents**						**Uncontrolled**		**5.35**	**129**	**23.5**	**1.28**			
									Controlled		**5.35**	**129**	**23.5**	**1.28**			

The roll coating laminating process (L2.1 and L3.1) emit negligable VOC and HAP emissions.
m/p/f = metal,plastic,fiberglass

METHODOLOGY

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

Appendix A: Emission Calculations
HAP Emission Calculations
Assembly and Touch-Up Booth

Company Name: Trail Lite Division of R-Vision Inc.
Address City IN Zip: 2666 S. Country Club Road, Warsaw, Indiana 46580
MSOP: 085-11470
Plt ID: 085-00078
Reviewer: Paula M. Miano
Date: October 18, 1999

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hr)	Weight % MEK	Weight % Glycol Ethers	Weight % Toluene	Weight % Vinyl Acetate	Weight % Dimethyl-phthalete	Weight % Styrene	Weight % Xylenes	Weight % Ethylbenzene	Weight % Methyl Methacrylate	MEK Emissions (tons/yr)	Glycol Ether Emissions (tons/yr)	Toluene Emissions (tons/yr)	Vinyl Acatate Emissions (tons/yr)	Dimethyl-phthalate Emissions (tons/yr)	Styrene Emissions (tons/yr)	Xylene Emissions (tons/yr)	Ethyl- benzene Emissions (tons/yr)	Methyl Methacrylate Emissions (tons/yr)
Line 1																					
Acrylic Laquer Thinner, 3613S	6.61	0.00133	2.5	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Adhesive Spray, 3M 90	5.84	0.00063	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Body Filler 6370	9.95	0.00273	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Rubbing Compound 711-G	10.00	0.00273	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paint B8951-L	8.88	0.00297	2.5	5.00%	0.00%	20.00%	0.00%	0.00%	0.00%	10.00%	2.00%	2.00%	0.01	0.00	0.06	0.00	0.00	0.00	0.03	0.01	0.01
Glass Cleaner	8.26	0.04688	2.5	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ABS Pipe Cement	7.26	0.02344	2.5	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crazy Clean Cleaner	8.34	0.02992	2.5	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
Acrylic Color Blender DXA100	7.11	0.00391	2.5	2.00%	0.00%	45.00%	0.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.01	0.00	0.14	0.00	0.00	0.00	0.05	0.00	0.00
Gelcoat, Black GV30763	9.37	0.00039	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	5.00%	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Gelcoat, White GV42000	10.68	0.00078	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	5.00%	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Methyl Ethyl Ketone Peroxide	9.26	0.00039	2.5	0.00%	0.00%	0.00%	0.00%	47.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Silicone Caulk SM5731	11.84	0.07813	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicone Caulk SM5732	8.67	0.04688	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicone Caulk SM5770	10.73	0.21875	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyurethane Sealant SM7100	13.34	0.37109	2.5	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00
Wood Glue, Wood Lock 40-0294	9.30	0.25000	2.5	0.00%	0.00%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
Clear PVC Solvent Cement	7.51	0.00781	2.5	55.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal													**1.77**	**0.212**	**1.90**	**0.051**	**0.019**	**0.125**	**0.075**	**0.006**	**0.012**
Line 2																					
Acrylic Laquer Thinner, 3613S	6.61	0.00133	2.5	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Adhesive Spray, 3M 90	5.84	0.00063	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Body Filler 6370	9.95	0.00273	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Rubbing Compound 711-G	10.00	0.00273	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paint B8951-L	8.88	0.00297	2.5	5.00%	0.00%	20.00%	0.00%	0.00%	0.00%	10.00%	2.00%	2.00%	0.01	0.00	0.06	0.00	0.00	0.00	0.03	0.01	0.01
Glass Cleaner	8.26	0.04688	2.5	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ABS Pipe Cement	7.26	0.04063	2.5	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crazy Clean Cleaner	8.34	0.02992	2.5	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
Acrylic Color Blender DXA100	7.11	0.00391	2.5	2.00%	0.00%	45.00%	0.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.01	0.00	0.14	0.00	0.00	0.00	0.05	0.00	0.00
Gelcoat, Black GV30763	9.37	0.00039	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	5.00%	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Gelcoat, White GV42000	10.68	0.00078	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	5.00%	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Methyl Ethyl Ketone Peroxide	9.26	0.00039	2.5	0.00%	0.00%	0.00%	0.00%	47.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Silicone Caulk SM5731	11.84	0.07813	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicone Caulk SM5732	8.67	0.04688	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicone Caulk SM5770	10.73	0.21875	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyurethane Sealant SM7100	13.34	0.37109	2.5	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00
Wood Glue, Wood Lock 40-0294	9.30	0.25000	2.5	0.00%	0.00%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
Subtotal													**2.44**	**0.212**	**1.90**	**0.051**	**0.019**	**0.125**	**0.075**	**0.006**	**0.012**

Company Name: Trail Lite Division of R-Vision Inc.
Address City IN Zip: 2666 S. Country Club Road, Warsaw, Indiana 46580
MSOP: 085-11470
Plt ID: 085-00078
Reviewer: Paula M. Miano
Date: October 18, 1999

Assembly and Touch-Up Booth

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hr)	Weight % MEK	Weight % Glycol Ethers	Weight % Toluene	Weight % Vinyl Acetate	Weight % Dimethyl-phthalete	Weight % Styrene	Weight % Xylenes	Weight % Ethylbenzene	Weight % Methyl Methacrylate	MEK Emissions (tons/yr)	Glycol Ether Emissions (tons/yr)	Toluene Emissions (tons/yr)	Vinyl Acatate Emissions (tons/yr)	Dimethyl-phthalate Emissions (tons/yr)	Styrene Emissions (tons/yr)	Xylene Emissions (tons/yr)	Ethyl- benzene Emissions (tons/yr)	Methyl Methacrylate Emissions (tons/yr)
Line 3																					
Acrylic Laquer Thinner, 3613S	6.61	0.00133	2.5	0.00%	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Adhesive Spray, 3M 90	5.84	0.00063	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Body Filler 6370	9.95	0.00273	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Rubbing Compound 711-G	10.00	0.00273	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paint B8951-L	8.88	0.00297	2.5	5.00%	0.00%	20.00%	0.00%	0.00%	0.00%	10.00%	2.00%	2.00%	0.01	0.00	0.06	0.00	0.00	0.00	0.03	0.01	0.01
Glass Cleaner	8.26	0.04688	2.5	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ABS Pipe Cement	7.26	0.04063	2.5	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crazy Clean Cleaner	8.34	0.02992	2.5	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
Acrylic Color Blender DXA100	7.11	0.00391	2.5	2.00%	0.00%	45.00%	0.00%	0.00%	0.00%	15.00%	0.00%	0.00%	0.01	0.00	0.14	0.00	0.00	0.00	0.05	0.00	0.00
Gelcoat, Black GV30763	9.37	0.00039	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	5.00%	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Gelcoat, White GV42000	10.68	0.00078	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	0.00%	5.00%	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Methyl Ethyl Ketone Peroxide	9.26	0.00039	2.5	0.00%	0.00%	0.00%	0.00%	47.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Silicone Caulk SM5731	11.84	0.07813	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicone Caulk SM5732	8.67	0.04688	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicone Caulk SM5770	10.73	0.21875	2.5	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyurethane Sealant SM7100	13.34	0.37109	2.5	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00
Wood Glue, Wood Lock 40-0294	9.30	0.25000	2.5	0.00%	0.00%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
Subtotal													**2.44**	**0.212**	**1.90**	**0.051**	**0.019**	**0.125**	**0.075**	**0.006**	**0.012**
Line 4																					
Adhesive Spray, 3M 90	5.84	0.00063	2.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Glass Cleaner	8.26	0.04688	2.0	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ABS Pipe Cement	7.26	0.04844	2.0	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crazy Clean Cleaner	8.34	0.02992	2.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicone Caulk SM5731	11.84	0.07813	2.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicone Caulk SM5732	8.67	0.21875	2.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silicone Caulk SM5770	10.73	0.04688	2.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polyurethane Sealant SM7100	13.34	0.37109	2.0	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00
Wood Glue, Wood Lock 40-0294	9.30	0.25000	2.0	0.00%	0.00%	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
Subtotal													**2.31**	**0.170**	**1.30**	**0.041**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

Total State Potential Emissions	**Individual**	**Totals**	**(tons/yr)**	**8.97**	**0.806**	**7.01**	**0.193**	**0.056**	**0.375**	**0.224**	**0.017**	**0.037**
	Overall	**Total**	**(tons/yr)**	**17.7**							

The roll coating laminating process (L2.1 and L3.1) emit negligable VOC and HAP emissions.

METHODOLOGY

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

Appendix A: Emission Calculations
Cyclone Operations

Company Name: Trail Lite Division of R-Vision Inc.
Address City IN Zip: 2666 S. Country Club Road, Warsaw, Indiana 46580
MSOP: 085-11470
Plt ID: 085-00078
Reviewer: Paula M. Miano
Date: October 18, 1999

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Emission Rate before Controls (lb/hr)	Emission Rate before Controls (tons/yr)	Emission Rate after Controls (lb/hr)	Emission Rate after Controls (tons/yr)
W1.1	80.0%	0.024	4500.0	4.7	20.61	0.941	4.12
W2.1	80.0%	0.014	4500.0	2.7	11.83	0.540	2.37
W3.1	80.0%	0.014	4500.0	2.7	11.83	0.540	2.37
W4.1	80.0%	0.014	4500.0	2.7	11.83	0.540	2.37
			Total	**12.8**	**56.1**	**2.56**	**11.2**

Methodology

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (sq. ft.) ((cub. ft./min.)/sq. ft.) (60 min/hr) (lb/7000 grains)
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Allowable Rate of Emissions

Unit ID	Process Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)	Allowable Emissions (tons/yr)
W1.1	1460	0.73	3.32	14.5
W2.1	1500	0.75	3.38	14.8
W3.1	1500	0.75	3.38	14.8
W4.1	1500	0.75	3.38	14.8

Methodology

Allowable Emissions = 4.10(Process Weight Rate)^0.67

Appendix A: Welding and Thermal Cutting

Company Name: **Trail Lite Division of R-Vision Inc.**
Address City IN Zip: **2666 S. Country Club Road, Warsaw, Indiana 46580**
Permit No./Plt ID: **085-11470-00078**
Reviewer: **Paula M. Miano**
Date: **October 18, 1999**

PROCESS WELDING	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS * (lb pollutant / lb electrode) PM = PM10	Mn	Ni	Cr	EMISSIONS (lb/hr) PM = PM10	Mn	Ni	Cr	TOTAL HAPS (lb/hr)
Metal Inert Gas (MIG)(ER5154)	3	1		0.0241	0.00003		0.00001	0.072	0.000102	0.000000	0.000030	0.0001
Metal Inert Gas (MIG)(ER5154)	1	0.5		0.0241	0.00003		0.00001	0.012	0.000017	0.000000	0.000005	0.0000
FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick) PM = PM10	Mn	Ni	Cr	EMISSIONS (lbs/hr) PM = PM10	Mn	Ni	Cr	TOTAL HAPS (lb/hr)
Oxyacetylene	1	1	40	0.1622	0.0005	0.0001	0.0003	0.389	0.0002	0.0000	0.0000	0.0002
EMISSION TOTALS								PM = PM10	Mn	Ni	Cr	Total HAPs
Potential Emissions lbs/hr								0.474	0.000	0.000	0.000	0.00
Potential Emissions lbs/day								11.37	0.008	0.000	0.001	0.01
Potential Emissions tons/year								**2.07**	0.001	0.000	0.000	0.002

METHODOLGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column. Consult AP-42 or other reference for different electrode types.
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)
Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/day x 1 ton/2,000 lbs.
Plasma cutting emission factors are from the American Welding Society study published in Sweden (March 1994).
Welding and other flame cutting emission factors are from an internal training session document.
See AP-42, Chapter 12.19 for additional emission factors for welding.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **Trail Lite Division of R-Vision Inc.**
Address City IN Zip: **2666 S. Country Club Road, Warsaw, Indiana 46580**
MSOP: **085-11470**
Plt ID: **085-00078**
Reviewer: **Paula M. Miano**
Date: **October 18, 1999**

Four (4) space heaters (H1.1-H1.4) rated at 0.225, 0.125, 0.10, and 0.025.
Four (4) space heaters (H2.1-H2.4) rated at 0.125, each.
Five (5) space heaters (H2.5-H2.9) rated at 0.20, each.
Five (5) space heaters (H3.1-H3.3,H3.5, and H3.6) rated at 0.15 each.
Seven (7) space heaters (H3.4, H3.7-H3.12) rated at 0.125 each.
Eight (8) space heaters (H4.1-H4.8) rated at 0.10, each

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
4.43	38.8

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.037	0.147	0.012	1.94	0.107	1.63

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

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

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: **Trail Lite Division of R-Vision Inc.**
Address City IN Zip: **2666 S. Country Club Road, Warsaw, Indiana 46580**
CP: **085-11470**
Plt ID: **085-00078**
Reviewer: **Paula M. Miano**
Date: **October 18, 1999**

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.070E-05	2.326E-05	1.454E-03	3.489E-02	6.590E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	9.691E-06	2.132E-05	2.713E-05	7.365E-06	4.070E-05

Methodology is the same as page 1.

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