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Amendment to the June 7, 2007 Extended Cooperative Environmental Agreement Between Northern Engraving Corporation and the Wisconsin Department of Natural Resources

This Amendment to the Extended Cooperative Environmental Agreement (Extended Agreement) is being entered into pursuant to 299.80 (6e) Wis. Stats. The amendments are additional to the June 2007 Extended Agreement, which provided a renewal for those conditions established under the June 10, 2002 and the Amended Agreement signed on June 23, 2003. These additional Amendments to the Extended Agreement become effective upon signing and will terminate 5 years from June 7, 2007. Northern Engraving Corporation (NEC) and Wisconsin Department of Natural Resources (DNR) may amend this agreement within the term.

In this document, Section VI, Approvals/Changes Included in Amended Agreement and Permit Renewals, outlines those changes to be incorporated as part of the Cooperative Environmental Agreement. These Amendments to the Extended Agreement will only apply to NEC's Sparta and Holmen facilities. West Salem will operate under the same conditions outlined in the June 7, 2007 Extended Agreement, which covers those conditions established under the June 23, 2003 Amended Agreement for West Salem. Upon signing of this Amended Agreement, all conditions established in the June 2002, June 2003 and the June 2007 Extended Agreement apply unless duly specified as a condition of this Amended Agreement for the Sparta, Holmen and West Salem facilities.

This Amended Agreement is being entered into pursuant to sec. 299.80 (7) (b) Wisconsin Statutes and represents the negotiated conditions agreed upon by DNR and NEC, for the purpose of providing an alternative method for the regulation of environmental impacts from NEC.

FOR AND IN CONSIDERATION of the terms and conditions contained in this Agreement, DNR and NEC set forth the following:

WHEREAS, NEC is a manufacturer with multiple facilities and affiliated companies located in Wisconsin, Iowa and Minnesota.

WHEREAS, DNR is a duly organized agency of the State of Wisconsin created pursuant to Wis. Stats. & sect; 15.34.

WHEREAS, the DNR has been legislatively delegated authority to regulate, among other things, air pollution, hazardous waste, solid waste, recycling, water pollution, and sewage within the State of Wisconsin. This authority having been delegated pursuant to Wis.Stats. & sect; 281.12, 285.11, 285.13, 289.06, 289.07, 291.09 and 291.11, among other statutes.

WHEREAS, the DNR has been delegated, authorized or otherwise approved by the federal government to implement all or a significant portion of the following federal programs: The Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq.;

The Solid Waste Disposal Act, as amended, 42 U.S.C. § 6901 et seq; and
The Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

WHEREAS, the DNR has consulted with and obtained concurrence from the United States Environmental Protection Agency (EPA) over the terms and conditions set forth in this Agreement as well as the procedural mechanisms necessary to effectuate any experimental changes to federal programs, or federally approved state programs, which may be required as a result of this Agreement.

WHEREAS, the DNR has entered a Memorandum of Agreement with the EPA dated March 25, 1999 entitled "Implementation of the Joint State/EPA Agreement to Pursue Regulatory Innovation and the Wisconsin Environmental Cooperation Pilot Program" (the "Joint State/EPA Agreement"). Among other things, the Joint State/EPA Agreement defines how DNR and EPA will develop, implement and pursue enforcement against participants in the Wisconsin Environmental Cooperation Pilot Program (the Program).

WHEREAS, DNR and EPA assent in the Joint State/EPA Agreement that the innovation and experimental methods set forth in agreements such as this, inherently involve some risk of failure. Regardless, the DNR and EPA have agreed to promote innovations at all levels of environmental regulation, through agreements such as this, to increase the efficiency and effectiveness of the environmental programs each implements.

WHEREAS, the DNR and NEC have entered into this Agreement pursuant to Wis. Stats. & sect; 299.80 to allow the DNR, EPA and NEC to implement and evaluate innovative environmental regulatory methods and where sect. 299.80 (6e) Wis. Stats allows for an extension of the Agreement.

WHEREAS, this Agreement seeks to grant NEC greater flexibility than would otherwise be allowed under current federal and state environmental programs, including but not limited to those implemented pursuant to Wis. Stats. ch. 280 through 295 and the rules promulgated there under.

WHEREAS, the DNR and NEC seek to reduce the time and resources they each spend on paperwork and other administrative tasks related to environmental regulation that do not result in benefits to the environment.

WHEREAS, the DNR and NEC acknowledge that each is entering into this Agreement on a voluntary basis.

WHEREAS, the DNR recognizes that the main goal in the Wisconsin Environmental Cooperation Pilot Program, Wis. Stats. & sect; 299.80, is to establish a collaborative process involving business, government and the public in order to reach consensus that is a "win" for each sector.

WHEREAS, the DNR and EPA have entered the Joint State/EPA Agreement whereby each assents that this Agreement must be implemented to meet the following goals:

Provide at least the same level of protection of public health and the environment as current regulations.

Encourage systematic assessment of direct and indirect environmental impacts of the facilities covered by this Agreement.

Encourage efficiency and cost effective, verifiable pollution reduction strategies.

Encourage the transfer of information.

Consolidate environmental permitting and approval requirements.

Grant regulatory flexibility where both parties agree that the flexibilities will encourage the goals and intent of the Environmental Cooperation Pilot Program (Program) as it relates to improved environmental performance and economic stability.

Reduce government and facility transaction costs for paperwork and other administrative tasks.

Encourage public participation and consensus.

Improve public information and access to environmental performance information.

Encourage facilities to work with communities.

Increase trust among government, facility owners/operators and the public.

WHEREAS, the DNR and EPA have entered the Joint State/EPA Agreement whereby EPA assents that when federal action is necessary for implementation of an innovation under this Agreement, EPA will promptly determine what is required in order to take such action and take that action.

WHEREAS, the DNR and EPA have entered the Joint State/EPA Agreement whereby EPA commits to consult with DNR before taking any regulatory or enforcement action concerning NEC so long as NEC is operating pursuant to this Agreement.

WHEREAS, the DNR and EPA have entered into the Joint State/EPA Agreement whereby each assents that the Program provides for waivers, variances and modifications to the existing regulations, policies, guidance and practices of traditional environmental programs.

WHEREAS, EPA and DNR have entered the Joint State/EPA Agreement acknowledging that to the extent this Agreement affects requirements under a federally-authorized or delegated program, the requirements of this Agreement replace those previously in affect under such programs and this Agreement becomes the requirement applicable to and legally binding upon NEC.

THEREFORE, in reliance upon the foregoing, including the State and EPA commitments in the Joint State/EPA Agreement, and in consideration of the terms and conditions set forth in this Agreement, as well as other valuable considerations having been duly received, the DNR and NEC enter into this Agreement pursuant to Wis. Stats. & sect; 299.80 for the purpose of providing alternative methods for the regulation of environmental impacts from covered NEC facilities. In furtherance of the extended Agreement, the parties agree to the following:

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I. FACILITY INFORMATION/CONTACTS

Northern Engraving Corporation (NEC) is a medium sized, privately held, family-owned, nameplate manufacturer with multiple facilities and affiliated companies located in Wisconsin, Iowa and Minnesota. Their customers vary widely in size and conduct business both in the USA and internationally.

Northern Engraving Corporation
803 South Black River Street
Sparta, WI 54656
FID# 642025010

Northern Engraving Corporation
1023 Sand Lake Road
Holmen, WI 54636
FID# 63200970

Northern Engraving Corporation
600 Brickl Road
West Salem, WI 54698
FID# 632024800

Contacts:

Bruce Corning
VP Management Systems
(608) 269 - 6911 Ext. 385

Randy Nedrelo
Solid and Hazardous Waste Manager
(608) 269 - 6911 Ext. 442

Northern Engraving manufactures nameplates, automotive trim and other industrial decoratives, using plastic and aluminum as the primary substrates. Presently Northern Engraving operates five manufacturing facilities in Wisconsin and Iowa. In addition there are several locations that provide support services to these manufacturing facilities. Northern Engraving has had active waste minimization/pollution prevention programs since 1988, having received recognition for its efforts on several occasions. Included is the Governor's Award for Excellence in Hazardous Waste Reduction in 1991 and 2000 and a DNR P/E/P Award in 1994.

Sparta, Holmen and West Salem are located in areas classified as attainment where

("Nonattainment area" means an area identified by DNR in a document prepared under s. 285.23 (2), where the concentration in the atmosphere of an air contaminant exceeds an ambient air quality standard.) All facilities have achieved ISO 14001 registration and continue to maintain the standards of such. (Refer to 2002 to 2006 Annual Reports at <http://dnr.wi.gov/org/caer/cea/ecpp/agreements/nec/index.htm>.)

II. DEFINITIONS

The following definitions are applicable to this Agreement:

1. "Approval" means a permit license or other approval issued by the DNR under chapters 280-295.
2. " Cooperative Environmental Agreement" or "Agreement" means this Agreement entered into by the DNR and NEC under section 299.80(6), Wis. Statutes.
3. "Environmental Management System (EMS)" means an organized set of procedures implemented by the owner or operator of a facility to evaluate the environmental performance of the facility and to achieve measurable or noticeable improvements in that environmental performance through planning and changes in the facility's operations.
4. "Environmental performance" means the effects whether regulated under chapters 280 to 295 or unregulated, of a facility on air, water, land, natural resources and human health.
5. "Facility" means all buildings, equipment and structures located on a single parcel or on adjacent parcels that are owned or operated by NEC.
6. "Interested person," means a person who is or may be affected by the activities at a facility that is covered or proposed to be covered by a cooperative agreement or a representative of such a person.
7. "Performance evaluation" means a systematic, documented and objective review conducted by or on behalf of the owner or operator of the facility including an evaluation of compliance with the cooperative agreement covering the facility, approvals that are not replaced by the cooperative agreement and the provision of chapters 280 to 295 and rules promulgated under those chapters for which a variance is not granted.
8. "Pollutant" means any of the following: any dredged spoil, solid waste, incinerator residue, sewage, garbage, refuse, oil, sewage sludge, munitions, chemical wastes, biological materials, radioactive substance, heat, wrecked or discarded equipment, rock, sand, cellar dirt, or industrial, municipal, or agricultural waste discharged into water or onto land. Any dust, fumes, mist, liquid, smoke, other particulate matter, vapor, gas odorous substance or any combination of those things emitted into the air but not uncombined water vapor.

9. "Violation" means a violation of a cooperative agreement, of an approval that is not replaced by the cooperative agreement or of a provision of chapters 280 to 295 and rules promulgated under those chapters for which a participant has not received a variance granted under sec. 299.80 (4) Wis. Stats.

III. PERIOD OF AGREEMENT

- 1.) This Amended Agreement shall commence, subject to its signing by both parties, during which period NEC and the DNR shall abide by all terms and conditions contained herein.
- 2.) In addition, this and any future Amendments will terminate 5 years hence the signature date of the June 7, 2007 Extended Agreement on June 7, 2012.

IV. AMENDMENT/REVOCATION OF THE AGREEMENT

This Agreement applies only to those facilities listed and described in Section I and includes additional changes to, and recurrent language from the June 7, 2007 Extended Agreement and Section VI. Approvals/Changes Included in Amended Agreement and Permit Renewals. DNR and NEC agree that newly acquired NEC facilities and other NEC facilities sharing ownership with NEC, can be included under the provisions of this Agreement, as an amendment, following a formal request by the company, a review of the facility(s) by DNR staff and discussion of environmental issues to be included. Inclusions of other NEC facilities may be as amendments, within the 5 year term of the 2007 Extended Agreement, pursuant to sec. 299.80 (7), Wis. Stats..

- 1.) The DNR may revoke the Agreement if NEC is in substantial noncompliance, refuses to amend this Agreement, and are unable or unwilling to meet commitments to superior environmental performance or have not addressed a substantive issue raised by a majority of the interested persons. (s. 299.80 (7), Wis. Statutes)
- 2.) The DNR may amend this Agreement for cause, including any of the following: (1) a change in federal or state environmental laws which necessitate amendment; (2) a violation of this Agreement; or (3) discovering that this Agreement was obtained by misrepresentation or failure to fully disclose all relevant information.
- 3.) The DNR shall provide at least 30 days for public comment on this Agreement and any future amendments of this Agreement if comments demonstrate considerable public interest in the proposed action. Alternatively, the DNR may revoke this Agreement, after an opportunity for a hearing, if it finds any of the substantive issues set forth in s. 299.80(7) (c) (2), Wis. Statutes. If the DNR makes such a finding and revokes this Agreement, such decision shall be considered a final decision for purposes of review under Chapter 227, Wis. Statutes and it shall contain the items enumerated in s. 299.80(7) (c) 3, Wis. Statutes.
- 4.) Nothing in this Agreement shall be deemed a waiver of NEC's constitutional protections, including, but not necessarily limited to, NEC's rights to substantive and procedural due process, equal protection under law, or the taking of property right.
- 5.) In the event that this Agreement is revoked, NEC shall resume operations under the conditions stated in (Part I. B of Appendix A1, A3, and A5), Specific Permit Conditions for each facility.

V. ENTIRE AGREEMENT

This Agreement, together with any specifications, referenced parts, attachments and effective amendments, shall constitute the entire Agreement. All revisions to this Agreement must be made by a written amendment to this Agreement, signed by DNR and NEC and issued under the same procedures and requirements pursuant to 299.80, Wis. Stats.

VI. APPROVALS/CHANGES INCLUDED IN AMENDED AGREEMENT AND PERMIT RENEWALS

Sparta and Holmen Facilities

All conditions, approvals, and changes expressed in this Amended Agreement and the renewed air pollution control permits, Appendix A1 and A3, of this Agreement for the Holmen and Sparta facilities will become effective upon signing of this Agreement by both parties.

West Salem

The NEC West Salem Air Pollution Control Permit expires on June 23, 2008. As part of this Amended Agreement, the NEC West Salem facility will continue to operate under the conditions established in the June 07, 2007 Extended Agreement. NEC may at any time between the signing date of this Amended Agreement and June 23, 2008, provide an Air Pollution Control Operation Permit Renewal application to the DNR. The DNR will incorporate the conditions of the air pollution control operation permit, as outlined for the Holmen and Sparta facilities, into the renewed operation permit for West Salem. The process of issuing a renewed operation permit allows for a 30-day public comment period. Until a final renewed operation permit is issued for the West Salem facility, Northern Engraving shall continue to comply with all the requirements of the current operation permit for the facility (permit number: 632024800-F03). The current operation permit requires the submittal of the 6 month reports of actual emissions to DNR and US EPA. The anticipated change for the West Salem facility becomes effective upon the issuance of a renewed operation permit which incorporates the removal of the 6 month reports of actual emissions in the renewed Agreement as outlined in this document, provided the change does not exceed or fall outside the scope of the renewed Agreement as it applies to the Holmen and Sparta facilities.”

A). Dropped the Six Month Reporting Requirement of Actual Facility Wide VOC and HAP Emissions

The following language that appears in the June 2007 extended Agreement is omitted from the renewed air pollution control permits for Sparta and Holmen:

“c. Report actual facility wide volatile organic compound and hazardous air pollutant emissions as follows:

- (1) The permittee shall submit a report summarizing the actual, facility wide volatile organic compound and hazardous air pollutant emissions for each consecutive 12 month period as calculated in conditions I.A.1.b.(2) and I.A.2.b.(2) and (4), every 6 months.
- (2) The period addressed by the report shall be the 6 month period starting on the date the Cooperative Agreement is signed or other date agreed upon and approved by DNR, U.S. EPA and the permittee, and each subsequent 6 month period thereafter.
- (3) A copy of the report shall be submitted to the DNR (Marty Sellers, Air Management Engineer, Department of Natural Resources, 3550 Mormon Coulee Road, La Crosse, WI 54601) and the U.S. EPA (Steve Rothblatt, Branch Chief, Air Program Branch, U.S. EPA, 77 W. Jackson Blvd., Mailcode: AR-18J, Chicago, IL 60604) within twenty days following the end of the reporting period.

If the report shows the actual facility wide volatile organic compound or hazardous air pollutant emissions have exceeded 50 percent of the allowable limitations outlined in conditions Part I.A.1.a and I.A.2.a. (1) and (2), the permittee shall provide an explanation why emissions reached the levels that they did and how they intend to ensure emissions will not exceed the allowable limitations outlined in conditions Part I.A.1.a. and I.A.2.a. (1) and (2). [s. NR 439.03(1)(a), Wis. Adm. Code]”

Explanation: The original 2002 and 2003 Agreements and associated Air Pollution Control Operation Permits require Northern Engraving to submit reports of their actual VOC and HAP emissions to both US EPA and DNR every six months. (Permit condition Part I.A.6.c. for Holmen and permit condition Part I.A.8.c. for Sparta.) Under this reporting requirement, if the actual facility wide emissions of VOC or HAPs had exceeded 50 percent of the allowable emission limitations (i.e. Allowable limitation for VOC is 85 tons per year, allowable limitation for each Clean Air Act (CAA) HAP is 8 tons per year, and allowable limitation for all CAA HAPs combined is 20 tons per year) then Northern Engraving would have been required to provide an explanation of why emissions reached the levels they did and how they intended to ensure emissions would not exceed the allowable emission limitations.

The US EPA required that this reporting requirement be included in the original Agreement and associated Air Pollution Control Operation Permits as a condition of allowing Northern Engraving to forgo daily record keeping of actual VOC and HAP emissions. At the time of issuance of the original Agreement and associated Air Pollution Control Operation Permits, it was US EPA's policy to require daily record keeping of actual emissions, if VOC and HAP emission limitations appeared in the permit as long term (i.e. monthly or 12 month average) emission limitations rather than usage or material content limitations.

Since the issuance of the original June 2002 and 2003 Agreements and associated Air Pollution Control Operation Permits, US EPA has changed their policy on the requirement of daily records when VOC and/or HAP emission limitations appear in the permit as long term emission limitations. The US EPA now allows the use of what they call the "Formula Based Approach" which allows record keeping on a time frame consistent with longer term VOC or HAP emission limitation provided a formula specifying how the permittee will calculate actual emissions is specifically included in the permit.

B.) More Time Allowed for Construction and Initial Operation under Future Construction Permits within this Amended Agreement Timeframe

On a case-by-case basis NEC will be allowed an additional period of time to commence construction and/or modification of proposed projects requiring a permit under ch. NR 406, Wis. Adm. Code.

Explanation: In most cases when the DNR issues an Air Pollution Control Construction Permit for a new or modified process under ch. NR 406, Wis. Adm. Code, a facility is given an initial 18 month period to commence construction or modification with the option of extending the construction permit to allow an additional 18 months to commence construction or modification. If construction or modification is not started within this time period (a total of 36 months), the construction permit will expire and the facility would be required to reapply and obtain a new Air Pollution Control Construction Permit to cover the proposed project. Northern Engraving requested as part of the renewal of the Agreement, to be allowed longer periods of time to commence construction and/or modification of proposed projects requiring a permit under ch. NR 406, Wis. Adm. Code. In reviewing the DNR's procedures on this matter it was found that the Department does allow longer periods of time to commence construction and/or modification in the case of large, phased projects. Because longer periods of time are

allowed in other cases, the Department will allow Northern Engraving to request periods for commencing construction and/or modification that are longer than 18 months on a case-by-case basis when they submit construction permit applications. Northern Engraving should specify the length of time they are requesting to commence construction and/or modification in any construction permit applications submitted in the future if they would like more than 18 months. The DNR would then allow the longer time period for commencing construction and/or modification under the Air Pollution Control Construction Permit issued for the project provided this does not extend beyond 42 months. Northern Engraving would still be allowed to request an 18 month extension of the construction permit if necessary. Note that the Department does not have the authority to approve construction permit extensions longer than 18 months. Extended timeframes may help to reduce unnecessary permit writing by both parties and give the company the flexibility and timeframe to construct and operate in a manner conducive to better environmental performance and economic stability.

VII. INTERESTED PERSONS GROUP

NEC agrees to encourage active participation from an interested persons group. NEC has sought to encourage involvement for the past 5 years and will seek to maintain representation from the communities and geographic locations of the current facilities covered and any additional facilities that may be included as an amendment during the 5 year period of this agreement. NEC will include in the annual report to the DNR a summary of efforts to establish and maintain such groups and their participation as required under Chapter 299.80, Wis. Stats. Make-up of such groups may include, but is not limited to, local schools officials, local and/or state officials, County Board Members, Local Emergency Planning Commissions, NEC employees, representatives from local conservation groups, and any other organization, individual, or industry representative, located in the county or immediate geographic area of NEC facilities, that may provide valuable input to such group and be subject to:
Membership in the interested persons group will be by invitation only. Participants will be provided no monetary or other compensation for being a member of this group.

NEC will commit to resolving substantive issues raised by members of the interested persons group and supported by a majority.

Meetings of the interested persons group will be coordinated by NEC and scheduled on a semi-annual basis, unless NEC and interested persons agree to additional meetings where necessary. The interested persons group will be provided an overview of the environmental performance of the covered NEC facilities.

For each of its covered facilities, NEC will provide an overview of its current environmental objectives and targets and the current environmental programs for achieving those objectives and targets.

NEC representatives will consider and respond to issues raised by the group. These responses will come in the form of written correspondence and/or further meetings with the group and/or discussions with individual member(s).

It is anticipated that public comments concerning NEC's participation in a Cooperative Environmental Agreement will be received during interested persons group meetings or other meetings with community groups. Minutes of these meetings shall be compiled which will

include, among other things, a summary of the public comments that were raised. Responses to those comments will be appended to the minutes for easy reference. A copy of these documents shall be made publicly available at NEC offices, local public libraries and other community institutions mutually agreed upon by the interested person's group and NEC.

The DNR has followed the procedures set forth in sec. 299.80 (6e) Wis. Stats. before proposing issuance of this amended Agreement. The interested persons group has been provided an opportunity to review this Agreement and the negotiation process between DNR and NEC. This Agreement reflects the consensus of those negotiations and the input of, among others, the interested persons group.

VIII. COMMITMENT TO ENVIRONMENTAL MANAGEMENT SYSTEM AND SUPERIOR ENVIRONMENTAL PERFORMANCE

Northern Engraving Corporation is an active and dedicated steward of the environment. Internally, the environmental policy commits the company to reducing waste, continually improving processes, and doing no harm to the environment. All facilities are registered to the international environmental standard, ISO 14001, and receive annual audits from one of the company's third-party registrars. The environmental management system gives the plants the tools needed to analyze environmental impacts, set objectives and targets, develop supporting programs, review results and redirect efforts. By using these tools and developing employee involvement, each facility has experienced remarkable success.

1). Summary of Results from Original Agreements Signed in 2002 and 2003.

NEC and DNR agree that the company has successfully met all conditions established under the initial June 10, 2002 and June 23, 2003 Agreements, that included, among other things, specific conditions and flexibilities written into the Air Pollution Construction and Operations Permits found in Part A. 1 of the Specific Permit Conditions for each facility as follows:

- Provided Baseline Reports for 2002 and 2003 Agreements.
- Provided Annual Reports on the company's EMS system approach, progress toward the economic, social and environmental impacts of their operations.

Each report included at a minimum:

- Results of the objectives and targets established in the previous year and any objectives identified for the next report.
- Information on meetings with Interested Persons Group and participation.
- Results of internal audits.
- Violations discovered during the audits.
- Time saved in reporting.
- Environmental achievements related to air, water, energy, and waste and an explanation of any shortfalls.
- Overall assessment of the program.
- Met annually with DNR to evaluate progress.
- Implemented EMS for facilities. Certified EMS at all facilities to the ISO 14001 Standards.
- Conducted annual audits by an accredited third party auditor.

- Provided 6-month rolling average reports to both DNR and EPA on Air Emissions occurring at the facilities.
- Annual reports put on DNR website for public viewing.

Excerpt from Northern Engraving Annual Report (Collective Summary of 2006)

Data from calendar year 1996 (Baseline) through calendar year 2006 show that plant emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAP) from the three Cooperative Agreement facilities decreased 63% (192 tons) and 94% (109 tons), respectively. In comparing the three facilities' 2006 emissions to 2005, VOCs and HAPs were reduced 7% (8.1 tons) and 31% (3.3 tons), respectively.

In 2006, these facilities used 74% less water than in 1996. This yearly reduction of 88,591,000 gallons also represents a 229% improvement in the sales to water used efficiency ratio.

During the 1996-2006 period, the three Cooperative Agreement facilities' generation of hazardous and solid wastes decreased 69% (40,860 gallons) and 78% (1,409 tons), respectively. Reformulation of sprays from a solvent base to water base significantly reduced hazardous waste generation while increasing the quantity of wastewater treated as non-hazardous. Similarly, oil absorbents were removed from the solid waste stream, managed as non-hazardous waste and recycled.

2). Commitments Continued as part of the Amended Agreement

Under the Extended and now Amended Agreement, NEC agrees to pursue superior environmental performance while achieving a balance between economic, social and environmental impacts from its efforts. NEC commits to continual improvement in environmental performance by annually reassessing its environmental aspects and setting new objectives for improvement. Over the long term they will achieve measurable improvements in environmental performance through the improved utilization of natural resources.

This Amended Agreement will continue to test the effectiveness of a robust, ISO 14001 certified, Environmental Management System. NEC will continue to identify and seek solutions to those aspects of their operations, both regulated and unregulated that have a significant environment impact on the natural environment.

- NEC currently implements an ISO 14001 registered EMS at the Sparta, Holmen and West Salem facilities. NEC commits to continue implementing the EMS and revising its provisions, to the extent necessary, to meet standards issued by the International Organization for Standardization.
- NEC and DNR will continue to recognize as part of this Amended Agreement, past voluntary environmental achievements back to January 1996, utilizing this year as the baseline year to track environmental improvements related to those aspects of the facility operations. NEC and DNR also realize that in some cases increments to environmental improvement will be smaller due to the large reductions accomplished by the company since 1996. NEC and DNR agree that environmental achievements, tracked as waste generated or emissions/sale is a viable reporting method for the purposes of this Amended Agreement since those additional reporting requirements are being met pursuant to chs. 280 to 295, Wis. Stats.. NEC commits to going beyond what would otherwise be required in environmental regulations, by agreeing to the following:

- NEC agrees to the conditions/changes established under PART I. A. of Specific Permit Conditions (Appendix A1, A3, A5) of this Amended Agreement for the Sparta, Holmen and the West Salem facility.
- NEC agrees to continue, in conformance with its EMS, to annually reassess its environmental aspects and develop environmental objectives and targets. NEC further agrees to develop environmental programs to achieve its environmental targets. Over the long term, through improved utilization of natural resources, NEC will continue to focus on reductions in emissions to the air and water, waste generated, and energy use and on other achievements both regulated and non – regulated that result in a positive impact in nature.
- NEC will continue to submit an Annual Performance Report (APR) pursuant to sec. 299.80 (11), Wis. Stats. to the Department after consideration has been provided to the interested persons group for review.
- NEC and DNR will work to reduce administrative burdens through the use of simplified record keeping, monitoring and reporting as described in Part I A. of each facility's Specific Permit Conditions. (Appendix A1, A3, A5)
- NEC commits to sharing information regarding its means of assessing environmental aspects, developing meaningful environmental objectives and targets, and implementing the environmental programs to achieve superior environmental performance, as defined by the environmental objectives and targets
- **Supplier/EMS Criteria** - NEC commits to working with suppliers in developing alternatives to current raw material usage that are more environmentally friendly.
- **NEC's Commitment to Public Awareness.** NEC commits to continuing its interested persons group and to conducting communications in a meaningful way. NEC will also enhance community awareness of its practices and approaches they are taking to reduce pollution. (**SECTION VII.**)
- NEC and DNR agree to meet all other conditions stated in sec. 299.80 (3) Wis. Stats.

IX. POLLUTION LIMITS

With inclusion of those limits identified in Section X (Operational Flexibility and Variances), NEC commits to abide by all current and future applicable environmental limits. All provisions established in permits or approvals not identified in Part I A. of the Specific Permit Conditions (Appendix A1, A3, A5) shall remain in effect.

X. OPERATIONAL FLEXIBILITY AND VARIANCES

DNR and NEC have agreed that the flexibilities and changes granted in the June 2002 and June 2003 Agreements and Section VI. Approvals/Changes Included in Amended Agreement and Permit Renewals) and (Section VIII. Commitment to Environmental Management System and Superior Environmental Performance), of this Agreement, meet the requirements of ch. 299.80 (4) Wis. Stats., and constitute a viable means to achieve further improvement of those aspects of the NEC operations in protecting the natural environment. In furtherance of the requirements and commitments contained in this Agreement, and consideration of additional requirements of

chs.280 and 295, Wis. Stats., DNR has established specific conditions found in Part I. A Specific Permit Conditions, Appendix A1, A3 and A5 of this Agreement which define:

1. Volatile Organic Compound Emissions
 - a. Limitations
 - b. Compliance Demonstration Methods
 - c. Record Keeping and Monitoring Requirements
 - d. Reference Test Methods
2. Hazardous Air Pollutant Emissions
 - a. Limitations
 - b. Compliance Demonstration Methods
 - c. Reference Test Methods
3. Particulate Matter Emissions
 - a. Limitations
 - b. Compliance Demonstration Methods
 - c. Record Keeping and Monitoring Requirements
 - d. Reference Test Methods
4. Visible Emissions
 - a. Limitations
 - b. Compliance Demonstration Methods
 - c. Record Keeping and Monitoring Requirements
 - d. Reference Test Methods
5. Operational Flexibility
 - a. New Equipment Construction and Modification
6. Facility Wide Reporting Requirements
7. Compliance Testing Requirements

XI. BASELINE PERFORMANCE EVALUATION AND REPORTING OBLIGATIONS

Previous Baseline Performance Evaluations were submitted by NEC on December 6, 2002 and June 23, 2003 as part of the requirements of the June 2002 and June 2003 Amended Agreements. Performance Reports will be submitted annually on April 15 of each year unless NEC and DNR agree to an alternative date during the term of this Agreement. This report shall be shared with the DNR and the interested persons group. A copy will be made available for public inspection at NEC offices and the public libraries nearest to the community of the facilities named in this Agreement and, at a minimum, contain the following:

1. Regarding the Interested Persons Group:

- a. Changes in the composition of the interested persons group;
- b. Summary of assistance and information provided to the interested persons group;
- c. Summary of meetings with the interested persons group, including dates, attendance lists, topics addressed, and comments received; and
- d. Results of any action or changes in response to input and feedback from the Interested

Persons Group.

2. Regarding Commitments to Superior Environmental Performance

- a. The previous year's Environmental Objectives and Targets;
- b. Progress made toward the previous year's Environmental Objectives and Targets;
- c. Current Environmental Objectives and Targets;
- d. Examples of programs/activities that resulted in waste, energy usage, and/or emissions reductions;
- e. Summary of facility air emissions and waste generation, as reported in the Annual Emissions Inventory and Hazardous Waste Report;
- f. Documentation of changes in citizen environmental complaints and satisfaction of complainant that concern has been addressed; and
- g. Documentation of changes in the status of NEC's environmental compliance.

3. Regarding Operational Flexibility:

- a. Time (days/weeks from submittal to completion) saved in obtaining permits;
- b. Time saved (hours per month) by the reduction in recordkeeping requirements and administrative requirements;
- c. Description of the changes in the time required by NEC to manage its air/air permit program; and
- d. Energy savings from avoiding the use of the incinerator.

4. Regarding Overall Assessment of the Success of the Agreement:

- a. Public recognition/awards resulting from the efforts of the Cooperative Agreement and EMS;
- b. A summary of the annual achievements, difficulties or other challenges associated with fulfilling the Agreement;
- c. An analysis of the suspected reasons for the above mentioned achievements and difficulties or other challenges associated with fulfilling the Agreement; and
- d. A summary of the activities undertaken to improve the performance of the Agreement.

NEC will provide all information in the form of a single report. NEC and the DNR agree to meet annually to review the results of this Agreement. At a minimum this meeting will include a review of the benefits for both parties, the roadblocks that were encountered, and the means to improve this process.

XII. REPORTING OF VIOLATIONS

Any violations discovered as part of the baseline or annual environmental performance evaluation shall be disclosed to DNR within 45 days of the completion of the evaluation in a report containing the information required under s. 299.80(12), Wis. Stats. DNR may not take any civil enforcement action on any such reported violations if they are corrected within 90 days of notification, unless the violations present an imminent threat to public health or the environment or may cause serious harm to public health or the environment, or the department discovers the violations before the Company discloses them. This does not exempt NEC from the requirements for immediate notification contained in s. 292.11, Wis. Stats. or any other provisions of any criminal violations would always be subject to DNR enforcement action.

If a longer period of time is needed to correct the violations, a compliance schedule can be negotiated and the Agreement modified allowing a compliance schedule of up to 12 months.

ENFORCEMENT DEFERRAL

DNR agrees not to commence a civil action to collect forfeitures for violation at NEC facilities covered by this Agreement if those violations are disclosed in a report that meets the requirements of Section XII of this Agreement for at least 90 days after DNR receives the report. So long as NEC corrects the violations that are disclosed in such a report within 90 days after DNR receives the report, DNR shall not commence a civil action to collect forfeitures for said violations. If NEC submits a report to DNR disclosing a violation and a proposed compliance schedule, DNR may approve the compliance schedule as submitted or propose a different compliance schedule. If NEC and DNR agree upon a compliance schedule, that schedule shall be incorporated into this Agreement without formal amendment. Notwithstanding anything else in this Agreement, DNR may commence a civil action at any time to collect forfeitures for violations which: (1) present an imminent threat to public health or the environment or may cause serious harm to public health or the environment; or (2) DNR discovers the violations before NEC submits a report disclosing such violations.

XIII. AMENDMENT OR REVOCATION OF AGREEMENT AND CONFIDENTIAL INFORMATION

Notwithstanding any other provision in this Agreement, included but not necessarily limited to Sections XI, XII, XIII and XIV, DNR will take all steps to protect NEC's confidential business information to the maximum extent provided by law. In this regard, NEC will designate confidential business information pursuant to Wis. Admin. Code & sect; NR 2.19; Wis. Stats. & sect; 285.70, 291.15, 289.09, 101.598, 134.90(5) and 905.08; and any other common law or statute providing for protection of confidential information. This Agreement shall not constitute a waiver by NEC of any such privilege that it currently or may hold over confidential business information, trade secrets or other privileged communications.

XIV. APPLICABLE LAW

The laws of the State of Wisconsin shall govern this Agreement. Furthermore, the rights, obligations and liabilities of the signatories to this Agreement shall be determined under principals of general contract law.

XV. FACILITY LIAISON AND ADDRESSES

NEC and DNR agree to appoint a representative from their respective organizations to serve as a liaison under this Agreement. All correspondence and communications between the parties shall be directed to the designated liaisons.

The DNR liaison shall have an intimate knowledge of NEC operations as well as a working familiarity with the coating industry and those activities associated with coating operations that have the potential to affect the environment. The DNR liaison shall also have working knowledge of non-environmental regulatory matters that affect the coating industry or manufacturing businesses in general.

NEC and DNR agree the current appointees will continue to serve as contacts for the duration of this agreement unless otherwise requested and agreed to by both parties following the signing of the

renewed Agreement. Changes in each organization's liaison or their associated addresses shall be forwarded to the other party once effective and will become part of this Agreement without formal amendment.

Mark Harings, Environmental Assistance Coordinator, Wisconsin Department of Natural Resources, 1300 W. Clairemont Avenue, Eau Claire, WI 54702-4001, (715) 831-3263.

Randy Nedrelo, Solid and Hazardous Waste Manager, Northern Engraving Corporation, 803 S. Black River Street, Sparta, WI 54656, (608) 269-6911.

**Amended Environmental Cooperative Agreement
between
Northern Engraving Corporation and
Wisconsin Department of Natural Resources**

IN WITNESS WHEREOF, the parties by their signatures shall cause this amended agreement to be executed upon signing and continue until June 7, 2012.

Signed for and on behalf of:
STATE OF WISCONSIN, DEPARTMENT OF NATURAL RESOURCES



By: /s/ Scott Hassett Date: 08/30/2007
Scott Hassett, Secretary

Signed for and on behalf of:
NORTHERN ENGRAVING CORPORATION



By: /s/ Philip Gelatt Date: 09/04/2007
Philip M. Gelatt, President



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
Scott A. Humrickhouse, Regional Director

West Central Region Air Program
LaCrosse Service Center
3550 Mormon Coulee Road, Rm. 104
LaCrosse, Wisconsin 54601
Fax 608-785-9990

June 11, 2007

FILE CODE: 4560-1
FID # : 632009730
PERMIT #: 632009730-F10

Mr. Bruce Corning, VP Management Systems
Northern Engraving Corporation - Holmen
P.O Box 377
Sparta, WI 54656

Dear Mr. Corning:

The Air Management Program of the Department of Natural Resources has performed a preliminary review of the renewal application for air pollution control permit number 632009730-F04 regarding the operation of an existing printed/coated plastic sheet manufacturing facility.

The West Central Region Air Program, LaCrosse Area Office has prepared an analysis of the proposed renewal and has made a preliminary determination that it is approvable. The analysis and preliminary determination indicated that the emission limitations and special permit conditions in the attached draft permit should be included in any renewed permit which may be issued by the Department. Please review this draft permit carefully.

The Department will now accept public comments on the preliminary analysis and draft permit as required by ss. 285.62(3), (4) and (5), Wis. Stats. Comments will be received for 30 days after publication of a Class I Legal notice. The Department will publish this notice. **Please review the Draft Permit and provide your comments to the Department within the same 30 day period.**

The public input, if any, will also be reviewed to note if significant public interest in the project exists and whether a public hearing is warranted. If a hearing is warranted, it would be held within 60 days from the end of the public comment period.

This draft operation permit contains monitoring requirements relating to the emissions from an air contaminant source. Pursuant to s. 285.17(2)(b), Wis. Stats., the Department is notifying you of the proposed monitoring requirements in the attached draft permit. You have the opportunity to demonstrate to the Department that the proposed monitoring requirements are unreasonable considering, among other factors, monitoring requirements imposed on similar air contaminant sources. **Please review the monitoring requirements.** If you do seek review of the monitoring requirements, please notify me within 30 days of publication of the notice seeking public comment. Your request for review should identify the specific monitoring requirements you are challenging and provide any information you have to demonstrate that the monitoring requirements are unreasonable. If the Department's Air and Waste Division Administrator determines that the monitoring requirements are unreasonable, the Department may not impose the monitoring requirements. If the Administrator determines that the monitoring requirements are reasonable, you may obtain a review of that determination by the Secretary of the Department. If the Secretary determines that the monitoring requirements are unreasonable, the Department may not impose the monitoring requirements.

Please be advised that this is only a preliminary determination. If you have any questions regarding this matter, please feel free to contact me at 608-789-5544.

Sincerely,

Mary Oleson

Air Management Engineer

cc: GEF II – AM/7 – FESOP Renewal

Enclosure



Appendix A1.



PREAMBLE

An Asterisk (*) throughout this document denotes legal authority, limitations and conditions which are **not** federally enforceable.

Concurrent Permit Actions Performed as Part of the Review and Issuance of Permit 632009730-F10.

Construction Permits Issued in Conjunction with Permit 632009730-F10 Under s. 285.61(8), Wis. Stats.: none

Revised Construction Permits Issued in Conjunction with Permit 632009730-F10 Under s. NR 406.11, Wis. Adm. Code: none

Operation (CONOP) Permits Issued in Conjunction with Permit 632009730-F10 Under s. 285.62(7)(b), Wis. Stats.: none

Revised Operation Permits Issued in Conjunction with Permit 632009730-F10 Under ss. NR 407.11, 407.12, 407.13 and/or 407.14, Wis. Adm. Code: none

The following permits, orders, etc., are adopted, under ss. 285.65(3), Wis. Stats., NR 406.11(1)(c) and (d), NR 407.09(2)(d) and NR 407.15(3) and (4), Wis. Adm. Code, by Permit 632009730-F10 which then becomes the primary enforceable document: EOP-10-KJC-83-32-081, MIA-10-KJC-83-42-053, 88-IRS-049, 91-POY-126, 91-POY-126-R1, 88-IRS-049-R1, EOP-10-KJC-83-32-081-R1, MIA-10-KJC-83-42-053-R1, 01-MEC-615, 632009730-F01, 632009730-F02, 05-MEC-314, 05-MEC-314-OP, 632009730-F03, 06-MEC-044, 06-MEC-044-OP, 632009730-F04

Stack and Process Index:

Stack S03, Process P03 - 2 Lithographic Presses with a Natural Gas/Propane Drying Oven Rated at 1.25 mmBtu/hr - Installed 1991 (PLO-05-H and PLO-07-H)

Stack S08, Process P08 - 1 Roll Coater with Natural Gas/Propane Conveyor Oven - Installed 1991 (PCO-08-H)

Stack S09, Process P09 - Six screening lines with 2 screening machines and two screening lines with 1 screening machine for a total 14 screening machines. Plus four additional backup screening machines for temporary replacement of the original 14 machines. Only 14 machines shall be operated at any one time. Process P09 includes 8 ovens. Six of these ovens fire natural gas or propane and have a total combined heat input rating of 7.9 mmBtus per hour. Two ovens are electric ovens. Installed 1991 and 2001. Modified 2005 and 2006. (Screening lines PSO-12-H, PSO-27-H, PSO-21-H, PSO-18-H, PSO-26-H, PSO-23-H, PSO-H-31, PSO-H-30)

Stack S36, Process P36 - Towel Dryer - Installed 1991

Stack S40, Process P40 - Screen Cleaning Machine - Installed 1998

Stack S14, Process P14 - Miscellaneous Facility Wide Cleanup

Stack S50, Process P50 - Two Digital Printing Lines each with an IR Curing Oven - Installed 2001

Stack S60, Process P60 - Screening machine with a natural gas oven with attached UV curing unit. The heat input rating of the natural gas oven is 0.78 mmBtus per hour. Installed 2002

Insignificant Emission Units:

Boiler, Turbine, and HVAC System Maintenance.

Convenience Space Heating (< 5 million BTU/hr Burning Gas, Liquid, or Wood).

Convenience Water Heating.

Internal Combustion Engines Used for Warehousing and Material Transport.
Janitorial Activities.
Maintenance of Grounds, Equipment, and Buildings (lawn care, painting, etc.).
Office Activities.
Sanitary Sewer and Plumbing Venting.
Four UV-Cured Lithographic Presses
Thermometer Metalizing Process
Parts Dryer
Ink Mixing Station
Electirc Lab Oven
Two each, 30,000 gallon propane storage tanks
Adhesive Application Press
Stock Room for paint, powder ink, solvents, and plastic
Tool and Die repair room
Punch Presses
Photo Shears
Thompson Presses
Quality Control Room and Laboratory
Flexlens
Screenmaking

Permit Shield — Unless precluded by the Administrator of the US EPA, compliance with all emission limitations in this operation permit is considered to be compliance with all emission limitations established under ss. 285.01 to 285.87, Wis. Stats., and emission limitations under the federal clean air act, that are applicable to the source if the permit includes the applicable limitation or if the Department determines that the emission limitations do not apply. The following emission limitations were reviewed in the analysis and preliminary determination and were determined not to apply to this stationary source:

Process P03: Because the facility is not located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county the requirements of s. NR 422.142, Wis. Adm. Code do not apply to P03, pursuant to s. NR 422.142(1), Wis. Adm. Code.

Process P08: Because the facility is not located in Brown, Calumet, Dane, Dodge, Door, Fond du Lac, Jefferson, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha or Winnebago counties and because the total VOC emissions from the facility, with all emission control equipment inoperative have not exceeded 100 tons per year, P08 is not subject to the limitations for fabric and vinyl coating in s. NR 422.08, Wis. Adm. Code, pursuant to s. NR 422.03(3), Wis. Adm. Code. Additionally the facility has elected restrictions to limit the volatile organic compound emissions to less than 100 tons per year.

Process P09: Because the facility is not located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county, P09 is exempt from the requirements of s. NR 422.145, Wis. Adm. Code, pursuant to s. NR 422.03(4m)(a), Wis. Adm. Code.

Process P14: Because cleanup (P14) is performed using a wipe cleaning operation and the facility is located outside of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha counties, it is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(g)1., Wis. Adm. Code. The cleanup solvent use (P14) is subject to general emission limitations for volatile organic compounds outline in ss. NR 419.03 and NR 419.04, Wis. Adm. Code which would be included in Part II of any operation permit issued by the Department.

Process P40: Because the facility is not located in brown, Calumet, Dane, Dodge, Door, Fond du Lac, Jefferson, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Washington or Waukesha counties, because the screen cleaning machine is a cold cleaner, and because not more than 1.5 gallons of solvent are added per day, P40 is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(a), Wis. Adm. Code. The screen cleaning machine is subject to the general emission limitations for volatile organic compounds outlined in ss. NR 419.03 and NR 419.04, Wis. Adm. Code which would be included in Part II of any operation permit issued by the Department.

Process P50: Because the facility is not located in Kenosha, Milwaukee, Ozaukee, Racine, Washington, or Waukesha counties, P50 is not subject to the limitations for plastic parts coating in s. NR 422.083, Wis. Adm. Code, pursuant to s. NR 422.083(1), Wis. Adm. Code.

Facility: Emissions from firing natural gas and propane, which are group I virgin fossil fuels, in the ovens associated with P03, P08, and P09 are exempt from ch. NR 445, Wis. Adm. Code requirements, pursuant to ss. NR 445.04(1)(c)1., (3)(c)1, (4)(c)1., and (4r)(b)1.; ss. NR 445.05(1)(c)1., (3)(c)1, (4)(c)1., and (4r)(b)1.; and s NR 445.07(5)(a), Wis. Adm. Code.

Part I — The headings for the areas in the permit are defined below. The legal authority for these limitations or methods follows them in [brackets].

Pollutant – This area will note which pollutant is being regulated by the permit.

Limitations – This area will list all applicable emission limitations that apply to the source, including case-by-case limitations such as Latest Available Control Techniques (LACT), Best Available Control Technology (BACT), or Lowest Achievable Emission Rate (LAER). It will also list any voluntary restrictions on hours of operation, raw material use, or production rate requested by the permittee to limit potential to emit.

Compliance Demonstration – The compliance demonstration methods outlined in this area may be used to demonstrate compliance with the associated emission limit or work practice standard listed under the corresponding **Limitations** column. The compliance demonstration area contains limits on parameters or other mechanisms that will be monitored periodically to ensure compliance with the limitations. The requirement to test as well as initial and periodic test schedules, if testing is required, will be stated here. Notwithstanding the compliance determination methods which the owner or operator of a sources is authorized to use under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source’s compliance with applicable emission limitations.

Reference Test Methods, Recordkeeping, and Monitoring Requirements – Specific US EPA Reference test methods or other approved test methods will be contained in this area and are the methods that must be used whenever testing is required. A reference test method will be listed even if no testing is immediately required. Also included in this area are any recordkeeping requirements and their frequency and reporting requirements. Accuracy of monitoring equipment shall meet, at a minimum, the requirements of s. NR 439.055(3) and (4), Wis. Adm. Code, as specified in Part II of this permit.

Condition Type – This area will specify other conditions that are applicable to the entire facility that may not be tied to one specific pollutant.

Conditions – Specific conditions usually applicable to the entire facility or compliance requirements.

Compliance Demonstration – This area contains monitoring and testing requirements and methods to demonstrate compliance with the conditions.

PART II — This section contains the general limitations that the permittee must abide by. These requirements are standard for most sources of air pollutants so they are included in this section with every permit.

DRAFT AIR POLLUTION CONTROL OPERATION PERMIT RENEWAL

EI FACILITY NO: 632009730

PERMIT NO.: 632009730-F10

TYPE: Synthetic Minor, Non-Part 70

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

Name of Source: Northern Engraving Corporation

Street Address: 1023 Sand Lake Road,
Holmen, La Crosse County, Wisconsin

Responsible Official, & Title: Mr. Bruce Corning, VP Management Systems

is authorized to operate a printed/coated plastic sheet manufacturing facility in conformity with the conditions herein.

THIS OPERATION PERMIT EXPIRES

Date will be inserted at the time of issuance.

A RENEWAL APPLICATION MUST BE SUBMITTED AT LEAST 6 MONTHS, BUT NOT MORE THAN 18 MONTHS, PRIOR TO THIS EXPIRATION DATE [ss. 285.66(3)(a), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].

No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely application for renewal of the permit. If you submit a timely application for renewal, the existing operation permit will not expire until the renewal application has been finally acted upon by DNR. [ss. 227.51(2), 285.62(8)(b), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].

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

Dated at Wisconsin Rapids, Wisconsin,

STATE OF WISCONSIN

DEPARTMENT OF NATURAL RESOURCES

For the Secretary

Joseph Ancel

West Central Region Air Team Supervisor

**PART I
SPECIFIC PERMIT CONDITIONS**

A. *Part I.A. of this operation permit is effective so long as the permittee is operating under a Cooperative Agreement with the Department as entered into under s. 299.80 Wis. Stats. If any such Cooperative Agreement expires or is revoked for any reason, Part I.A. of this operation permit is no longer effective and Part I.B. becomes the effective operation permit for the facility. If any such Cooperative Agreement expires or is revoked for any reason, the permittee shall comply with any delayed compliance deadlines and practical interim requirements established by the Department in a written revocation decision until the Department issues the approvals required under chs. 280 to 295, Wis. Stats, that were replaced by the above referenced Cooperative Agreement.*

1. Volatile Organic Compound Emissions

a. Limitations:

(1) The total volatile organic compound emissions from the facility may not exceed 85 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats and s. 285.65(7), Wis. Stats.]

b. Compliance Demonstration Methods:

(1) Each month the permittee shall calculate the total volatile organic compound emissions from the facility as follows:

$$E = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n)] - [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]\}$$

where:

E is the monthly VOC emissions (tons/month);

U is the monthly usage of each ink, coating, solvent, or other VOC containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other VOC containing material used during the month (pounds/gallon)

C is the VOC content of each ink, coating, solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);

G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100% of its content;

n identifies each ink, coating, solvent or other VOC containing material used during the month;

S is the amount of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month (gallons/month);

P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month in pounds per gallon;

m identifies each spent ink, coating, solvent or other VOC containing material recovered and shipped off site during the month.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) To demonstrate compliance with condition I.A.1.a.(1), the permittee shall calculate the total volatile organic compound emissions from the facility over each 12 consecutive month period by summing the monthly volatile organic compound emissions as calculated in I.A.1.b.(1) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(3) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content (C_n) and the density (W_n) of the of the inks, coatings, solvents or other VOC containing materials used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content (P) no less than: (a) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (b) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

c. Record Keeping and Monitoring Requirements:

(1) The permittee shall keep records of the following for each ink, coating, solvent, or other VOC containing material used at the facility:

- (a) A unique name or identification number; and
- (b) The VOC content, expressed as a weight fraction (C_n).
[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall keep monthly records of:

- (a) The amount of each ink, coating, solvent, or other VOC containing material used in gallons per month (U_n);
- (b) The density of each ink, coating, solvent, or other VOC containing material used in pounds per gallon (W_n);
- (c) The G multiplier factor for the VOC in the material (G_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor;
- (d) The amount of spent ink, coating, solvent, or other VOC containing material recovered and shipped off site in gallons per month (S_m);
- (e) The VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site in pounds per gallon (P_m).
- (f) The total monthly VOC emissions from the facility in tons per month (E), as calculated in I.A.1.b.(1); and
- (g) The total VOC emissions from the facility in tons per year as calculated in I.A.1.b.(2).
[s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Volatile Organic Compound Emissions: Whenever compliance emission testing is required, US EPA Method 18, 25, 25A or 25B shall be used to demonstrate compliance. [s. NR 439.06(3)(a), Wis. Adm. Code]

(2) Reference Test Method for Volatile Organic Compound Content: Whenever VOC content testing is required, US EPA Method 24 or 24A shall be used to determine the organic solvent content, the volume of solids, the weight of solids, the water content and the density of inks. [s. NR 439.06(3)(b), Wis. Adm. Code]

2. Hazardous Air Pollutant Emissions

a. Limitations:

(1) The emissions of each hazardous air pollutant regulated by the Clean Air Act shall be less than 8 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats.] [s. 285.65(7), Wis. Stats.]

(2) The total emissions of all hazardous air pollutants regulated by the Clean Air Act combined shall be less than 20 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats.] [s. 285.65(7), Wis. Stats.]

b. Compliance Demonstration Methods:

(1) Each month the permittee shall calculate the total emissions of each hazardous air pollutant from the facility regulated by the Clean Air Act as follows:¹

$$E_x = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times H_1 \times F_1) + (U_2 \times W_2 \times H_2 \times F_2) + \dots + (U_n \times W_n \times H_n \times F_n)] - [(S_1 \times I_1) + (S_2 \times I_2) + \dots + (S_m \times I_m)]\}$$

where:

E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month);

x identifies each HAP emitted from the facility

U is the monthly usage of each ink, coating, solvent, or other HAP containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other HAP containing material used during the month (pounds/gallon)

¹ This calculation shall be performed for each hazardous air pollutant regulated by the Clean Air Act that is emitted from the facility.

H is the HAP content of each ink, coating, solvent, or other HAP containing material used during the month expressed as a weight fraction (i.e. if a material is 25% HAP by weight H would be 0.25);

F is a multiplier for HAP containing materials for which the HAP is emitted at other than 100% of its content;

n identifies each ink, coating, solvent or other HAP containing material used during the month;

S is the amount of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month (gallons/month);

I is the HAP content of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month in pounds per gallon;

m identifies each spent ink, coating, solvent or other HAP containing material recovered and shipped off site during the month.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) To demonstrate compliance with condition I.A.2.a.(1), the permittee shall calculate the emissions of each hazardous air pollutant regulated by the Clean Air Act over each 12 consecutive month period by summing the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act as calculated in I.A.2.b.(1) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(3) Each month the permittee shall calculate the total emissions of hazardous air pollutants regulated by the Clean Air Act as follows:

$$E_{\text{hap}} = \sum E_x$$

where:

E_{hap} is the monthly total emissions of all hazardous air pollutants regulated by the Clean Air Act that are emitted by the facility (tons/month);

E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month) as calculated in I.A.2.b.(1);

x identifies each HAP emitted from the facility.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(4) To demonstrate compliance with condition I.A.2.a.(2), the permittee shall calculate the total emissions of all hazardous air pollutants regulated by the Clean Air Act over each 12 consecutive month period by summing the monthly emissions of all hazardous air pollutants regulated by the Clean Air Act as calculated in I.A.2.b.(3) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(5) The permittee shall use coating manufacturer's formulation data to determine the HAP content (H_n) of the of the inks, coatings, solvents or other HAP containing materials used. [s. NR 439.04(1)(d), Wis. Adm. Code]

(6) The permittee shall analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content (H) no less than: (a) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (b) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

c. Record Keeping and Monitoring Requirements:

(1) The permittee shall keep records of the following for each ink, coating, solvent, or other HAP containing material used at the facility:

(a) A unique name or identification number; and

(b) The weight fraction of each HAP contained in the material (H_n).

[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall keep monthly records of:

(a) The amount of each ink, coating, solvent, or other HAP containing material used in gallons per month (U_n);

(b) The density of each ink, coating, solvent, or other HAP containing material used in pounds per gallon (W_n);

(c) The F multiplier factor for the HAP in the material (F_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor;

- (d) The amount of spent ink, coating, solvent, or other HAP containing material recovered and shipped off site in gallons per month (S_m);
 - (e) The amount of each HAP contained in each spent ink, coating, solvent or other HAP containing material recovered and shipped off site in pounds per gallon (I_m);
 - (f) The facility total monthly emissions of each HAP in tons per month (E_x), as calculated in I.A.2.b.(1);
 - (g) The total monthly HAP emissions from the facility in tons per month (E_{hap}), as calculated in I.A.2.b.(3);
 - (h) The facility total emissions of each HAP in tons per year as calculated in I.A.2.b.(2).; and
 - (i) The total HAP emissions from the facility in tons per year as calculated in I.A.2.b.(4).
- [s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Hazardous Air Pollutant Emissions: Whenever compliance emission testing is required, a method approved by the Department in writing shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

3. Particulate Matter Emissions

a. Limitations:

(1) Particulate matter emissions from each stack exhausting non-electric drying ovens and space heaters may not exceed 0.15 pounds per mmBtu of heat input to each stack. [s. NR 415.06(2)(a), Wis. Adm. Code]

b. Compliance Demonstration Methods:

(1) The permittee shall only fire natural gas and/or propane in each non-electric drying oven and space heater at the facility.² [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]

c. Record Keeping and Monitoring Requirements:

(1) The permittee shall retain on site, a statement indicating that natural gas and propane are the only fuels available for combustion at the facility.³ [s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]

4. Visible Emissions

a. Limitations:

(1) The visible emissions from each of the stacks exhausting emissions units at the facility may not exceed 20% opacity [s. NR 431.05, Wis. Adm. Code]

b. Compliance Demonstration Methods:

² Because the maximum theoretical emissions while firing these fuels are less than the allowable limit of 0.15 pounds per million Btu heat input, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

³ This statement is sufficient because each non-electric drying oven is designed to only burn natural gas and/or propane.

(1) The permittee shall only fire natural gas and/or propane in each non-electric drying oven.⁴ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]

c. Record Keeping and Monitoring Requirements:

(1) The permittee shall retain on site, a statement indicating that natural gas and propane are the only fuels available for combustion at the facility⁵ [s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

5. Operational Flexibility

a. New Equipment Construction and Modification: The permittee may commence construction or modification (but not operation) of new process equipment prior to obtaining a construction permit, provided the following conditions are met. The following conditions do not apply if a proposed project is exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(1) The permittee shall submit the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department:

(a) Two copies of a complete construction and operation permit application describing the proposed equipment;

(b) An application fee of \$1350 or other amount as required by s. NR 410.03(1)(d), Wis. Adm. Code; and

(c) Information describing how the interested persons group was notified of the proposed project.

[ss. 299.80(10) and (11)(b), Wis. Stats.]

(2) The Department shall process the permit application in accordance with ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code, however, the permittee need not wait for permit issuance to commence construction. The Department shall process the permit application as both a construction permit and a significant revision to this operation permit and issue both permits simultaneously to reduce the administrative burden of issuing a construction permit that expires 18 months after issuance followed by an operation permit. The Department shall send an invoice outlining the fees required for processing the construction permit for the proposed project, including the fees for an expedited permit review authorized by s. NR 410.03(o), Wis. Adm. Code, less the \$1350 permit application fee. [ss. 299.80(2)(h), (4)(b), (10) and (11)(b), Wis. Stats.]

(3) The permittee shall pay the total amount of the fee invoice within 30 days of receipt.⁶ [s. 299.80(10), Wis. Stats.]

(4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.⁷ [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

⁴ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation for fuel burning installations. The remaining stacks at the facility exhaust volatile organic compound emissions, and visible emissions are not expected from these other emission points.

⁵ This statement is sufficient because each non-electric drying oven is designed to only burn natural gas and/or propane.

⁶ Pursuant to s. 299.80(10), Wis. Stats., a participant in a cooperative agreement shall pay the same fees required under chs. 280 to 295, Wis. Stats. that it would be required to pay if it had not entered into a cooperative agreement. Therefore, while the requirement to obtain a construction permit prior to installation is waived, the permittee is still required to pay the fees that would have been assessed had a construction permit been issued under ch. NR 406, wis. Adm. Code.

⁷ By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for

(5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction of the equipment in question immediately.

b. New Equipment Operation: The permittee may operate new process equipment, provided one of the following alternate scenarios are met. The following conditions do not apply if a proposed project is exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(1) *Alternate Scenario #1:* The permittee may operate new process equipment provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.5.a. and the Department issues a construction permit pursuant to ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code. The permittee shall operate the new process equipment in compliance with the conditions contained in any construction permit issued by the Department. [s. NR 406.03, Wis. Adm. Code]

(2) *Alternate Scenario #2:* The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.5.a. and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

- (a) The permittee shall submit two copies of the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department, 14 calendar days prior to the date of initial operation:
- (i) Information identifying all applicable requirements from the Wisconsin Statutes, Wisconsin Administrative Code, and federal Clean Air Act for the proposed equipment;
 - (ii) A quantification of the air pollution emissions that would result from the proposed project;
 - (iii) A computer dispersion modeling analysis showing the National Ambient Air Quality Standards will be protected if the proposed project results in an increase in potential particulate matter, sulfur dioxide, nitrogen oxide, and/or carbon monoxide emissions.
 - (iv) A computer dispersion modeling analysis showing the Acceptable Ambient Concentrations will be protected if the proposed project results in an increase in emissions of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code so that the resulting facility total emissions of the hazardous air pollutant are above the corresponding Table Value(s) **OR** results in the emission of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code that was not previously emitted, at a rate greater than its corresponding Table Value(s); and
 - (v) An analysis showing the proposed project will not cause the total facility wide potential emissions of particulate matter, sulfur dioxide, nitrogen oxides or carbon monoxide to exceed 100 tons per year. Any proposed new or relocated source that will result in the facility wide potential emissions of any one of these pollutants exceeding 100 tons per year is not eligible for this waiver. If the facility wide potential emissions of any one of the pollutants would be greater than 100 tons per year as the result of a proposed project, the permittee shall comply with the construction permit requirements outlined in ch. NR 406, Wis. Adm. Code and the significant operation permit revision requirements of s. NR 407.13, Wis. Adm. Code.⁸

PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air pollutant emissions. Requirement I.A.5.a.(1)(g) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

⁸ This requirement is necessary because if the potential emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeds 100 tons the facility would be considered a major source for Part 70 purposes and would be required to obtain either a Part 70 source permit or a synthetic minor, non-Part 70 source permit containing conditions that limit the potential emissions of all criteria pollutants to less than 100 tons per year.

[ss. 299.80(10) and (11)(b), Wis. Stats.]

(b) The Department has 14 calendar days from the date that all the information outlined in (a) is received to request additional information or object to the proposed project. If the Department requests additional information during the original 14 calendar day period the Department shall have an additional 7 calendar days from the date of receipt of the information to request additional information or object to the proposed project. Under no scenario shall the Department have less than 14 days to review original submittal. If the Department does not respond within 14 calendar days from the date that all the information outlined in (a) is submitted, or within 7 days from the date that any additional information requested by the Department is submitted, whichever is later, the permittee may commence initial operation of the proposed equipment. The Department may provide written approval to commence initial operation of the proposed equipment prior to the end of the 14 calendar day period. If this is the case the permittee may commence initial operation upon receipt of this written approval. [ss. 299.80(2)(h) and (11)(b), Wis. Stats.]

(3) *Alternate Scenario #3:* The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.5.a. and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(a) The Department provides written approval to commence initial operation of the proposed equipment. This written approval shall only be provided after the Department completes an air quality dispersion modeling analysis to ensure that the national ambient air quality standards and acceptable ambient concentrations will be protected while the proposed equipment is operating; [s. NR 406.09, Wis. Adm. Code]

(b) The permittee shall comply with any specific conditions included in the Department's written approval to commence initial operation;

(4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.⁹ [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction and/or operation of the equipment in question immediately.

6. Facility Wide Reporting Requirements

a. Submit the results of monitoring or a summary of monitoring results required by Part I.A. of this permit to the Department annually.

(1) The time period to be addressed by the submittal are: January 1 to December 31.

(2) The report shall be submitted to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.

(3) All deviations from and violations of applicable requirements shall be clearly identified in the submittal.

⁹ By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air pollutant emissions. Requirement I.A.5.a.(1)(g) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

(4) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report.
[s. NR 439.03(1)(b), Wis. Adm. Code]

b. Submit a certification of compliance with the requirements of Part I.A. of this permit to the Department annually.

(1) The time period to be addressed by the report is the January 1 to December 31 period which precedes the report.

(2) The report shall be submitted to the Wisconsin Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 60 days after the end of each reporting period.

(3) The information included in the report shall comply with the requirements of Part II Section N of this permit.

(4) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report.

[s. NR 439.03(1)(c), Wis. Adm. Code]

7. Compliance Testing Requirements

a. Whenever compliance emission tests are required by the Department:

(1) Any compliance emission tests required by the Department shall be conducted while operating at 100% capacity. If operation at 100% capacity is not feasible, the sources shall operate at a capacity which is approved by the Department in writing.

(2) The reference test methods outlined in this permit shall be used unless an alternate, U.S. EPA approved, test method is approved by the Department in writing.

(3) The Department shall be informed at least 20 working days prior to any tests so a Department representative can witness the testing.

(4) At the time of notification, a compliance test plan shall also be submitted for approval.

(5) Two copies of the report on any required tests shall be submitted to the Department for evaluation within 60 days after the tests.

[s. NR 439.07, Wis. Adm. Code]

8. Construction Permit Requirements

(a) Construction Permit Expiration: Construction permit 06-MEC-044 expires August 2, 2007. Construction or modification and an initial operation period for equipment shakedown, testing and Department evaluation of operation to assure conformity with the permit conditions is authorized for each emissions unit covered in this permit. Please note that the sources covered by this permit are required to meet all emission limits and conditions contained in the permit at all times, including during the initial operation period. If 18 months is an insufficient time period for construction or modification, equipment shakedown, testing and Department evaluation of operation, the permit holder may request and the Department may approve in writing an extension of this permit. [ss. 285.60(1)(a)2 and 285.66(1), Wis. Stats.; s. NR 406.12, Wis. Adm. Code and 06-MEC-044]

B. *Part I.A. of this operation permit is effective so long as the permittee is operating under a Cooperative Agreement with the Department as entered into under s. 299.80 Wis. Stats. If any such Cooperative Agreement expires or is revoked for any reason, Part I.A. of this operation permit is no longer effective and Part I.B. becomes the effective operation permit for the facility. If any such Cooperative Agreement expires or is revoked for any reason, the permittee shall comply with any delayed compliance deadlines and practical interim requirements established by the Department in a written revocation decision until the Department issues the approvals required under chs. 280 to 295, Wis. Stats, that were replaced by the above referenced Cooperative Agreement.*

1. P03, Stack S03 - 2 Lithographic Presses with a Natural Gas/Propane Drying Oven Rated at 1.25 mmBtu/hr- Installed 1991 (PLO-05-H and PLO-07-H)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions may not exceed 0.15 pounds per mmBtu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in each drying oven. ¹⁰ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site, a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. ¹¹ [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Visible Emissions	(a) Emissions may not exceed 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in each drying oven. ¹² [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The permittee shall retain on site, a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. ¹³ [s. NR 439.04(1)(d), Wis. Adm. Code]

¹⁰ Because the maximum theoretical emissions while firing these fuels are less than the allowable limit of 0.15 pounds per million Btu heat input, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

¹¹ This statement is sufficient because each drying oven is designed to only burn natural gas and/or propane.

¹² It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

¹³ This statement is sufficient because each drying oven is designed to only burn natural gas and/or propane.

1. P03, Stack S03 - 2 Lithographic Presses with a Natural Gas/Propane Drying Oven Rated at 1.25 mmBtu/hr- (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>c. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> The permittee may not use coatings or inks with a VOC content greater than 1.8 pounds per gallon as applied. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.1.c.(3)(c) to demonstrate compliance with I.B.1.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on the presses: (a) A unique name of identification number for each ink and other VOC containing material, as applied; and (b) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

2. P08, Stack S08 - 1 Roll Coater with a Natural Gas/Propane Conveyor Oven rated at 0.8 mmBtu/hr - Installed 1991 (PCO-08-H)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> (i) The permittee may not use coatings or inks with a VOC content greater than 7.1 pounds per gallon as applied. (ii) The permittee may not use more than 500 gallons of coating per month, averaged over each 12-consecutive month period [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.2.a.(3)(c) to demonstrate compliance with I.B.2.a.(1)(a)(i). [s. NR 407.09(4), Wis. Adm. Code]</p> <p>(b) To demonstrate compliance with condition I.B.2.a.(1)(a)(ii), the permittee shall calculate the total gallons of coating used, averaged over each 12 consecutive month period by dividing the total gallons of coating used during each consecutive 12 month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each coating and other VOC containing materials used on the coater: (i) A unique name of identification number for each coating and other VOC containing material, as applied; and (ii) The VOC content of each coating and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(e) The permittee shall keep monthly records of: (i) The amount of coating used on the coater in gallons per month; and (ii) The total gallons of coatings used averaged over each 12 consecutive month period as calculated in condition I.B.2.a.(2)(b). [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

2. P08, Stack S08 - 1 Roll Coater with Natural Gas/Propane Conveyor Oven - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
b. Visible Emissions	(a) Emissions may not exceed 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the conveyor oven. ¹⁴ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The permittee shall retain on site, a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. ¹⁵ [s. NR 439.04(1)(d), Wis. Adm. Code]

¹⁴ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

¹⁵ This statement is sufficient because the conveyor oven is designed to only burn natural gas and/or propane.

3. P09, Stack S09 - Six screening lines with 2 screening machines each and two screening lines with 1 screening machine for a total of 14 screening machines. Plus four additional backup screening machines for temporary replacement of the original 14 machines. Only 14 machines shall be operated at any one time. Process P09 includes 8 ovens. Six of these ovens fire natural gas or propane and have a total combined heat input rating of 7.9 mmBtus per hour. Two ovens are electric ovens. Installed 1991 and 2001. Modified 2005 and 2006. (Screening lines PSO-12-H, PSO-27-H, PSO-21-H, PSO-18-H, PSO-26-H, PSO-23-H, PSO-H-31, PSO-H-30)

POLLUTANT	(1). LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions may not exceed 0.15 pounds per mmBtu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code]	(b) The permittee shall only fire natural gas and/or propane in each of the drying ovens that are not powered by electricity. ¹⁶ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site, a statement indicating that natural gas and propane are the only fuels available for combustion at the facility.. ¹⁷ [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Visible Emissions	(a) Emissions may not exceed 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in each of the drying ovens that are not powered by electricity. ¹⁸ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The permittee shall retain on site, a statement indicating that natural gas and propane are the only fuels available for combustion at the facility.. ¹⁹ [s. NR 439.04(1)(d), Wis. Adm. Code]

¹⁶ Because the maximum theoretical emissions while firing these fuels are less than the allowable limit of 0.15 pounds per million Btu heat input, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

¹⁷ This statement is sufficient because each non-electric drying oven is designed to only burn natural gas and/or propane.

¹⁸ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

¹⁹ This statement is sufficient because each non-electric drying oven is designed to only burn natural gas and/or propane.

3. P09, Stack S09 - Screening Lines - (Continued)

POLLUTANT	(1). LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>c. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> The permittee may not use coatings or inks with a VOC content greater than 7.3 pounds per gallon as applied. [s. NR 424.03(2)(c), Wis. Adm. Code and 06-MEC-044]</p>	<p>(a) The permittee shall maintain the records required by I.B.3.c.(3)(c) to demonstrate compliance with I.B.3.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on the screening lines: (i) A unique name of identification number for each ink and other VOC containing material, as applied; and (ii) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

4. P36, Stack S36 - Towel Dryer - Installed 1991

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) No person may cause, allow or permit organic compound emissions into the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution. [s. NR 419.03(1), Wis. Adm. Code]</p> <p>(b) No person may cause, allow or permit organic compounds to be used or handled without using good operating practices and taking reasonable precautions to prevent the spillage, escape or emission of organic compounds, solvents or mixtures. [s. NR 419.03(2), Wis. Adm. Code]</p> <p>(c) No person may cause, allow or permit the disposal of more than 1.5 gallons of any liquid VOC waste, or of any liquid, semisolid or solid waste materials containing more than 1.5 gallons of any VOC, in any one day from a facility in a manner that would permit their evaporation into the ambient air during the ozone season, except as provided for in s. NR 419.07. [s. NR 419.04(1), Wis. Adm. Code]</p> <p>(d) Disposal during the ozone season shall be by methods approved by the department, such as incineration, recovery for reuse, or transfer in closed containers to an acceptable disposal facility, such that the quantity of VOC which evaporates into the ambient air does not exceed 15% (by weight) or 1.5 gallons in any one day, whichever is larger. [s. NR 419.04(2), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.4.a.(3)(b) to demonstrate compliance with I.B.4.a.(1). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) For each batch of towels dried the permittee shall keep records of (i) the weight of the towels before drying; (ii) the weight of the towels after drying; and (iii) the calculated amount of VOCs that are emitted from the towel dryer. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

5. P50, Stack S50 - Two Digital Printing Lines Each with an IR Curing Oven - Installed 2001

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques</u>: The permittee may not use coatings or inks with a VOC content greater than 5.4 pounds per gallon as applied. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.5.a.(3)(c) to demonstrate compliance with I.B.5.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content</u>: Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each coating and other VOC containing materials used on the coater: (i) A unique name of identification number for each coating and other VOC containing material, as applied; and (ii) The VOC content of each coating and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

6. P40, Stack S40 - Screen Cleaning Machine - Installed 1998

Because the facility is not located in brown, Calumet, Dane, Dodge, Door, Fond du Lac, Jefferson, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Washington or Waukesha counties, because the screen cleaning machine is a cold cleaner, and because not more than 1.5 gallons of solvent are added per day, it is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(a), Wis. Adm. Code. Therefore the screen cleaning machine is subject to the general emission limitations for volatile organic compounds outlined in ss. NR 415.03 and NR 419.04, Wis. Adm. Code which are included in Part II of this operation permit.

7. P14, Stack S14 - Miscellaneous Facility Wide Cleanup

Because cleanup is performed using a wipe cleaning operation and the facility is located outside of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha counties, it is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(g)1., Wis. Adm. Code. The cleanup solvent use is subject to general emission limitations for volatile organic compounds outlined in ss. NR 419.03 and NR 419.04, Wis. Adm. Code which are included in Part II of this operation permit.

8. P60, Stack S60 - Screening machine with a natural gas oven with attached UV curing unit. The heat input rating of the natural gas oven is 0.78 mmBtus per hour. Installed 2002

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques</u>: The permittee may not use materials with VOC contents greater than those listed below: (i) The VOC content of inks used may not be greater than 0.3 pounds per gallon as applied; (ii) The VOC content of adhesives used may not be greater than 0 pounds per gallon as applied; and [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.8.c.(3)(c) to demonstrate compliance with I.B.8.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content</u>: Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on P60: (a) A unique name or identification number for each ink, adhesive, and other VOC containing material, as applied; and (b) The VOC content of each ink, adhesive and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or manufacturer's formulation data to determine the VOC content of the inks, adhesives, and solvents used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

9. Process B10, Stack S10 - Natural Gas/Propane Space Heaters with a Total Rating of 10 mmBtu/hr

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions from each space heater with a maximum heat input more than one million Btu per hour may not exceed 0.15 pounds per million Btu heat input. ³³ [s. NR 415.06(2)(a), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the space heaters. ³⁴ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the space heaters. ³⁶ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility.. [s. NR 439.04(1)(d), Wis. Adm. Code]

³³ Note: s. NR 415.06, Wis. Adm. Code applies only to fuel burning installations with a maximum heat input of more than one million Btus per hour.

³⁴ Because the maximum theoretical emissions while firing these fuels are less than the allowable limit of 0.15 pounds per million Btu heat input, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

³⁶ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

10. Synthetic Minor Conditions Applicable to the Entire Facility

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) Volatile organic compound emissions from the entire facility may not exceed 8.21 tons per month averaged over each 12 consecutive month period. [s. 285.65(7), Wis. Stats.]</p>	<p>(a) Each calendar month the permittee shall calculate the total volatile organic compound emissions from the facility as follows. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{monthly}} = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n)] - [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]\}$ <p>where: E_{monthly} is the monthly VOC emissions (tons/month); U is the monthly usage of each ink, coating, solvent, or other VOC containing material used during the month (gallons/month); W is the density of each ink, coating, solvent, or other VOC containing material used during the month (pounds/gallon); C is the VOC content of each ink, coating, solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25); G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100% of its content; n identifies each ink, coating, solvent or other VOC containing material used during the month; S is the amount of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site (gallons/month); P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site in pounds per gallon; m identifies each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site.</p>	<p>(a) The permittee shall keep monthly records of the following:</p> <ul style="list-style-type: none"> (i) A unique name or identification number for each ink, coating, solvent, or other VOC containing material used at the facility; (ii) The VOC content, expressed as a weight fraction (C_n) of each ink, coating, solvent, or other VOC containing material used at the facility; (iii) The amount of each ink, coating, solvent, or other VOC containing material used in gallons per month (U_n); (iv) The density of each ink, coating, solvent, or other VOC containing material used in pounds per gallon (W_n); (v) The G multiplier factor for the VOC in the material (G_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor; (vi) The amount of spent ink, coating, solvent, or other VOC containing material recovered each month and shipped off site in gallons per month (S_m); (vii) The VOC content of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site in pounds per gallon (P_m); (viii) The total monthly VOC emissions from the facility in tons per month as calculated in I.B.10.a.(2)(a), (E_{monthly}); and (ix) The total amount of VOC emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.10.a.(2)(b). [s. NR 439.04(1)(d), Wis. Adm. Code]

10. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds - (Continued)</p>		<p>(b) To demonstrate compliance with condition I.B.10.a.(1)(a), the permittee shall calculate the total tons of volatile organic compound emissions from the facility, averaged over each 12 consecutive month period by dividing the total monthly volatile organic compound emissions as calculated in I.B.10.b.(2)(a) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(b) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content (C_n) and the density (W_n) of the of the inks, coatings, solvents or other VOC containing materials used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(c) The permittee shall analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content (P) no less than: (i) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (ii) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

10. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Hazardous Air Pollutants Regulated by the Clean Air Act</p> <p><i>Continued on Next Page...</i></p>	<p>(a) The permittee may not emit any single hazardous air pollutant regulated by the Clean Air Act at a rate greater than 0.83 tons per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p> <p>(b) The permittee may not emit a total of all hazardous air pollutants regulated by the Clean Air Act combined at a rate greater than 2.08 tons per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p>	<p>(a) Each calendar month the permittee shall calculate the total facility emissions of each hazardous air pollutant regulated by the Clean Air Act as follows. This calculation shall be performed within fifteen calendar days of the end of each month.²⁰</p> $E_x = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times H_1 \times F_1) + (U_2 \times W_2 \times H_2 \times F_2) + \dots + (U_n \times W_n \times H_n \times F_n)] - [(S_1 \times I_1) + (S_2 \times I_2) + \dots + (S_m \times I_m)]\}$ <p>where: E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month); x identifies each HAP emitted from the facility U is the monthly usage of each ink, coating, solvent, or other HAP containing material used during the month (gallons/month); W is the density of each ink, coating, solvent, or other HAP containing material used during the month (pounds/gallon); H is the HAP content of each ink, coating, solvent, or other HAP containing material used during the month expressed as a weight fraction (i.e. if a material is 25% HAP by weight H would be 0.25); F is a multiplier for HAP containing materials for which the HAP is emitted at other than 100% of its content; n identifies each ink, coating, solvent or other HAP containing material used during the month; S is the amount of each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site (gallons/month); I is the HAP content of each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site in pounds per gallon; m identifies each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(a) The permittee shall keep monthly records of the following: (i) A unique name or identification number for each ink, coating, solvent, or other HAP containing material used at the facility; (ii) The weight fraction of each HAP contained in the material (H_n) of each ink, coating, solvent, or other HAP containing material used at the facility; (iii) The amount of each ink, coating, solvent, or other HAP containing material used in gallons per month (U_n); (vi) The density of each ink, coating, solvent, or other HAP containing material used in pounds per gallon (W_n); (v) The F multiplier factor for the HAP in the material (F_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor; (vi) The amount of spent ink, coating, solvent, or other HAP containing material recovered each month and shipped off site in gallons per month (S_m); (vii) The amount of each HAP contained in each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site in pounds per gallon (I_m); (viii) The facility total monthly emissions of each HAP in tons per month as calculated in I.B.10.b.(2)(a), (E_x); (ix) The total amount of each HAP emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.10.b.(2)(b); (x) The total monthly HAP emissions from the facility in tons per month (E_{hap}), as calculated in I.B.10.b.(2)(c); (xi) The total amount of all HAPs combined emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.10.b.(2)(d). [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

²⁰ This calculation shall be performed for each hazardous air pollutant regulated by the Clean Air Act that is emitted from the facility.

10. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Hazardous Air Pollutants Regulated by the Clean Air Act - (Continued)</p>		<p>(b) To demonstrate compliance with condition I.B.10.b.(1)(a), the permittee shall calculate the emissions of <u>each</u> hazardous air pollutant regulated by the Clean Air Act, averaged over each 12 consecutive month period by dividing the total monthly emissions of each hazardous air pollutant regulated by the Clean Air Act as calculated in I.B.10.b.(2)(a) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(c) Each calendar month the permittee shall calculate the <u>total</u> emissions of hazardous air pollutants regulated by the Clean Air Act as follows. This calculation shall be performed within fifteen calendar days of the end of each month.</p> $E_{hap} = \sum E_x$ <p>where: E_{hap} is the monthly total emissions of all hazardous air pollutants regulated by the Clean Air Act that are emitted by the facility (tons/month); E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month) as calculated in I.B.10.b.(1)(a); x identifies each HAP emitted from the facility. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(d) To demonstrate compliance with condition I.B.10.b.(1)(b), the permittee shall calculate the total emissions of <u>all</u> hazardous air pollutants regulated by the Clean Air Act, averaged over each 12 consecutive month period by dividing the total monthly emissions of all hazardous air pollutants regulated by the Clean Air Act as calculated in I.B.10.b.(2)(c) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(b) The permittee shall use coating manufacturer's formulation data to determine the HAP content (H_n) of the of the inks, coatings, solvents or other HAP containing materials used. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(c) The permittee shall analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content (H) no less than: (i) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (ii) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

11. Conditions Applicable to the Entire Facility

CONDITION TYPE	(1). CONDITIONS
a. Reporting	<p>(a) Submit the results of monitoring or a summary of monitoring results required by Part I.B. of this permit to the Department annually.</p> <p>(i) The time period to be addressed by the submittal are: January 1 to December 31.</p> <p>(ii) The report shall be submitted to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.</p> <p>(iii) All deviations from and violations of applicable requirements shall be clearly identified in the submittal.</p> <p>(iv) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(b), Wis. Adm. Code]</p> <p>(b) Submit a certification of compliance with the requirements of Part I.B. of this permit to the Department annually.</p> <p>(i) The time period to be addressed by the report is the January 1 to December 31 period which precedes the report.</p> <p>(ii) The report shall be submitted to the Wisconsin Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.</p> <p>(iii) The information included in the report shall comply with the requirements of Part II Section N of this permit.</p> <p>(iv) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(c), Wis. Adm. Code]</p>
b. Compliance Testing	<p>(a) Whenever compliance emission tests are required by the Department:</p> <p>(i) Any compliance emission tests required by the Department shall be conducted while operating at 100% capacity. If operation at 100% capacity is not feasible, the sources shall operate at a capacity which is approved by the Department in writing.</p> <p>(ii) The reference test methods outlined in this permit shall be used unless an alternate, U.S. EPA approved, test method is approved by the Department in writing.</p> <p>(iii) The Department shall be informed at least 20 working days prior to any tests so a Department representative can witness the testing.</p> <p>(iv) At the time of notification, a compliance test plan shall also be submitted for approval.</p> <p>(v) Two copies of the report on any required tests shall be submitted to the Department for evaluation within 60 days after the tests. [s. NR 439.07, Wis. Adm. Code]</p>
c. Construction Permit Requirements	<p>(a) Construction Permit Expiration: Construction permit 06-MEC-044 expires August 2, 2007. Construction or modification and an initial operation period for equipment shakedown, testing and Department evaluation of operation to assure conformity with the permit conditions is authorized for each emissions unit covered in this permit. Please note that the sources covered by this permit are required to meet all emission limits and conditions contained in the permit at all times, including during the initial operation period. If 18 months is an insufficient time period for construction or modification, equipment shakedown, testing and Department evaluation of operation, the permit holder may request and the Department may approve in writing an extension of this permit. [ss. 285.60(1)(a)2 and 285.66(1), Wis. Stats.; s. NR 406.12, Wis. Adm. Code and 06-MEC-044]</p>

APPENDIX A2.

ANALYSIS, PRELIMINARY DETERMINATION AND DRAFT PERMIT FOR
THE RENEWAL OF OPERATION PERMIT NUMBER 632009730-F04
FOR
NORTHERN ENGRAVING CORPORATION,
LOCATED AT
1023 SAND LAKE ROAD,
HOLMEN, LA CROSSE COUNTY, WISCONSIN
ON THE OPERATION OF
AN EXISTING
PRINTED/COATED PLASTIC SHEET MANUFACTURING FACILITY

This review was performed by the Wisconsin Department of Natural Resources in accordance with Sections 285.60 to 285.66, Wis. Stats. and Chapter NR 407, Wis. Adm. Code. This review is for a Synthetic Minor Non-Part 70 source located in an area which is designated attainment/unclassified for all criteria pollutants.

Air Pollution Control Operation Permit: 632009730-F10

Analysis, Preliminary Determination
and Draft Permit prepared by: Mary Oleson Date: 5/4/2007

Approval Element	Initials and Date
Preliminary Determination Document (including calculations)	<i>BKE 5/4/2007</i>
Applicable Requirement	<i>BKE 5/4/2007</i>
Compliance Documentation Methods (compliance inspector concurrence)	<i>MS 5/4/2007</i>
Compliance Plan and Schedule	<i>na</i>
Federal Enforceability of Permit Conditions (synthetic minor conditions)	<i>JEA 5/18/2007</i>

Approved for Public Review and Comment: /s/ Joseph E. Ancel Date: 6/13/2007

cc: GEF II - AM/7 – FESOP Renewal
La Crosse County Library, 103 State Street, Holmen, WI 54638

INTRODUCTION

Sources which are not exempt from the operation permit requirements under Section 407.03, Wis. Adm. Code, that were issued an operation permit from the Department of Natural Resources, are required to obtain a renewed air pollution control operation permit. Sources subject to the requirements must submit a permit renewal application to the Department by the date set forth in Sections 285.66(3)(a), Wis. Stats., and NR 407.04(2), Wis. Adm. Code. The renewal application is then reviewed following the provisions set forth in Sections 285.62, 285.63 and 285.64, Wis. Stats., and Chapter NR 407, Wis. Adm. Code.

Subject sources are to be reviewed for their air pollution control technology and for their impact upon the air quality. This is to insure compliance with all applicable rules and statutory requirements. The review will show why the source(s) operation should be approved, conditionally approved, or disapproved. It will encompass emission calculations and air quality analysis using US EPA models, if applicable. Emissions from volatile organic compound (VOC) sources and small sources whose emissions are known to be insignificant are normally not modeled. As a precautionary note, the emission estimates may be based on US EPA emission factors (AP-42) or theoretical data and can vary from actual stack test data.

This review is based on information contained within the renewal application submitted for an air pollution control operation permit. A renewed operation permit may be issued if the criteria set forth in sections 285.63, 284.64 and 285.66, Wis. Stats., are met.

A final decision on the renewal will not be made until the public has had an opportunity to comment on the Department's analysis, preliminary determination and draft permit. The conditions proposed in the draft permit may be revised in any final permit issued based on comments received or further evaluation by the Department.

GENERAL APPLICATION INFORMATION

Owner/Operator: Northern Engraving Corporation
P.O Box 377
Sparta, WI 54656

Responsible Official: Mr. Bruce Corning, VP Management Systems
(608) 269-6911

Application Contact Person: Mary Goodman, Air Quality Manager
(608) 269-6911

Application Submitted By: Mary Goodman, Air Quality Manager

Date of Administratively Complete Application: 12/28/2006

Dates of Submittal: 12/8/2006, 4/9/2007, 4/21/2007

SOURCE DESCRIPTION

The Northern Engraving Corporation, Holmen facility produces printed/coated plastic sheets. The facility houses several screening and lithographic process lines and a roll coating line. There are also several offices, a tool and die repair shop, storage rooms, a maintenance shop, an ink-mixing and screen-making facility in the plant.

Changes Since Issuance of Original Operation Permit 632009730-F01: Since the original operation permit was

issued to this facility the following permits were issued to the facility:

Construction permit 05-MEC-314/Significant Revision 632009730-F03 (integrated issuance) to cover modifications to P09/S09 and the construction permit-exempt installation of P60 (logged as application 632009730-F02).

Construction permit 06-MEC-044/Significant Revision 632009730-F04 (integrated issuance) to cover further modifications to P09/S09.

Changes Identified in the Renewal Application: The permittee identified that all process lines remain the same as covered in the most recent operation permit 632009730-F04. However, they identify the following changes in their renewal application:

Process P03/S03: The second oven was removed so they operate one natural gas/propane oven rated at 1.25 mmBtu.hour on this process line.

Process P08/S08: Usage rate and HAP emission rate changes (Results in a decrease in VOC, toluene, and cyclohexanone emissions. Hexamethylene-1,6-diisocyanate (HDI) and perchloroethylene are new HAPs now emitted, but the MTEs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code)

Process P09/S09: Emission of an additional HAP (HDI is a new HAP emitted from this process, but the MTEs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code.)

Process P14/S14: Usage rate and HAP emission rate changes (Results in a decrease in VOC and cyclohexanone emissions. Trimethyl benzene is a new HAP emitted from the process, but the MTEs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code. Mineral spirit emissions increase but remain less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code.)

These changes will be incorporated into any renewed operation permit issued by the Department. (Note: The information above explains why these changes are exempt from construction permit requirements.)

Additionally the permittee requested language changes to the following permit conditions:

I.A.3.c.(1), I.A.4.c.(1), I.B.1.a.(3)(b), I.B.1.b.(3)(b), I.B.2.b.(3)(b), I.B.3.a.(3)(b), and I.B.3.b.(3)(b). The permittee requested a change to the compliance demonstration method language so they are required to retain a statement on site indicating that natural gas and propane are the only fuels available for combustion at the facility.

I.A.1.b., I.B.9.a.(2)(a), I.A.2.b., and I.B.9.b.(2)(a). The permittee requested changes to these compliance demonstration methods to factor in hazardous air pollutants that are not 100 percent emitted in to equations for calculation HAP emissions.

These requested changes will be incorporated into any renewed operation permit issued by the Department.

Special Note: The permittee entered into a Cooperative Environmental Agreement with the Department (incorporated into operation permit 632009730-F01 on June 10, 2002) that limits the VOC emissions from the facility to 85 tons in any 12 consecutive months, limits emissions of each HAP regulated by the Clean Air Act to 8 tons in any 12 consecutive months, and limits emissions of all HAPs regulated by the Clean Air Act combined to 20 tons in any 12 consecutive months. These conditions were carried over into revised operation permits 632009730-F03 and 632009730-F04. These conditions will also be carried over into this permit renewal. For details on how the Cooperative Environmental Agreement is incorporated into the operation permits issued to Northern Engraving's Holmen facility and for details on the specific variances granted by the Department under this Agreement please refer to the Preliminary Determination for operation permit number 632009730-F01.

At the same time this operation permit is being renewed, the Department is also processing a renewal request for the Cooperative Environmental Agreement. Northern Engraving has requested several changes, of which the following will be reflected in the renewed operation permit:

Six Month Reports of Actual Facility Wide VOC and HAP Emissions: The original Agreement and associated Air Pollution Control Operation Permits require Northern Engraving to submit reports of their actual VOC and HAP emissions to both US EPA and DNR every six months. (Permit condition I.A.6.c. for Holmen and permit condition I.A.8.c. for Sparta.) Under this reporting requirement, if the actual facility wide emissions of VOC or HAPs have exceeded 50 percent of the allowable emission limitations (i.e. Allowable limitation for VOC is 85 tons per year, allowable limitation for each CAA HAP is 8 tons per year, and allowable limitation for all CAA

HAPs combined is 20 tons per year) then Northern Engraving is required to provide an explanation of why emissions reached the levels they did and how they intend to ensure emissions will not exceed the allowable emission limitations.

The US EPA required that this reporting requirement be included in the original Agreement and associated Air Pollution Control Operation Permits as a condition of allowing Northern Engraving to forgo daily record keeping of actual VOC and HAP emissions. At the time of issuance of the original Agreement and associated Air Pollution Control Operation Permits, it was US EPA's policy to require daily record keeping of actual emissions, if VOC and HAP emission limitations appeared in the permit as long term (i.e. monthly or 12 month average) emission limitations rather than usage or material content limitations.

Since the issuance of the original Agreement and associated Air Pollution Control Operation Permits, US EPA has changed their policy on the requirement of daily records when VOC and/or HAP emission limitations appear in the permit as long term emission limitations. The US EPA now allows the use of what they call the "Formula Based Approach" which allows record keeping on a time frame consistent with longer term VOC or HAP emission limitations provided a formula specifying how the permittee will calculate actual emissions is specifically included in the permit.

DNR staff discussed this issue with Constantine Blatheras of the US EPA and he concurred that the requirement to report actual VOC and HAP emissions every 6 months could be removed from the Agreement and associated Air Pollution Control Operation Permits, as the permits meet US EPA's requirements for the Formula Based Approach by specifying how Northern Engraving is required to calculate their actual VOC and HAP emissions. Accordingly, the 6 month reporting requirements will be dropped from the renewed Agreement and renewed Air Pollution Control Operation Permits.

The following is the permit condition from the current Air Pollution Control Operation Permits that will be omitted from the renewed permits:

- “c. Report actual facility wide volatile organic compound and hazardous air pollutant emissions as follows:
- (1) The permittee shall submit a report summarizing the actual, facility wide volatile organic compound and hazardous air pollutant emissions for each consecutive 12 month period as calculated in conditions I.A.1.b.(2) and I.A.2.b.(2) and (4), every 6 months.
 - (2) The period addressed by the report shall be the 6 month period starting on the date the Cooperative Agreement is signed or other date agreed upon and approved by DNR, U.S. EPA and the permittee, and each subsequent 6 month period thereafter.
 - (3) A copy of the report shall be submitted to the DNR (Marty Sellers, Air Management Engineer, Department of Natural Resources, 3550 Mormon Coulee Road, La Crosse, WI 54601) and the U.S. EPA (Steve Rothblatt, Branch Chief, Air Program Branch, U.S. EPA, 77 W. Jackson Blvd., Mailcode: AR-18J, Chicago, IL 60604) within twenty days following the end of the reporting period.
 - (4) If the report shows the actual facility wide volatile organic compound or hazardous air pollutant emissions have exceeded 50 percent of the allowable limitations outlined in conditions I.A.1.a and I.A.2.a.(1) and (2), the permittee shall provide an explanation why emissions reached the levels that they did and how they intend to ensure emissions will not exceed the allowable limitations outlined in conditions I.A.1.a. and I.A.2.a.(1) and (2).
- [s. NR 439.03(1)(a), Wis. Adm. Code]”

Northern Engraving has also requested the following change as part of the Agreement Renewal. This change will appear in the renewed Agreement, but will not appear in the renewed operation permit:

Time Allowed for Construction and Initial Operation under Future Construction Permits: In most cases when the DNR issues an Air Pollution Control Construction Permit for a new or modified process under ch. NR 406, Wis. Adm. Code, a facility is given an initial 18 month period to commence construction or modification with the option of extending the construction permit to allow an additional 18 months to commence construction or modification. If construction or modification is not started within this time period (a total of 36 months), the construction permit will expire and the facility would be required to reapply and obtain a new Air Pollution Control Construction Permit to cover the proposed project. Northern Engraving requested as part of the renewal of the Agreement, to be allowed longer periods of time to commence construction and/or modification of proposed projects requiring a permit under ch. NR 406, Wis. Adm. Code. In reviewing the DNR's procedures on this matter it was found that the Department does allow longer periods of time to commence construction and/or modification in the case of large, phased projects. Because longer periods of time are

allowed in other cases, the Department will allow Northern Engraving to request periods for commencing construction and/or modification that are longer than 18 months on a case-by-case basis when they submit construction permit applications. Northern Engraving should specify the length of time they are requesting to commence construction and/or modification in any construction permit applications submitted in the future if they would like more than 18 months. The DNR would then allow the longer time period for commencing construction and/or modification under the Air Pollution Control Construction Permit issued for the project provided this does not extend beyond 42 months. Northern Engraving would still be allowed to request an 18 month extension of the construction permit if necessary. Note that the Department does not have the authority to approve construction permit extensions longer than 18 months.

Significant Emissions Units:

1. Process P03 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P03
Unit description:	Two Lithographic Presses with One Natural Gas/Propane Drying Oven (PLO-05-H and PLO-07-H)
Control technology status:	Uncontrolled
Maximum continuous rating (mmBTU/hr):	1.25
Date of construction or last modification:	1991
Construction Permit Requirements:	These presses were originally covered by construction permit 91-POY-126 issued on December, 6, 1991.

Process P03 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural Gas	Propane	None
Higher Heating Value:	1000 mmBtu/cf6	92 mmBtu/gal3	
Maximum Sulfur Content (weight %):	0	0.403	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	1.25 mmBtu/hr	1.25 mmBtu/hr	

Stack S03 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S03	Exhaust flow rate, normal (ACFM):	4844
Exhausting Unit(s):	P03	Exhaust gas temperature, normal (°F):	150
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	26 ft.	Stack equipped with any obstruction:	No
Inside dimensions at outlet (ft):	1.0 ft.		

2. Process P08 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P08

2. Process P08 – Emission Unit Information.

Process Parameter	Description
Unit description:	One roll coater with natural gas/propane conveyor oven (PCO-08-H)
Control technology status:	Uncontrolled
Maximum continuous rating (mmBTU/hr):	0.8 mmBtu per hour
Date of construction or last modification:	1991
Construction Permit Requirements:	The roll coater was originally covered by construction permit 91-POY-126, issued December 6, 1991.

Process P08 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural Gas	Propane	None
Higher Heating Value:	1000 mmBtu/cf6	92 mmBtu/gal3	
Maximum Sulfur Content (weight %):	0	0.403	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	0.8 mmBtu/hr	0.8 mmBtu/hr	

Stack S08 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S08	Exhaust flow rate, normal (ACFM):	2800
Exhausting Unit(s):	P08	Exhaust gas temperature, normal (°F):	150
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	32 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.0 ft.		

3. Process P09 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P09
Unit description:	Six screening lines with 2 screening machines and two screening lines with 1 screening machine for a total of 14 machines. Plus four additional backup screening machines for temporary replacement of the original 14 machines. Only 14 machines shall be operated at any one time. Process P09 includes 8 ovens. Six of these ovens fire natural gas or propane and have a total combined heat input rating of 7.9 mmBtus per hour. Two ovens are electric ovens. Installed 1991 and 2001. Modified 2005 and 2006. (Screening lines PSO-12-H, PSO-27-H, PSO-21-H, PSO-18-H, PSO-26-H, PSO-23-H, PSO-H-31, PSO-H30)
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	7.9 mmBtu per hour
Date of construction or last modification:	2006

3. Process P09 – Emission Unit Information.

Process Parameter	Description
Construction Permit Requirements:	The screening lines were covered by construction permits EOP-10-KJC-83-32-081, EOP-10-KJC-83-32-081, 910POY-126, 01-MEC-615, 05-MEC-314, and 06-MEC-044.

Process P09 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural Gas	Propane	none
Higher Heating Value:	1000 mmBtu/cf6	92 mmBtu/gal3	
Maximum Sulfur Content (weight %):	0	0.403	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	7.9 mmBtu/hr	7.9 mmBtu/hr	

Stack S09 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S09	Exhaust flow rate, normal (ACFM):	30010
Exhausting Unit(s):	P09	Exhaust gas temperature, normal (°F):	150
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	32 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	4.9 ft.		

4. Process P14 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P14
Unit description:	Miscellaneous Facility Wide Cleanup
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	12/01/1991
Construction Permit Requirements:	Cleanup was covered in the construction permits issued for each process.

Process P14 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	none		

Stack S14 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
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Stack S14 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S14	Exhaust flow rate, normal (ACFM):	-1
Exhausting Unit(s):	P14	Exhaust gas temperature, normal (°F):	0
This stack has an actual exhaust point:	no	Exhaust gas discharge direction:	

5. Process P36 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P36
Unit description:	Towel Dryer
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	12/01/1991
Construction Permit Requirements:	The towel dryer is covered by construction permit EOP-10-KJC-83-32-081A, issued on October 31, 1989.

Process P36 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	none		

Stack S36 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S36	Exhaust flow rate, normal (ACFM):	1900
Exhausting Unit(s):	P36	Exhaust gas temperature, normal (°F):	70
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	25 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1 ft.		

6. Process P40 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P40
Unit description:	Screen Cleaning Machine
Control technology status:	Uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	1998
Construction Permit Requirements:	

Process P40 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	none		

Stack S40 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S40	Exhaust flow rate, normal (ACFM):	500
Exhausting Unit(s):	P40	Exhaust gas temperature, normal (°F):	70
This stack has an actual exhaust point:	Yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	28 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.5 ft.		

7. Process P50 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P50
Unit description:	Two digital printing lines each with an IR oven.
Control technology status:	Uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	2001
Construction Permit Requirements:	Because the maximum theoretical volatile organic compound emissions from this process are less than 5.7 pounds per hour, no construction permit is required pursuant to s. NR 406.04(2), Wis. Adm. Code.

Process P50 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	none		

Stack S50 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S50	Exhaust flow rate, normal (ACFM):	0
Exhausting Unit(s):	P50	Exhaust gas temperature, normal (°F):	0
This stack has an actual exhaust point:	No	Exhaust gas discharge direction:	

8. Process P60 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P60
Unit description:	Screening machine with a natural gas oven with attached UV curing unit. The heat input rating of the natural gas oven is 0.78 mmBtu

8. Process P60 – Emission Unit Information.

Process Parameter	Description
	per hour.
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	0.78
Date of construction or last modification:	2002
Construction Permit Requirements:	Process P60 is exempt from construction permit requirements because the maximum theoretical VOC emissions are less than 5.7 pounds per hour pursuant to s. NR 406.04(2), Wis. Adm. Code.

Process P60 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92 mmBtu/gal3	
Maximum Sulfur Content (weight %):	0	0.403	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	0.78 mmBtu/hr	0.78 mmBtu/hr	

Stack S60 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S60	Exhaust flow rate, normal (ACFM):	2000
Exhausting Unit(s):	P60	Exhaust gas temperature, normal (°F):	150
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	22.0 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.2 ft.		

9. Process B10 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	B10
Unit description:	Natural Gas/Propane Space Heaters
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	Total of 10 mmBtu per hour
Date of construction or last modification:	various
Construction Permit Requirements:	Process B10 is exempt from construction permit requirements because the maximum theoretical emissions are less than the rates listed in NR 406.04(2), Wis. Adm. Code.

Process B10 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92 mmBtu/gal3	
Maximum Sulfur Content (weight %):	0	0.403	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	10 mmBtu/hr	10 mmBtu/hr	

Stack S10 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S10		
Exhausting Unit(s):	B10		
This stack has an actual exhaust point:	No		

Stack Parameter Summary.

Stack ID	Actual Exhaust Point or Fugitive	Circular or Rectangular	Discharge Direction	Exhaust Obstacle	Diameter or Width (if rect.)	Length (if rect.)	Height	Temp.	Normal Flow Rate	Maximum Flow Rate
			U, D, H	True/False	ft (m)	ft (m)	ft (m)	°F	ACFM	ACFM
S03	Actual	Circular	U	No	1.0 ft.	0 ft. 0 in. (m)	26 ft. 0 in. (7.9248 m)	150	4844	4844
S08	Actual	Circular	U	No	1.0 ft.	0 ft. 0 in. (m)	32 ft. 0 in. (9.7536 m)	150	2800	2800
S09	Actual	Circular	U	No	4 ft. 10.8 in. (1.49352 m)	0 ft. 0 in. (m)	32 ft.	150	30010	31000
S14	fugitive							0		
S36	actual	Circular	U	No	1 ft. 0 in. (0.3048 m)	0 ft. 0 in. (m)	25 ft. 0 in. (7.62 m)	70	1900	1900
S40	Actual	Circular	U	No	1.5 ft.		28 ft	70	500	500
S50	fugitive									
S60	actual	Circular	U	no	1.2 ft.	0 ft. 0 in. (m)	22 ft.	150	2000	2000
S10	Area source									

Insignificant Emissions Units:

- Boiler, Turbine, and HVAC System Maintenance.
- Convenience Space Heating (< 5 million BTU/hr Burning Gas, Liquid, or Wood).
- Convenience Water Heating.
- Internal Combustion Engines Used for Warehousing and Material Transport.
- Janitorial Activities.
- Maintenance of Grounds, Equipment, and Buildings (lawn care, painting, etc.).
- Office Activities.
- Sanitary Sewer and Plumbing Venting.
- Four UV-Cured Lithographic Presses

Thermometer Metalizing Process
Parts Dryer
Ink Mixing Station
Electirc Lab Oven
Two each, 30,000 gallon propane storage tanks
Adhesive Application Press
Stock Room for paint, powder ink, solvents, and plastic
Tool and Die repair room
Punch Presses
Photo Shears
Thompson Presses
Quality Control Room and Laboratory
Flexlens
Screenmaking

SOURCE SPECIFIC APPLICABLE REQUIREMENTS AND EMISSION CALCULATIONS

The applicable requirements and emission calculations for the following emissions units were reviewed under the preliminary determinations for operation permit numbers 632009730-F01, 632009730-F03, and 632009730-F04 and under the preliminary determinations for construction permit numbers 05-MEC-314 and 06-MEC-044 and remain unchanged as a result of this renewal:

- Stack S03, Process P03 - 2 Lithographic Presses with One Natural Gas/Propane Drying Oven Rated at 1.25 mmBtus per hour - Installed 1991 (PLO-05-H and PLO-07-H)**
- Stack S08, Process P08 - 1 Roll Coater with Natural Gas/Propane Conveyor Oven - Installed 1991 (PCO-08-H)**
- Stack S09, Process P09 - Six screening lines with 2 screening machines and two screening lines with 1 screening machine for a total 14 screening machines. Plus four additional backup screening machines for temporary replacement of the original 14 machines. Only 14 machines shall be operated at any one time. Process P09 includes 8 ovens. Six of these ovens fire natural gas or propane and have a total combined heat input rating of 7.9 mmBtus per hour. Two ovens are electric ovens. Installed 1991 and 2001. Modified 2005 and 2006. (Screening lines PSO-12-H, PSO-27-H, PSO-21-H, PSO-18-H, PSO-26-H, PSO-23-H, PSO-H-31, PSO-H-30)**
- Stack S36, Process P36 - Towel Dryer - Installed 1991**
- Stack S40, Process P40 - Screen Cleaning Machine - Installed 1998**
- Stack S14, Process P14 - Miscellaneous Facility Wide Cleanup**
- Stack S50, Process P50 - Two Digital Printing Lines each with an IR Curing Oven - Installed 2001**
- Stack S60, Process P60 - Screening machine with a natural gas oven with attached UV curing unit. The heat input rating of the natural gas oven is 0.78 mmBtus per hour. Installed 2002**

Please refer to the preliminary determinations for permit numbers 632009730-F01, 05-MEC-314/632009730-F03, and 06-MEC-044/632009730-F04 for a detailed description of the applicable requirements and emission calculations for these emissions units.

The following are the applicable requirements and emission calculations for emissions units that are either new or changed as a result of this renewal:

Space Heaters B10: Maximum theoretical emissions were calculated using emission factors from AP-42, 5th edition. Because the space heaters were installed and last modified after April 1, 1972, they are subject to s. NR 415.06(2)(a), Wis. Adm. Code, which limits particulate matter emissions to not more than 0.15 pounds per mmBtu heat input from any stack. Because the space heaters were installed and last modified after April 1, 1972, they are subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not greater than 20% opacity. The space heaters are subject to the general limitations for sulfur dioxide, volatile organic compounds, carbon monoxide and nitrogen oxides contained in ss. NR 417.03, NR 419.03, NR 426.03 and NR 428.03, Wis. Adm. Code, respectively.

These general limitations would be included in Part II of any permit issued by the Department

Chapter NR 445, Wis. Adm. Code – Hazardous Air Pollutant Analysis: Emissions of all non-exempt hazardous pollutants regulated by ch. NR 445, Wis. Adm. Code are below the corresponding Table A Values with the exception of 2-butoxyethanol, cyclohexanone, diacetone alcohol, and trimethyl benzene (note that all stacks are within 10 degrees of vertical and are unobstructed). See the facility emission table below for a summary of hazardous air pollutant emissions from the facility. A dispersion modeling analysis performed by John Roth shows the facility impact of 2-butoxyethanol, cyclohexanone, diacetone alcohol, and trimethyl benzene are less than their respective acceptable ambient concentration. Please see the Air Quality Review section for more information. [Note: For the original operation permit review, hazardous air pollutant emissions were compared to the values in Tables 1 through 5 of Subchapter II of chapter NR 445, Wis. Adm. Code. For this operation permit renewal review, additional emissions from the modified equipment were incorporated into a modeling analysis of the entire facility. See the Air Quality Review section below for details. Hazardous air pollutant emissions were compared to the revised values in Table A of Subchapter III of chapter NR 445, Wis. Adm. Code.]

Compliance Assurance Monitoring (CAM) Applicability: Because this facility is a synthetic minor, non-Part 70 source it is not subject to Compliance Assurance Monitoring (CAM) requirements.

CONTROL TECHNOLOGY REVIEW

The control technologies for the following emissions units were reviewed under the preliminary determinations for operation permit numbers 632009730-F01, 632009730-F03, and 632009730-F04 and under the preliminary determinations for construction permit numbers 05-MEC-314 and 06-MEC-044 and remain unchanged as a result of this renewal:

- Stack S03, Process P03 - 2 Lithographic Presses with One Natural Gas/Propane Drying Oven Rated at 1.25 mmBtus/hr - Installed 1991 (PLO-05-H and PLO-07-H)**
- Stack S08, Process P08 - 1 Roll Coater with Natural Gas/Propane Conveyor Oven - Installed 1991 (PCO-08-H)**
- Stack S09, Process P09 - Six screening lines with 2 screening machines and two screening lines with 1 screening machine for a total 14 screening machines. Plus four additional backup screening machines for temporary replacement of the original 14 machines. Only 14 machines shall be operated at any one time. Process P09 includes 8 ovens. Six of these ovens fire natural gas or propane and have a total combined heat input rating of 7.9 mmBtus per hour. Two ovens are electric ovens. Installed 1991 and 2001. Modified 2005 and 2006. (Screening lines PSO-12-H, PSO-27-H, PSO-21-H, PSO-18-H, PSO-26-H, PSO-23-H, PSO-H-31, PSO-H-30)**
- Stack S36, Process P36 - Towel Dryer - Installed 1991**
- Stack S40, Process P40 - Screen Cleaning Machine - Installed 1998**
- Stack S14, Process P14 - Miscellaneous Facility Wide Cleanup**
- Stack S50, Process P50 - Two Digital Printing Lines each with an IR Curing Oven - Installed 2001**
- Stack S60, Process P60 - Screening machine with a natural gas oven with attached UV curing unit. The heat input rating of the natural gas oven is 0.78 mmBtus per hour. Installed 2002**

Please refer to the preliminary determination for permit numbers 632009730-F01, 05-MEC-314/632009730-F03, and 06-MEC-044/632009730-F04 for a detailed description of the control technologies for these emissions units.

The following are the control technologies for emissions units that are either new or changed as a result of this renewal: None.

AIR QUALITY REVIEW

An air quality modeling analysis was conducted by John Roth of the Bureau of Air Management. The results of this analysis are summarized below and in a memo dated May 4, 2007:

A. INTRODUCTION

On May 3, 2007 a dispersion modeling analysis was completed for Northern Engraving to assess the impact of the particulate matter, sulfur dioxide, nitrogen oxide, carbon monoxide, 2-butoxyethanol, cyclohexanone, diacetone alcohol, and trimethyl benzene emissions from their facility in Holmen, La Crosse County, on ambient air quality. This analysis was performed in support of operation permit renewal 632009730-F10.

B. MODELING ANALYSIS

- ◆ Northern Engraving provided the stack parameters and building dimensions used in this analysis. Mary Oleson verified emissions and rule applicability for those sources. Building dimensions were determined for all sources using BPIP-PRIME with measurements taken on the plot plan provided with the application. Please refer to the source parameter table for details.
- ◆ The PSD baselines for PM₁₀, SO₂, and NO_x in La Crosse County have not been set. Therefore, none of the sources at NE-Holmen consume increment.
- ◆ Five years (1998-2002) of preprocessed meteorological data was used in this analysis. The surface data was collected in Wisconsin Rapids (ISW), and the upper air meteorological data also originated in Green Bay.
- ◆ Regional background concentration were found to be as follows:

Regional Background Concentrations (Concentrations are in µg/m ³)			
Monitoring Site	Pollutant	Averaging Period	Concentration
1415 East Walnut GRB East H.S. Brown County	SO ₂	3 hr	137.1
		24 hr	35.2
		Annual	7.9
Devil's Lake Park Sauk County	NO ₂	Annual	4.7
923 270 th Avenue Luck, Polk County	CO	1 hr	3,188.0
		8 hr	890.4
Trout Lake Nursery Vilas County	PM ₁₀	24 hr	27.4
		Annual	9.2
Trout Lake Nursery Vilas County	TSP	24 hr	41.8

- ◆ The AERMIC Model (AERMOD) was also used in the analysis. The model used rural dispersion coefficients with the regulatory default options. These allow for calm wind and missing data correction, buoyancy induced dispersion, and building downwash including recirculation cavity effects.
- ◆ The receptors used in this analysis followed USEPA and WDNR ambient air policy and consisted of a rectangular grid with 25-meter resolution extending from the facility. Receptors on top of any building or within enclosed fence lines were not considered. For the pollutants listed in Chapter NR 445 of the Wisconsin Administrative Code, receptors on the Northern Engraving property were also not considered. Receptor terrain elevations were derived from the AERMOD terrain processor (AERMAP) using USGS digitized elevation model (DEM) files.

C. MODEL RESULTS

The results demonstrate that the ambient air quality standards for all pollutants will be attained and maintained assuming the emission rates and stack parameters listed in the attached source table.

Modeling Analysis Results (All Concentrations in $\mu\text{g}/\text{m}^3$)			
	TSP – 24 hr	PM ₁₀ – 24 hr	PM ₁₀ – Annual
Facility Impact	91.6	91.6	12.8
Background	41.8	27.4	9.2
Total Concentration	133.4	119.0	22.0
NAAQS	150.0	150.0	50.0
% NAAQS	88.9	79.3	44.0

Modeling Analysis Results (All Concentrations in $\mu\text{g}/\text{m}^3$)			
	SO ₂ – 3 hr	SO ₂ – 24 hr	SO ₂ – Annual
Facility Impact	2.1	1.0	0.2
Background	137.1	35.2	7.9
Total Concentration	139.2	36.2	8.1
NAAQS	1,300.0	365.0	80.0
% NAAQS	10.7	9.9	10.1

Modeling Analysis Results (All Concentrations in $\mu\text{g}/\text{m}^3$)			
	CO – 1 hr	CO – 8 hr	NO ₂ – Annual
Facility Impact	292.4	183.4	63.6
Background	3,188.0	890.4	4.7
Total Concentration	3,480.4	1,073.8	68.3
NAAQS	40,000	10,000	100.0
% NAAQS	8.7	10.7	68.3

Modeling Analysis Results (All Concentrations in $\mu\text{g}/\text{m}^3$)			
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	2-Butoxy 24 hr	2-Butoxy Annual	Cyclohexa 24 hr	Diactetone 24 hr	Trimethyl 24 hr
Facility Impact	660.4	85.2	806.6	945.7	511.2
NR 445 AAC	2,320	13000	2311	5701	2949
% AAC	28.5	0.7	34.9	16.6	17.3

D. CONCLUSIONS

The results demonstrate that all ambient air quality standards will be attained and maintained assuming the emission rates and stack parameters listed in the attached source table.

NORTHERN ENGRAVING - HOLMEN Stack Parameters					
ID	LOCATION (UTM)	HEIGHT (M)	DIAMETER (M)	VELOCITY (M/S)	TEMP (K)
S03	640247, 4868128	7.92	0.30	32.34	338.6
S08A	640253, 4868117	9.75	0.30	9.06	338.6
S08B	640253, 4868120	9.75	0.30	9.06	338.6
S09A	640229, 4868186	9.75	0.43	6.02	338.6
S09B	640228, 4868183	9.75	0.43	6.02	338.6
S09C	640235, 4868178	9.75	0.46	9.37	338.6
S09D	640235, 4868175	9.75	0.46	12.21	338.6
S09E	640236, 4868171	9.75	0.46	7.10	338.6
S09F	640236, 4868167	9.75	0.46	9.09	338.6
S09G	640236, 4868163	9.75	0.46	12.21	338.6
S09H	640236, 4868159	9.75	0.46	8.52	338.6
S36	640218, 4868182	7.62	0.30	12.29	294.0
S40	640252, 4868188	8.53	0.46	1.444	294.0
S60	640241, 4868151	6.71	0.36	9.50	338.6
<i>(a) Volume Sources</i>					
ID	LOCATION (UTM)	HEIGHT (M)	Init Sigma Y (M)	Init Sigma Z (M)	
V10A	640244, 4868127	2.74	22.3	2.55	
V10B	640244, 4868175	2.74	22.3	2.55	
V10C	640291, 4868127	2.74	21.4	2.55	

NORTHERN ENGRAVING – HOLMEN Emission Rates				
ID	PM RATE (#/HR)	SO ₂ RATE (#/HR)	NO _x RATE (#/HR)	CO RATE (#/HR)
S03	0.19	0.0008	0.26	0.11
S08A	0.006	0.0005	0.17	0.067
S08B	-	-	-	-
S09A	-	-	-	-
S09B	-	-	-	-
S09C	0.19	0.0008	0.26	0.11
S09D	0.23	0.0009	0.31	0.13
S09E	0.19	0.0008	0.26	0.11
S09F	0.19	0.0008	0.26	0.11
S09G	0.23	0.0009	0.31	0.13
S09H	0.17	0.0007	0.23	0.092
S36	-	-	-	-
S40	-	-	-	-
S60	0.06	0.0005	0.08	0.07
V10A	0.025	0.002	0.69	0.28
V10B	0.025	0.002	0.69	0.28
V10C	0.025	0.002	0.69	0.28

NORTHERN ENGRAVING – HOLMEN Emission Rates				
ID	2-butoxyethanol (#/HR)	cyclohexanone (#/HR)	diacetone alcohol (#/HR)	trimethyl benzene (#/HR)
S03	-	-	-	-
S08A	-	2.33	-	-
S08B	-	2.33	-	-
S09A	2.88	2.90	4.18	1.20
S09B	2.88	2.90	4.18	1.20
S09C	3.61	4.06	5.20	3.22
S09D	3.61	4.06	5.20	3.22
S09E	3.61	4.06	5.20	3.22
S09F	3.61	4.06	5.20	3.22
S09G	3.61	4.06	5.20	3.22
S09H	3.61	4.06	5.20	3.22
S36	0.10	0.30	-	-
S40	-	0.14	-	-
S60	-	-	-	-
V10A	-	-	-	-
V10B	-	-	-	-
V10C	-	-	-	-

FACILITY EMISSIONS

Actual emissions are the total emissions generated by the emission sources identified below over the specified time period taking into account any reductions made by a control device or technique. Maximum theoretical emissions are the quantity of air contaminants that theoretically could be emitted by the emissions sources identified below, without considering emission control devices, based on the design capacity of the source. Potential to emit is the maximum capacity of the emission sources identified below to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air contaminant shall be treated as part of its design if the limitation is Federally enforceable.

A. Stack Emissions:

1. P03, Stack S03 - 2 Lithographic Presses with One Natural Gas/Propane Drying Oven Rated at 1.25 mmBtu/hr - Installed 1991 (PLO-05-H and PLO-07-H)

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.0095	0.042	0.0095	0.042	0.19	0.82
Sulfur Dioxide	0.00075	0.0033	0.00075	0.0033	0.00075	0.0033
Nitrogen oxides	0.26	1.13	0.26	1.13	0.26	1.13
Carbon Monoxide	0.11	0.46	0.11	0.46	0.11	0.46
VOCs	1.84	8.06	0.94	#	1.84	8.06

2. P08, Stack S08 - 1 Roll Coater with Natural Gas/Propane Conveyor Oven - Installed 1991 (PCO-08-H)

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.006	0.03	0.006	0.03	0.006	0.03
Sulfur Dioxide	0.0005	0.002	0.0005	0.002	0.0005	0.002
Nitrogen oxides	0.17	0.72	0.17	0.72	0.17	0.72
Carbon Monoxide	0.07	0.29	0.07	0.29	0.07	0.29
VOCs	24.45	107.09	24.45	#	24.45	107.09

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P08

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
cyclohexanone *	4.66	20.40	4.66	##
Hexamethylene-1,6-diisocyanate	0.000004	0.000018	0.000004	##
perchloroethylene	0.082	0.36	0.082	##
toluene	0.90	3.94	0.90	##

3. P09, Stack S09 - Six screening lines with 2 screening machines each and two screening lines with 1 screening machine for a total 14 screening machines. Plus four additional backup screening machines for temporary replacement of the original 14 machines. Only 14 machines shall be operated at any one time. Process P09 includes 8 ovens. Six of these ovens fire natural gas or propane and have a total combined heat input rating of 7.9 mmBtus per hour. Two ovens are electric ovens. Installed 1991 and 2001. Modified 2005 and 2006. (Screening lines PSO-12-H, PSO-27-H, PSO-21-H, PSO-18-H, PSO-26-H, PSO-23-H, PSO-H-31, PSO-H-30)

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY

Particulate matter emissions	0.06	0.26	0.06	0.26	1.19	5.19
Sulfur Dioxide	0.0047	0.020	0.0047	0.020	0.0047	0.020
Nitrogen oxides	1.63	7.14	1.63	7.14	1.63	7.14
Carbon Monoxide	0.66	2.91	0.66	2.91	0.66	2.91
VOCs	223.47	538.24	223.47	#	223.47	538.24

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P09

Pollutant	Maximum Theoretical			Potential to Emit
	lbs/hr	lbs/hr averaged over 24 hours	TPY	lbs/hr
2-butoxyethanol *	49.86	27.42	120.12	49.86
cumene	3.53	1.94	8.50	3.53
cyclohexanone *	54.87	30.18	132.19	54.87
diacetone alcohol *	71.94	39.57	173.31	71.94
ethyl benzene	7.98	4.39	19.22	7.98
Glycol ether	35.53	19.54	85.60	35.53
Hexamethylene-1,6-diisocyanate	0.000054	0.000054	0.00024	0.000054
naphthalene	7.98	4.39	19.22	7.98
Propylene glycol monomethyl ether *	94.35	51.89	227.30	94.35
stoddard solvent *	31.53	17.33	75.94	31.53
Trimethyl benzene *	37.05	20.38	89.24	37.05
xylene	27.93	15.36	67.28	27.93

4. P14, Stack S14 - Miscellaneous Facility Wide Cleanup

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	13.0	60.0	13.0	#	13.0	60.0

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P14

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
cyclohexanone *	0.14	0.62	0.14	0.62
Mineral Spirits * (indoor fugitive)	0.64	2.81	0.64	2.81
1,2,4-trimethyl benzene (indoor fugitive)	0.29	1.27	0.29	1.27

5. P36, Stack S36 - Towel Dryer - Installed 1991

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	25.0	109.5	25.0	#	25.0	109.5

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P36

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol *	0.10	0.44	0.10	0.44
cyclohexanone *	0.30	1.31	0.30	1.31

6. P40, Stack S40 - Screen Cleaning Machine - Installed 1998

Pollutant	Maximum Theoretical	Potential to Emit	Maximum Allowables
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	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	0.31	1.37	0.31	#	0.31	1.37

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P40

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
cyclohexanone *	0.14	0.61	0.14	0.61

7. P50, Stack S50 - Two Digital Printing Lines each with an IR curing oven - Installed 2001

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	2.01	8.78	2.01	#	2.01	8.78

8. P60, Stack S60 - Screening machine with a natural gas oven with attached UV curing unit. The heat input rating of the natural gas oven is 0.78 mmBtus per hour. Installed 2002

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.006	0.03	0.006	0.03	0.006	0.03
Sulfur Dioxide	0.0005	0.002	0.0005	0.002	0.0005	0.002
Nitrogen oxides	0.08	0.34	0.08	0.34	0.08	0.34
Carbon Monoxide	0.07	0.29	0.07	0.29	0.07	0.29
VOCs	2.27	9.94	2.27	#	2.27	9.94

TOTAL FACILITY EMISSIONS

Pollutant	Maximum Theoretical Emissions	Potential to Emit Under Title V Operation Permit	Maximum Allowable Emissions	Potential to Emit Under the Cooperative Agreement
	TPY	TPY	TPY	TPY
Particulate Matter Emissions	0.57	0.57	10.18	0.57
Sulfur Dioxide	0.046	0.046	0.046	0.046
Nitrogen Oxides	14.98	14.98	14.98	14.98
Carbon Monoxide	6.23	6.23	6.23	6.23
VOCs	843.08	99	843.08	85.44
Total CAA HAPs	575.75	24.96	575.75	20

Hazardous Air Pollutant	Potential to Emit			NR 445, Wis. Adm. Code Table A Value (stacks ≥25 ft and < 40 ft)	PTE greater than Table Value?
	(lbs/hr)	24-hr ave (lbs/hr)	(lbs/yr)		
cumene	3.53		16,000	51.3	lbs/hr no
2-butoxyethanol *	50.05	27.61	438,438	20.2	lbs/hr yes
cyclohexanone *	60.1147	35.42	526,605	20.1	lbs/hr yes
diacetone alcohol *	71.94	39.97	630,194	49.6	lbs/hr no
ethyl benzene	7.98			90.6	lbs/hr no
				16,000	730,000
glycol ethers	35.53		16,000	na	
Hexamethylene-1,6-isocyanate	0.000058			0.00718	lbs/hr no
				0.00026	7.3

Hazardous Air Pollutant	Potential to Emit			NR 445, Wis. Adm. Code Table A Value (stacks ≥25 ft and < 40 ft)	Units	PTE greater than Table Value?
	(lbs/hr)	24-hr ave (lbs/hr)	(lbs/yr)			
(HDI)						
naphthalene	7.98		16,000	10.9	lbs/hr	no
perchloroethylene	0.082			35.4	lbs/hr	no
			716	1237	lbs/yr	no
Propylene glycol monomethyl ether*	94.35		826,506	1,460,000	lbs/yr	no
stoddard solvent *	32.07		280,933	119	lbs/hr	no
toluene	1.80			39.3	lbs/hr	no
			15,768	292,000	lbs/yr	no
Trimethyl benzene*	37.34	20.67	327,098	25.6	lbs/hr	no
xylene	27.93		16,000	90.6	lbs/hr	no
Total HAPS regulated by the CAA		##				

HAP = hazardous air pollutant

CAA = Clean Air Act

na = not applicable

* denotes state-only HAPs

The permittee has elected restrictions to limit the potential VOC emissions from the facility to not more than 85 tons per year while operating under the Cooperative Agreement and to less than 100 tons per year otherwise. See total facility emissions summarized above. These more restrictive limitations would be included in any Operation Permit issued by the Department. Note: VOC emissions from use of materials containing VOCs will be limited to 85 tons per year. The additional 0.44 tons of VOCs per year are from combustion of natural gas and propane at the facility

The permittee has elected restrictions to limit the potential emissions of all HAPs regulated by the Clean Air Act to not more than 20 tons per year while operating under the Cooperative Agreement and to less than 25 tons per year otherwise. The permittee has elected restrictions to limit the potential emissions of each HAP regulated by the Clean Air Act to not more than 8 tons per year while operating under the Cooperative Agreement and to less than 10 tons per year otherwise. These more restrictive limitations would be included in any Operation Permit issued by the Department.

Note: The above table includes a column for the potential emissions in pounds per hour averaged over 24 hours. Inherent in the operation of process P09 is a significant amount of time for setup, color check, downtime, breacktime and cleanup. As a worst case the process runs only 55 percent of the time in any 24 hour period. (Data shows that actual run time is 36 percent of the time and 55 percent was used as a worst case.) Twenty four hour average emission rates are included in the above table for pollutants with HAPs over the Table A values and with ambient air standards that are based on a 24 hour average. These 24 hour average emission rates are used in the dispersion modeling.

FACILITY STATUS UNDER PART 70

The facility is located in an area designated as attainment/unclassified for all criteria pollutants. The facility would be considered a synthetic minor, non-part 70 source because the permittee elected limitations to restrict the potential emissions of volatile organic compounds to less than the major source threshold of 100 tons per year. The potential emissions of each other criteria pollutant are less than the major source threshold level of 100 tons per year. Additionally, the permittee elected limitations to restrict the potential emissions of each hazardous air pollutant regulated by the Clean Air Act to less than 10 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined to less than 25 tons per year.

Note: The permittee has elected to restrict the potential emissions of volatile organic compounds to not more than 85 tons per year while operating under a Cooperative Agreement with the Department. Additionally, the permittee elected to restrict the potential emissions of each hazardous air pollutant regulated by the Clean Air Act to not more than 8 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined to not more than 20 tons per year, while operating under a Cooperative Agreement with the Department.

COMPLIANCE DEMONSTRATION METHODS

The compliance demonstration methods for the following emissions units were reviewed under the preliminary determinations for operation permit numbers 632009730-F01, 632009730-F03, and 632009730-F04 and under the preliminary determinations for construction permit numbers 05-MEC-314 and 06-MEC-044 and remain unchanged as a result of this renewal:

- Stack S03, Process P03 - 2 Lithographic Presses with Natural Gas/Propane Drying Ovens - Installed 1991 (PLO-05-H and PLO-07-H)**
- Stack S08, Process P08 - 1 Roll Coater with Natural Gas/Propane Conveyor Oven - Installed 1991 (PCO-08-H)**
- Stack S09, Process P09 - Six screening lines with 2 screening machines and two screening lines with 1 screening machine for a total 14 screening machines. Plus four additional backup screening machines for temporary replacement of the original 14 machines. Only 14 machines shall be operated at any one time. Process P09 includes 8 ovens. Six of these ovens fire natural gas or propane and have a total combined heat input rating of 7.9 mmBtus per hour. Two ovens are electric ovens. Installed 1991 and 2001. Modified 2005 and 2006. (Screening lines PSO-12-H, PSO-27-H, PSO-21-H, PSO-18-H, PSO-26-H, PSO-23-H, PSO-H-31, PSO-H-30)**
- Stack S36, Process P36 - Towel Dryer - Installed 1991**
- Stack S40, Process P40 - Screen Cleaning Machine - Installed 1998**
- Stack S14, Process P14 - Miscellaneous Facility Wide Cleanup**
- Stack S50, Process P50 - Two Digital Printing Lines each with an IR Curing Oven - Installed 2001**
- Stack S60, Process P60 - Screening machine with a natural gas oven with attached UV curing unit. The heat input rating of the natural gas oven is 0.78 mmBtus per hour. Installed 2002**

Please refer to the preliminary determinations for permit numbers 632009730-F01, 05-MEC-314/632009730-F03, and 06-MEC-044/632009730-F04 for a description of the compliance demonstration methods for these emissions units.

The following are the compliance demonstration methods for emissions units that are either new or changed as a result of this renewal:

Space Heaters B10: To demonstrate compliance with particulate matter and visible emission limitations the permittee would be required to retain a statement that natural gas and propane are the only fuels available for combustion at the facility. This is an adequate compliance demonstration method because the maximum theoretical emissions while firing these fuels are less than the allowable particulate matter emission limit. Additionally, it is not expected that visible emission limitations would be exceeded while firing natural gas and propane. Please see the Draft Permit for specific compliance demonstration methods.

I.A.3.c.(1), I.A.4.c.(1), I.B.1.a.(3)(b), I.B.1.b.(3)(b), I.B.2.b.(3)(b), I.B.3.a.(3)(b), I.B.3.b.(3)(b): The permittee requested a change to the compliance demonstration method language so they are required to retain a statement on site indicating that natural gas and propane are the only fuels available for combustion at the facility. This is adequate to demonstrate compliance because it is not expected that they will exceed the particulate matter emission and visible emission limitations while firing these fuels.

I.A.1.b.(1) and I.B.9.a.(2)(a): The permittee requested changes to this compliance demonstration method to factor in VOCs that are not 100 percent emitted in to equations for calculating VOC emissions. A multiplier was added to the equation allowing the permittee to factor in an emission rate for VOCs that are not emitted at 100 percent of their content.

I.A.1.c.(2) and I.B.9.a.(3)(a): A requirement was added to each of these conditions indicating that the permittee must keep records of the VOC emission rate multiplier used for each VOC containing raw material.

I.A.2.b.(1) and I.B.9.b.(2)(a): The permittee requested changes to this compliance demonstration method to factor in HAPs that are not 100 percent emitted in to equations for calculating HAP emissions. A multiplier was added to the equation allowing the permittee to factor in an emission rate for HAPs that are not emitted at 100 percent of their content.

I.A.2.c.(2) and I.B.9.b.(3)(a): A requirement was added to each of these conditions indicating that the permittee must keep records of the HAP emission rate multiplier used for each HAP containing raw material.

FACILITY COMPLIANCE STATUS

The Department finds that:

1. The source will meet applicable emission limits and other requirements.
2. The source will not cause nor exacerbate a violation of an ambient air quality standard or ambient air increment.

PRELIMINARY DETERMINATION

The Wisconsin Department of Natural Resources has reviewed the permit application and other materials submitted by Northern Engraving Corporation and hereby makes a preliminary determination that an operation permit may be issued with the following Draft Applicable Limits and Draft Permit Conditions.

June 13, 2007

FILE CODE: 4560-1
FID # : 642025010
PERMIT #: 642025010-F10

Mr. Bruce Corning, VP Management Systems
Northern Engraving Corp
PO Box 377
Sparta, WI 54656

Dear Mr. Corning:

The Air Management Program of the Department of Natural Resources has performed a preliminary review of the renewal application for air pollution control permit number 642025010-F04 regarding the operation of an existing decorative nameplate and automotive trim manufacturing facility.

The West Central Region Air Program, LaCrosse Area Office has prepared an analysis of the proposed renewal and has made a preliminary determination that it is approvable. The analysis and preliminary determination indicated that the emission limitations and special permit conditions in the attached draft permit should be included in any renewed permit which may be issued by the Department. Please review this draft permit carefully.

The Department will now accept public comments on the preliminary analysis and draft permit as required by ss. 285.61(6) and (7) and ss. 285.62(3), (4) and (5), Wis. Stats. Comments will be received for 30 days after publication of a Class I Legal notice. The Department will publish this notice. **Please review the Draft Permit and provide your comments to the Department within the same 30 day period.**

The public input, if any, will also be reviewed to note if significant public interest in the project exists and whether a public hearing is warranted. If a hearing is warranted, it would be held within 60 days from the end of the public comment period.

This draft operation permit contains monitoring requirements relating to the emissions from an air contaminant source. Pursuant to s. 285.17(2)(b), Wis. Stats., the Department is notifying you of the proposed monitoring requirements in the attached draft permit. You have the opportunity to demonstrate to the Department that the proposed monitoring requirements are unreasonable considering, among other factors, monitoring requirements imposed on similar air contaminant sources. **Please review the monitoring requirements.** If you do seek review of the monitoring requirements, please notify me within 30 days of publication of the notice seeking public comment. Your request for review should identify the specific monitoring requirements you are challenging and provide any information you have to demonstrate that the monitoring requirements are unreasonable. If the Department's Air and Waste Division Administrator determines that the monitoring requirements are unreasonable, the Department may not impose the monitoring requirements. If the Administrator determines that the monitoring requirements are reasonable, you may obtain a review of that determination by the Secretary of the Department. If the Secretary determines that the monitoring requirements are unreasonable, the Department may not impose the monitoring requirements.

Please be advised that this is only a preliminary determination. If you have any questions regarding this matter, please feel free to contact me at 608-789-5544.

Sincerely,

Mary Oleson
Air Management Engineer

cc: GEF II – AM/7 – FESOP Renewal

Enclosure



APPENDIX A3



PREAMBLE

An Asterisk (*) throughout this document denotes legal authority, limitations and conditions which are **not** federally enforceable.

Concurrent Permit Actions Performed as Part of the Review and Issuance of Permit 642025010-F10.

Construction Permits Issued in Conjunction with Permit 642025010-F10 Under s. 285.61(8), Wis. Stats.: none

Revised Construction Permits Issued in Conjunction with Permit 642025010-F10 Under s. NR 406.11, Wis. Adm. Code: none

Operation (CONOP) Permits Issued in Conjunction with Permit 642025010-F10 Under s. 285.62(7)(b), Wis. Stats.: none

Revised Operation Permits Issued in Conjunction with Permit 642025010-F10 Under ss. NR 407.11, 407.12, 407.13 and/or 407.14, Wis. Adm. Code: none

The following permits, orders, etc., are adopted, under ss. 285.65(3), Wis. Stats., NR 406.11(1)(c) and (d), NR 407.09(2)(d) and NR 407.15(3) and (4), Wis. Adm. Code, by Permit 642025010-F10 which then becomes the primary enforceable document: 05-MEC-206/642025010-F04, 03-POY-016/642025010-F03, 02-MEC-618/642025010-F02, 642025010-F01, 97-JCH-130, 97-JCH-107, 95-MM-617, 93-IRS-040, 92-POY-157, 92-POY-068, 91-POY-136, 91-POY-088, 90-IRS-135, EOP-10-KJC-83-32-077A, 642025010-N01, 87-IRS-081, 87-MJT-033, 86-RV-049, and EOP-10-KJC-83-42-077

Stack and Process Index:

- Stack S02, Boiler B02 - Natural Gas/Propane Space Heaters with a Total Rating of 37.1 mmBtu/hr - Installed 1994**
- Stack S12, Boiler B22 - Natural Gas/Propane Boiler Rated at 8.4 mmBtu/hr - Installed 1961**
- Stack S13, Boiler B23 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**
- Stack S14, Boiler B24 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**
- Stack S15, Boiler B25 - Natural Gas/Propane Boiler Rated at 6.3 mmBtu/hr - Installed 1961**
- Stack S03, Process P03 - 5 Lithographic Lines with UV Curing - Installed 1988**
- Stack S18, Process P32 - 4 Roll Coating Machines, and 3 Natural Gas/Propane Curing Oven rated at 5 mmBtus/hr, 6 mmBtus/hr, and 5.25 mmBtus/hr - Controlled by Thermal Oxidizer C18 (P32-1S Installed 1984; P32-10S Installed 1989; P32-87S Installed 1993) (Only 3 can be operated at a time.) - Modified 2003 and 2005.**
- Stack S19, Process P33 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (P-33-18S-2B) - Installed 1993**
- Stack S53, Process P37 - 3 Screening Lines each with a Natural Gas/Propane Curing - (P-37-12S; P-43-SOS; P171-SOS)**
- Stack S41, Process P41 - Two Litho Pressess with Two UV Ovens - Installed 2001**
- Stack S43, Process P43 - One Screening Machine and Three Small Screening Machines with One Electric Drying Oven - Installed 2001**
- Stack S42, Process P42 - Two Roll Coaters with Four Electric Drying Ovens - Utilized for R&D Activities - Installed 2001**
- Stack S44, Process P44 - Spraybooth - Utilized for R&D Activities - Installed 2001**
- Stack S57, Process P57 - Plastic Spray Booth with (this booth uses same curing oven used for P33) - (P-58-PBS)**
- Stack S63, Process P63 - Miscellaneous Facility Wide Cleanup**
- Stack S72, Process P72 - Towel Dryer - Installed 1991**
- Stack S75, Process P75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven - Installed 2003**

Stack S79, Process P79 - Two Screening Lines, One with 1 Screening Machine and 1 UV Oven, One with 2 Screening Machines and 1 UV Oven

Stack S80, Process P80 - Roll Coating Machine (and replacement coater) with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

Insignificant Emission Units:

Boiler, Turbine, and HVAC System Maintenance.
Convenience Water Heating.
Demineralization and Oxygen Scavenging of Water for Boilers.
Fire Control Equipment.
Internal Combustion Engines Used for Warehousing and Material Transport.
Janitorial Activities.
Maintenance of Grounds, Equipment, and Buildings (lawn care, painting, etc.).
Office Activities.
Pollution Control Equipment Maintenance.
Sanitary Sewer and Plumbing Venting.
Carpentry shop, Diamond cutting, powder coat
Adhesive application
Norlens
Paint Lab, reactor, ink mill
Screenmaking
Injection molding, water quality lab
Litho lab
Sheet Prep
Art Dept.
Tool Room
Distillation
Underground storage tanks
Punch Presses

Permit Shield — Unless precluded by the Administrator of the US EPA, compliance with all emission limitations in this operation permit is considered to be compliance with all emission limitations established under ss. 285.01 to 285.87, Wis. Stats., and emission limitations under the federal clean air act, that are applicable to the source if the permit includes the applicable limitation or if the Department determines that the emission limitations do not apply. The following emission limitations were reviewed in the analysis and preliminary determination and were determined not to apply to this stationary source:

Boilers B22, B23, B24, and B25: The boilers are not subject to the new source performance standards for fossil fuel steam generators of s. NR 440.19, Wis. Adm. Code because each boiler has a heat input rating less than 250 mmBTU per hour and was installed prior to August 17, 1971. The boilers are not subject to the new source performance standards for industrial-commercial-institutional steam generating unit of s. NR 440.205, Wis. Adm. Code, because each boiler has a heat input rating less than 100 mmBtu per hour and was installed prior to June 19, 1984. The boilers are not subject to the new source performance standards for small industrial-commercial-institutional steam generating units of s. NR 440.207, Wis. Adm. Code because each boiler was installed prior to June 9, 1989.

Process P03: Because the facility is not located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county the requirements of s. NR 422.142, Wis. Adm. Code do not apply to process P03, pursuant to s. NR 422.142(1), Wis. Adm. Code. Because the maximum theoretical volatile organic compound emissions from each litho line are less than 15 pounds per day, the litho lines are exempt from the requirements of s. NR 424.03(2), Wis. Adm. Code, pursuant to s. NR 424.03(1)(a)4., Wis. Adm. Code.

Process P63: Because cleanup is performed using a wipe cleaning operation and the facility is located outside of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha counties, it is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(g)1., Wis. Adm. Code.

Facility: Emissions from firing natural gas and propane, which are group I virgin fossil fuels, in space heaters B02, in boilers B22, B23, B24, and B25, and in the ovens associated with P32, P33, and P37 are exempt from ch. NR 445, Wis. Adm. Code requirements, pursuant to ss. NR 445.04(1)(c)1., (3)(c)1, (4)(c)1., and (4r)(b)1.; ss. NR 445.05(1)(c)1., (3)(c)1, (4)(c)1., and (4r)(b)1.; and s NR 445.07(5)(a), Wis. Adm. Code.

Part I — The headings for the areas in the permit are defined below. The legal authority for these limitations or methods follows them in [brackets].

Pollutant – This area will note which pollutant is being regulated by the permit.

Limitations – This area will list all applicable emission limitations that apply to the source, including case-by-case limitations such as Latest Available Control Techniques (LACT), Best Available Control Technology (BACT), or Lowest Achievable Emission Rate (LAER). It will also list any voluntary restrictions on hours of operation, raw material use, or production rate requested by the permittee to limit potential to emit.

Compliance Demonstration – The compliance demonstration methods outlined in this area may be used to demonstrate compliance with the associated emission limit or work practice standard listed under the corresponding **Limitations** column. The compliance demonstration area contains limits on parameters or other mechanisms that will be monitored periodically to ensure compliance with the limitations. The requirement to test as well as initial and periodic test schedules, if testing is required, will be stated here. Notwithstanding the compliance determination methods which the owner or operator of a sources is authorized to use under ch. NR 439, Wis. Adm. Code, the Department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations.

Reference Test Methods, Recordkeeping, and Monitoring Requirements – Specific US EPA Reference test methods or other approved test methods will be contained in this area and are the methods that must be used whenever testing is required. A reference test method will be listed even if no testing is immediately required. Also included in this area are any recordkeeping requirements and their frequency and reporting requirements. Accuracy of monitoring equipment shall meet, at a minimum, the requirements of s. NR 439.055(3) and (4), Wis. Adm. Code, as specified in Part II of this permit.

Condition Type – This area will specify other conditions that are applicable to the entire facility that may not be tied to one specific pollutant.

Conditions – Specific conditions usually applicable to the entire facility or compliance requirements.

Compliance Demonstration – This area contains monitoring and testing requirements and methods to demonstrate compliance with the conditions.

PART II — This section contains the general limitations that the permittee must abide by. These requirements are standard for most sources of air pollutants so they are included in this section with every permit.

DRAFT AIR POLLUTION CONTROL OPERATION PERMIT RENEWAL

EI FACILITY NO: 642025010
TYPE: Synthetic Minor, Non-Part 70

PERMIT NO.: 642025010-F10

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

Name of Source: Northern Engraving Corporation
Street Address: PO Box 377,
803 S Black River Street
Sparta, Monroe County, Wisconsin
Responsible Official, & Title: Mr. Bruce Corning, VP Management Systems

is authorized to operate a decorated nameplate and automotive trim manufacturing facility in conformity with the conditions herein.

THIS OPERATION PERMIT EXPIRES _____ **Date will be inserted at the time of issuance.**

A RENEWAL APPLICATION MUST BE SUBMITTED AT LEAST 6 MONTHS, BUT NOT MORE THAN 18 MONTHS, PRIOR TO THIS EXPIRATION DATE [ss. 285.66(3)(a), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].

No permittee may continue operation of a source after the operation permit expires, unless the permittee submits a timely application for renewal of the permit. If you submit a timely application for renewal, the existing operation permit will not expire until the renewal application has been finally acted upon by DNR. [ss. 227.51(2), 285.62(8)(b), Wis. Stats. and NR 407.04(2), Wis. Adm. Code].

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

Dated at Wisconsin Rapids, Wisconsin, _____

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By _____
Joseph E. Ancel
West Central Region, Air Team Supervisor

**PART I
SPECIFIC PERMIT CONDITIONS**

- A.** *Part I.A. of this operation permit is effective so long as the permittee is operating under a Cooperative Agreement with the Department as entered into under s. 299.80 Wis. Stats. If any such Cooperative Agreement expires or is revoked for any reason, Part I.A. of this operation permit is no longer effective and Part I.B. becomes the effective operation permit for the facility. If any such Cooperative Agreement expires or is revoked for any reason, the permittee shall comply with any delayed compliance deadlines and practical interim requirements established by the Department in a written revocation decision until the Department issues the approvals required under chs. 280 to 295, Wis. Stats, that were replaced by the above referenced Cooperative Agreement.*

1. Volatile Organic Compound Emissions

a. Limitations:

(1) The total volatile organic compound emissions from the facility may not exceed 85 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats and s. 285.65(7), Wis. Stats.]

(2) The volatile organic compound emissions from each of process P41, P42, and P43 may not exceed 1666 pounds per month. (Note: This limitation is necessary for these processes to be exempt from construction permit requirements.) [s. NR 406.04(1)(g), Wis. Adm. Code]

b. Compliance Demonstration Methods:

(1) Each month the permittee shall calculate the total volatile organic compound emissions from the facility as follows:

$$E = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n)] - [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]\}$$

where:

E is the monthly VOC emissions (tons/month);

U is the monthly usage of each ink, coating, solvent, or other VOC containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other VOC containing material used during the month (pounds/gallon)

C is the VOC content of each ink, coating, solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);

n identifies each ink, coating, solvent or other VOC containing material used during the month;

G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content;

S is the amount of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month (gallons/month);

P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month in pounds per gallon;

m identifies each spent ink, coating, solvent or other VOC containing material recovered and shipped off site during the month.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) To demonstrate compliance with condition I.A.1.a.(1), the permittee shall calculate the total volatile organic compound emissions from the facility over each 12 consecutive month period by summing the monthly volatile organic compound emissions as calculated in I.A.1.b.(1) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(3) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content (C_n) and the density (W_n) of the of the inks, coatings, solvents or other VOC containing materials used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content (P) no less than: (a) each time there is a substantial change to

materials or process operations that may affect the characteristics of the waste stream; or (b) quarterly, whichever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

(5) To demonstrate compliance with condition I.A.1.a.(2) the permittee shall calculate the total monthly volatile organic compound emissions from each of process P41, P42, and P43 as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]

$$E_{\text{monthly}} = [(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n)] - [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]$$

where:

E_{monthly} is the monthly VOC emissions (pounds/month);

U is the amount of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 during the month (gallons/month);

W is the density of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 during the month (pounds/gallon);

C is the VOC content of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);

n identifies each ink, coating, clean-up solvent or other VOC containing material used on process P42 during the month;

G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content; S is the amount of each spent ink, coating, solvent or other VOC containing material recovered from each of processes P41, P42, and P43 and shipped off site each month (gallons/month);

P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered from each of processes P41, P42, and P43 and shipped off site each month in pounds per gallon; and

m identifies each spent ink, coating, solvent or other VOC containing material recovered from each of processes P41, P42, and P43 and shipped off site during the month.

This calculation shall be performed within twenty calendar days of the end of each calendar month.

c. Record Keeping and Monitoring Requirements:

(1) The permittee shall keep records of the following for each ink, coating, solvent, or other VOC containing material used at the facility:

- (a) A unique name or identification number; and
- (b) The VOC content, expressed as a weight fraction (C_n).
[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall keep monthly records of:

- (a) The amount of each ink, coating, solvent, or other VOC containing material used in gallons per month (U_n);
- (b) The density of each ink, coating, solvent, or other VOC containing material used in pounds per gallon (W_n);
- (c) The G multiplier factor for the VOC in the material (G_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor;
- (d) The amount of spent ink, coating, solvent, or other VOC containing material recovered and shipped off site in gallons per month (S_m);
- (e) The VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site in pounds per gallon (P_m).
- (f) The total monthly VOC emissions from the facility in tons per month (E), as calculated in I.A.1.b.(1); and
- (g) The total VOC emissions from the facility in tons per year as calculated in I.A.1.b.(2).
[s. NR 439.04(1)(d), Wis. Adm. Code]

(3) To demonstrate compliance with condition I.A.1.a.(2) the permittee shall keep records of the following for each of processes P41, P42, and P43:

- (i) A unique name or identification number for each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43;
- (ii) The VOC content, expressed as a weight fraction (C_n) of each ink, coating, clean-up solvent, or other VOC containing material used on each of process P41, P42, and P43;
- (iii) The amount of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 in gallons per month (U_n);
- (iv) The density of each ink, coating, clean-up solvent, or other VOC containing material used on each of processes P41, P42, and P43 in pounds per gallon (W_n);
- (v) The G multiplier factor for the VOC in the material (G_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor;

(vi) The total monthly VOC emissions from each of processes P41, P42, and P43 in pounds per month (E_{monthly}), as calculated in I.A.1.b.(5).
[s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Volatile Organic Compound Emissions: Whenever compliance emission testing is required, US EPA Method 18, 25, 25A or 25B shall be used to demonstrate compliance. [s. NR 439.06(3)(a), Wis. Adm. Code]

(2) Reference Test Method for Volatile Organic Compound Content: Whenever VOC content testing is required, US EPA Method 24 or 24A shall be used to determine the organic solvent content, the volume of solids, the weight of solids, the water content and the density of inks. [s. NR 439.06(3)(b), Wis. Adm. Code]

2. Hazardous Air Pollutant Emissions

a. Limitations:

(1) The emissions of each hazardous air pollutant regulated by the Clean Air Act shall be less than 8 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats.] [s. 285.65(7), Wis. Stats.]

(2) The total emissions of all hazardous air pollutants regulated by the Clean Air Act combined shall be less than 20 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats.] [s. 285.65(7), Wis. Stats.]

b. Compliance Demonstration Methods:

(1) Each month the permittee shall calculate the total emissions of each hazardous air pollutant from the facility regulated by the Clean Air Act as follows:⁶⁹ [s. NR 407.09(4)(a)1., Wis. Adm. Code]

$$E_x = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times H_1 \times F_1) + (U_2 \times W_2 \times H_2 \times F_2) + \dots + (U_n \times W_n \times H_n \times F_n)] - [(S_1 \times I_1) + (S_2 \times I_2) + \dots + (S_m \times I_m)]\}$$

where:

E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month);

x identifies each HAP emitted from the facility

U is the monthly usage of each ink, coating, solvent, or other HAP containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other HAP containing material used during the month (pounds/gallon)

H is the HAP content of each ink, coating, solvent, or other HAP containing material used during the month expressed as a weight fraction (i.e. if a material is 25% HAP by weight H would be 0.25);

F is a multiplier for HAP containing materials for which the HAP is emitted at other than 100% of its content. For those HAP containing materials for which the HAP is 100% emitted, F equals 1 and does not have to be specifically considered in the equation.;

n identifies each ink, coating, solvent or other HAP containing material used during the month;

S is the amount of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month (gallons/month);

I is the HAP content of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month in pounds per gallon;

m identifies each spent ink, coating, solvent or other HAP containing material recovered and shipped off site during the month.

(2) To demonstrate compliance with condition I.A.2.a.(1), the permittee shall calculate the emissions of each hazardous air pollutant regulated by the Clean Air Act over each 12 consecutive month period by summing the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act as calculated in I.A.2.b.(1) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

⁶⁹ This calculation shall be performed for each hazardous air pollutant regulated by the Clean Air Act that is emitted from the facility.

(3) Each month the permittee shall calculate the total emissions of hazardous air pollutants regulated by the Clean Air Act as follows:

$$E_{\text{hap}} = 3 E_x$$

where:

E_{hap} is the monthly total emissions of all hazardous air pollutants regulated by the Clean Air Act that are emitted by the facility (tons/month);

E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month) as calculated in I.A.2.b.(1);

x identifies each HAP emitted from the facility.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(4) To demonstrate compliance with condition I.A.2.a.(2), the permittee shall calculate the total emissions of all hazardous air pollutants regulated by the Clean Air Act over each 12 consecutive month period by summing the monthly emissions of all hazardous air pollutants regulated by the Clean Air Act as calculated in I.A.2.b.(3) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(5) The permittee shall use coating manufacturer's formulation data to determine the HAP content (H_n) of the of the inks, coatings, solvents or other HAP containing materials used. [s. NR 439.04(1)(d), Wis. Adm. Code]

(6) The permittee shall analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content (H) no less than: (a) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (b) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

c. Record Keeping and Monitoring Requirements:

(1) The permittee shall keep records of the following for each ink, coating, solvent, or other HAP containing material used at the facility:

(a) A unique name or identification number; and

(b) The weight fraction of each HAP contained in the material (H_n);

(c) The F multiplier factor for the HAP in the material (F_n).

[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall keep monthly records of:

(a) The amount of each ink, coating, solvent, or other HAP containing material used in gallons per month (U_n);

(b) The density of each ink, coating, solvent, or other HAP containing material used in pounds per gallon (W_n);

(c) The F multiplier factor for the HAP in the material (F_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor;

(d) The amount of spent ink, coating, solvent, or other HAP containing material recovered and shipped off site in gallons per month (S_m);

(e) The amount of each HAP contained in each spent ink, coating, solvent or other HAP containing material recovered and shipped off site in pounds per gallon (I_m);

(f) The facility total monthly emissions of each HAP in tons per month (E_x), as calculated in I.A.2.b.(1);

(g) The total monthly HAP emissions from the facility in tons per month (E_{hap}), as calculated in I.A.2.b.(3);

(h) The facility total emissions of each HAP in tons per year as calculated in I.A.2.b.(2).

(i) The total HAP emissions from the facility in tons per year as calculated in I.A.2.b.(4).

[s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Hazardous Air Pollutant Emissions: Whenever compliance emission testing is required, a method approved by the Department in writing shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

3. Particulate Matter Emissions

a. Particulate Matter Emission Limitations:	b. Compliance Demonstration Methods:	c. Record Keeping and Monitoring:
(1) Total particulate matter emissions from all space heater included under B02 may not exceed 0.28 pounds per hour. ⁷⁰ [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(1) The permittee shall only fire natural gas and/or propane in the space heaters (B02). ⁷¹ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(1) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
(2) Particulate matter emissions from each boiler may not exceed the following limitations: (a) B22 : 0.06 pounds per hour (b) B23 : 0.08 pounds per hour; (c) B24 : 0.08 pounds per hour; and (d) B25 : 0.05 pounds per hour. ⁷³ [s. NR 415.06(1)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(2) The permittee shall only fire natural gas and/or propane in each boiler. ⁷⁴ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(2) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
(3) Particulate matter emissions from the roller coaters P32 may not exceed 0.24 pounds per hour. ⁷⁶ [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(3) The permittee shall only fire natural gas and/or propane in the curing ovens and thermal oxidizer associated with P32. ⁷⁷ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(3) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]

⁷⁰ This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

⁷¹ Because the emission limitation listed in I.A.3.a.(1) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

⁷³ These more restrictive limitations are necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

⁷⁴ Because the emission limitations listed in I.A.3.a.(2) are equal to the maximum theoretical emissions for each boiler while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

⁷⁶ This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

⁷⁷ Because the emission limitation in I.A.3.a.(3) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

a. Particulate Matter Emission Limitations:	b. Compliance Demonstration Methods:	c. Record Keeping and Monitoring:
<p>(4) Particulate matter emissions from the metal spray booths P33 may not exceed the most restrictive of:⁷⁹</p> <p>(a) 0.40 pounds per 1000 pounds gas;</p> <p>(b) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(c) 0.91 pounds per hour.</p> <p>[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(4) The permittee shall operate a paint overspray filter system on each spray booth (P33) to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(5) The permittee shall maintain the pressure drop across each overspray filter system associated with P33 within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(4) The permittee shall monitor and record the pressure drop across each paint overspray filter system associated with P33 once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>(5) Particulate matter emissions from the screening lines P37 may not exceed 0.13 pounds per hour.⁸⁰ [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(6) The permittee shall only fire natural gas and/or propane in the non-electric curing ovens.⁸¹ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(5) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p>(6) Particulate matter emissions from the plastic spray booth P57 may not exceed the most restrictive of:⁸³</p> <p>(a) 0.40 pounds per 1000 pounds gas;</p> <p>(b) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(c) 0.06 pounds per hour.</p> <p>[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(7) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever the process (P57) is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(8) The permittee shall maintain the pressure drop across the overspray filter system associated with P57 within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(6) The permittee shall monitor and record the pressure drop across the paint overspray filter system associated with P57 once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>

⁷⁹ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.1 tons per hour and a stack gas flow rate of 3700 ACFM. The limitation of 0.91 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

⁸⁰ This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

⁸¹ Because the emission limitation in I.A.3.a.(5) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

⁸³ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.025 tons per hour and a stack gas flow rate of 1400 ACFM. The limitation of 0.06 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

a. Particulate Matter Emission Limitations:	b. Compliance Demonstration Methods:	c. Record Keeping and Monitoring:
<p>(7) Particulate matter emissions from spray booth P44 may not exceed the most restrictive of:⁸⁵</p> <p>(i) 0.40 pounds per 1000 pounds gas;</p> <p>(ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(iii) 0.36 pounds per hour.</p> <p>[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(9) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever process P44 is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(10) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever process P44 is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(7) The permittee shall monitor and record the pressure drop across the paint overspray filter system associated with process P44 once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>(8) Particulate matter emissions from P80 may not exceed 0.15 lbs/mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]</p>	<p>(11) The permittee shall only fire natural gas and/or propane in the non-electric curing ovens.⁵¹ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(8) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

d. Reference Test Methods:

(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]

4. Nitrogen Oxide Emissions

a. Limitations:

(1) The permittee may not burn more than a total of 310,350 gallons of propane per month averaged over each 12 consecutive month period at the facility.²⁷ [s. 285.65(7), Wis. Adm. Code]

(2) Stacks S12, S13, S14, and S15 may not be equipped with rainhats or any other device that obstructs vertical discharge of the exhaust gas.²⁸ [s. 285.63(1)(b), Wis. Stats.]

⁸⁵ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.025 tons per hour and a stack gas flow rate of 2000 ACFM. The limitation of 0.36 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

⁵¹ Because the emission limitation in I.A.3.a.(8) is less than the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

²⁷ The permittee elected the limitation in I.A.4.a.(1) in their original operation permit to restrict the facility wide potential nitrogen oxide emissions to less than the major source threshold level of 100 tons per year so that the facility is considered a synthetic minor non-Part 70 source. Because a number of nitrogen oxide emissions units have been removed this limitation is no longer necessary to limit facility wide potential nitrogen oxide emissions to less than 100 tons per year, however removing this limitation would result in an increase in emissions that would require a construction permit and this limitation may be necessary to ensure the NAAQS for nitrogen oxide is attained and maintained. Please refer to the compliance plan in condition I.18.c.(1) for more information.

²⁸ This requirement is necessary to ensure that the National Ambient Air Quality Standards for nitrogen oxides are attained and maintained.

b. Compliance Demonstration Methods:

(1) To demonstrate compliance with condition I.A.4.a.(1), the permittee shall calculate the total gallons of propane used at the facility, averaged over each 12 consecutive month period by dividing the total gallons of propane used during each consecutive 12 month period by 12. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) To demonstrate compliance with I.A.4.a.(2), the permittee shall maintain the records required by I.A.4.c.(2). [s. NR 407.09(4), Wis. Adm. Code]

c. Record Keeping and Monitoring Requirements:

(1) To demonstrate compliance status with condition I.A.4.a.(1), the permittee shall keep monthly records of:

- (a) The total gallons of propane used at the facility;
- (b) The gallons of propane used at the facility averaged over each 12 consecutive month period as calculated in condition I.A.4.b.(1).

[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall maintain records at the source that indicate stacks S12, S13, S14, and S15 have unobstructed vertical flow. [s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, US EPA Methods 7 shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code]

5. Formaldehyde Emissions*

a. Limitations:

(1) * The permittee may not emit formaldehyde at a rate greater than 11.4 pounds per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]

b. Compliance Demonstration Methods:

(1) * Each month the permittee shall calculate the total facility emissions of formaldehyde as follows:

$$E_{\text{form}} = [(V_1 \times W_1 \times F_1) + (V_2 \times W_2 \times F_2) + \dots + (V_n \times W_n \times F_n)] - [(R_1 \times G_1) + (R_2 \times G_2) + \dots + (R_m \times G_m)]$$

where:

E_{form} is the monthly emissions of formaldehyde (pounds/month);

x identifies each HAP emitted from the facility

V is the monthly usage of each ink, coating, solvent, and other material containing formaldehyde used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other material containing formaldehyde used during the month (pounds/gallon);

F is the formaldehyde content of each ink, coating, solvent, or other material containing formaldehyde used during the month expressed as a weight fraction (i.e. if a material is 25% formaldehyde by weight F would be 0.25);

n identifies each ink, coating, solvent or other material containing formaldehyde used during the month;

R is the amount of each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site (lbs/month);

G is the formaldehyde content of each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site expressed as a weight fraction (i.e. if a spent material is 25% formaldehyde by weight G would be 0.25);

m identifies each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site during.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) *To demonstrate compliance with condition I.A.5.a.(1), the permittee shall calculate the emissions of formaldehyde, averaged over each 12 consecutive month period by dividing the total monthly emissions of formaldehyde as calculated in I.A.5.b.(1) for each 12 consecutive month period by 12. This calculation shall be

performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

c. Record Keeping and Monitoring Requirements:

(1) *The permittee shall keep monthly records of the following:

- (a) A unique name or identification number for each ink, coating, solvent, or other material containing formaldehyde used at the facility;
- (b) The weight fraction of formaldehyde (F_n) of each ink, coating, solvent, or other material used at the facility;
- (c) The amount of each ink, coating, solvent, or other material containing formaldehyde used in gallons per month (V_n);
- (d) The density of each ink, coating, solvent, or other material containing formaldehyde used in pounds per gallon (W_n);
- (e) The amount of spent ink, coating, solvent, or other material containing formaldehyde recovered each month to be shipped off site in pounds per month (R_m);
- (f) The weight fraction of each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site, expressed as a weight fraction (G_m);
- (g) The facility total monthly emissions of formaldehyde in pounds per month (E_{form}), as calculated in I.A.5.b.(1); and
- (h) The total amount of formaldehyde emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.A.5.b.(2).

[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) *The permittee shall use coating manufacturer's formulation data to determine the formaldehyde (F_n) of the of the inks, coatings, solvents or other materials containing formaldehyde used at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]

(3) *The permittee shall analyze the spent ink, coating, solvent and other materials containing formaldehyde recovered and shipped off site to determine the HAP content (G) no less than: (i) each time there is a change to materials or process operations that may affect the waste stream; or (ii) annually, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Formaldehyde Emissions: Whenever compliance emission testing is required, US EPA Method 0011 shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

6. Visible Emissions

a. Limitations:

(1) The visible emissions from each of the stacks exhausting B22, B23, B24, and B25 may not exceed 40% opacity. [s. NR 431.04(1), Wis. Adm. Code]

(2) The visible emissions from stacks exhausting the emissions units at the facility, excluding those listed in I.A.6.a.(1), may not exceed 20% opacity. [s. NR 431.05, Wis. Adm. Code]

b. Compliance Demonstration Methods:

(1) The compliance demonstration methods listed for particulate matter emissions in I.A.3.b.(1) through (13) shall also serve as compliance demonstration methods for the visible emissions limitations in I.A.6.a.(1) and (2). [s. NR 407.09(4), Wis. Adm. Code]

c. Record Keeping and Monitoring Requirements:

(1) The record keeping and monitoring requirements listed for particulate matter emissions in I.A.3.c.(1) through (8) shall also serve as the record keeping and monitoring requirements for the visible emission limitations in I.A.6.a.(1) and (2). [s. NR 407.09(1)(c)1., Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

7. Operational Flexibility

- a. **New Equipment Construction and Modification:** The permittee may commence construction or modification (but not operation) of new process equipment prior to obtaining a construction permit, provided the following conditions are met. The following conditions do not apply if a proposed project is exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(1) The permittee shall submit the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department:

- (a) Two copies of a complete construction and operation permit application describing the proposed equipment;
- (b) An application fee of \$1350 or other amount as required by s. NR 410.03(1)(d), Wis. Adm. Code; and
- (c) Information describing how the interested persons group was notified of the proposed project. [ss. 299.80(10) and (11)(b), Wis. Stats.]

(2) The Department shall process the permit application in accordance with ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code, however, the permittee need not wait for permit issuance to commence construction. The Department shall process the permit application as both a construction permit and a significant revision to this operation permit and issue both permits simultaneously to reduce the administrative burden of issuing a construction permit that expires 18 months after issuance followed by an operation permit. The Department shall send an invoice outlining the fees required for processing the construction permit for the proposed project, including the fees for an expedited permit review authorized by s. NR 410.03(o), Wis. Adm. Code, less the \$1350 permit application fee. [ss. 299.80(2)(h), (4)(b), (10) and (11)(b), Wis. Stats.]

(3) The permittee shall pay the total amount of the fee invoice within 30 days of receipt.²⁹ [s. 299.80(10), Wis. Stats.]

(4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.³⁰ [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction of the equipment in question immediately.

²⁹ Pursuant to s. 299.80(10), Wis. Stats., a participant in a cooperative agreement shall pay the same fees required under chs. 280 to 295, Wis. Stats. that it would be required to pay if it had not entered into a cooperative agreement. Therefore, while the requirement to obtain a construction permit prior to installation is waived, the permittee is still required to pay the fees that would have been assessed had a construction permit been issued under ch. NR 406, wis. Adm. Code.

³⁰ By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air pollutant emissions. Requirement I.A.7.b.(2)(a)(v) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

- b. New Equipment Operation:** The permittee may operate new process equipment, provided one of the following alternate scenarios are met. The following conditions do not apply if a proposed project is exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(1) Alternate Scenario #1: The permittee may operate new process equipment provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.7.a.(1) and the Department issues a construction permit pursuant to ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code. The permittee shall operate the new process equipment in compliance with the conditions contained in any construction permit issued by the Department. [s. NR 406.03, Wis. Adm. Code]

(2) Alternate Scenario #2: The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.7.a.(1) and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

- (a) The permittee shall submit two copies of the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department, 14 calendar days prior to the date of initial operation:
- (i) Information identifying all applicable requirements from the Wisconsin Statutes, Wisconsin Administrative Code, and federal Clean Air Act for the proposed equipment;
 - (ii) A quantification of the air pollution emissions that would result from the proposed project;
 - (iii) A computer dispersion modeling analysis showing the National Ambient Air Quality Standards will be protected if the proposed project results in an increase in potential particulate matter, sulfur dioxide, nitrogen oxide, and/or carbon monoxide emissions.
 - (iv) A computer dispersion modeling analysis showing the Acceptable Ambient Concentrations will be protected if the proposed project results in an increase in emissions of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code so that the resulting facility total emissions of the hazardous air pollutant are above the corresponding Table Value(s) **OR** results in the emission of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code that was not previously emitted, at a rate greater than its corresponding Table Value(s); and
 - (v) An analysis showing the proposed project will not cause the total facility wide potential emissions of particulate matter, sulfur dioxide, nitrogen oxides or carbon monoxide to exceed 100 tons per year. Any proposed new or relocated source that will result in the facility wide potential emissions of any one of these pollutants exceeding 100 tons per year is not eligible for this waiver. If the facility wide potential emissions of any one of the pollutants would be greater than 100 tons per year as the result of a proposed project, the permittee shall comply with the construction permit requirements outlined in ch. NR 406, Wis. Adm. Code and the significant operation permit revision requirements of s. NR 407.13, Wis. Adm. Code.³¹
- [ss. 299.80(10) and (11)(b), Wis. Stats.]
- (b) The Department has 14 calendar days from the date that all the information outlined in (a) is received to request additional information or object to the proposed project. If the Department requests additional information during the original 14 calendar day period the Department shall have an additional 7 calendar days from the date of receipt of the information to request additional information or object to the proposed project. Under no scenario shall the Department have less than 14 days to review original submittal. If the Department does not respond within 14 calendar days from the date that all the information outlined in (a) is submitted, or within 7 days from the date that any additional information requested by the Department is submitted, whichever is later, the permittee may commence initial operation of the proposed equipment. The Department may provide written approval to commence initial operation of the proposed equipment prior to the end of the 14 calendar day period. If this is the case the permittee may commence initial operation upon receipt of this written approval. [ss. 299.80(2)(h) and (11)(b), Wis. Stats.]

(3) Alternate Scenario #3: The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.7.a.(1) and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

³¹ This requirement is necessary because if the potential emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeds 100 tons the facility would be considered a major source for Part 70 purposes and would be required to obtain either a Part 70 source permit or a synthetic minor, non-Part 70 source permit containing conditions that limit the potential emissions of all criteria pollutants to less than 100 tons per year.

- (a) The Department provides written approval to commence initial operation of the proposed equipment. This written approval shall only be provided after the Department completes an air quality dispersion modeling analysis to ensure that the national ambient air quality standards and acceptable ambient concentrations will be protected while the proposed equipment is operating;
- (b) The permittee shall comply with any specific conditions included in the Department's written approval to commence initial operation;

(4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.³² [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction and/or operation of the equipment in question immediately.

8. Facility Wide Reporting Requirements

a. Submit the results of monitoring or a summary of monitoring results required by Part I.A. of this permit to the Department annually.

- (1) The time period to be addressed by the submittal are: January 1 to December 31.
- (2) The report shall be submitted to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.
- (3) All deviations from and violations of applicable requirements shall be clearly identified in the submittal.
- (4) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(b), Wis. Adm. Code]

b. Submit a certification of compliance with the requirements of Part I.A. of this permit to the Department annually.

- (1) The time period to be addressed by the report is the January 1 to December 31 period which precedes the report.
- (2) The report shall be submitted to the Wisconsin Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 60 days after the end of each reporting period.
- (3) The information included in the report shall comply with the requirements of Part II Section N of this permit.
- (4) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(c), Wis. Adm. Code]

9. Compliance Testing Requirements

a. Whenever compliance emission tests are required by the Department:

- (1) Any compliance emission tests required by the Department shall be conducted while operating at 100% capacity. If operation at 100% capacity is not feasible, the sources shall operate at a capacity which is approved by the Department in writing.

³² By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air pollutant emissions. Requirement I.A.5.a.(1)(g) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

- (2) The reference test methods outlined in this permit shall be used unless an alternate, U.S. EPA approved, test method is approved by the Department in writing.
- (3) The Department shall be informed at least 20 working days prior to any tests so a Department representative can witness the testing.
- (4) At the time of notification, a compliance test plan shall also be submitted for approval.
- (5) Two copies of the report on any required tests shall be submitted to the Department for evaluation within 60 days after the tests.

[s. NR 439.07, Wis. Adm. Code]

B. *Part I.A. of this operation permit is effective so long as the permittee is operating under a Cooperative Agreement with the Department as entered into under s. 299.80 Wis. Stats. If any such Cooperative Agreement expires or is revoked for any reason, Part I.A. of this operation permit is no longer effective and Part I.B. becomes the effective operation permit for the facility. If any such Cooperative Agreement expires or is revoked for any reason, the permittee shall comply with any delayed compliance deadlines and practical interim requirements established by the Department in a written revocation decision until the Department issues the approvals required under chs. 280 to 295, Wis. Stats, that were replaced by the above referenced Cooperative Agreement.*

1. Process B02, Stack S02 - Natural Gas/Propane Space Heaters with a Total Rating of 33.4 mmBtu/hr - Installed 1994

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Total particulate matter emissions from all space heater included under B02 may not exceed 0.28 pounds per hour. ³³ [s. NR 415.06(2)(a), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the space heaters. ³⁴ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the space heaters. ³⁶ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility.. [s. NR 439.04(1)(d), Wis. Adm. Code]

³³ This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

³⁴ Because the emission limitation listed in I.B.1.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

³⁶ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

2. **Boiler B22, Stack S12 - Natural Gas/Propane Boiler Rated at 8.4 mmBtu/hr - Installed 1961**
Boiler B23, Stack S13 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971
Boiler B24, Stack S14 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971
Boiler B25, Stack S15 - Natural Gas/Propane Boiler Rated at 6.3 mmBtu/hr - Installed 1961

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions from each boiler may not exceed the following limitations: (i) B22: 0.06 pounds per hour (ii) B23: 0.08 pounds per hour; (iii) B24: 0.08 pounds per hour; and (iv) B25 0.05 pounds per hour. ³⁸ [s. NR 415.06(1)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(a) The permittee shall only fire natural gas and/or propane in each boiler. ³⁹ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Visible Emissions	(a) 40% opacity [s. NR 431.04(1), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in each boiler. ⁴¹ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
c. Nitrogen Oxides	(a) Stacks S12, S13, S14, and S15 may not be equipped with rainhats or any other device that obstructs vertical discharge of the exhaust gas. ⁴³ [s. 285.63(1)(b), Wis. Stats.]	(a) To demonstrate compliance with I.B.2.c.(1)(a), the permittee shall maintain the records required by I.B.2.c.(3)(b). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Nitrogen Oxide Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 7 shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code] (b) The permittee shall maintain records at the source that indicate stacks S12, S13, S14, and S15 have unobstructed vertical flow. [s. NR 439.04(1)(d), Wis. Adm. Code]

³⁸ These more restrictive limitations are necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

³⁹ Because the emission limitations listed in I.B.2.b.(1)(a) are equal to the maximum theoretical emissions for each boiler while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

⁴¹ It is not expected that the visible emission limitation of 40% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

⁴³ This requirement is necessary to ensure that the National Ambient Air Quality Standards for nitrogen oxides are attained and maintained.

3. Process P03, Stack S03 - 5 Lithographic Lines with UV Curing - Installed 1988

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) Emissions from each individual lithographic line included under P03 may never exceed 15 pounds in any day. [s. NR 424.03(1)(a)4., Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.3.a.(3)(c) to demonstrate compliance with I.B.3.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall maintain records that demonstrate the VOC emissions from each individual lithographic line included under P03 do not exceed 15 pounds in any day. [s. NR 439.04(3), Wis. Adm. Code]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

4. Process P32, Stack S18 - 4 Roll Coating Machines, with three Natural Gas/Propane Curing Oven rated at 5, 6, and 5.25 mmBtus/hr - Controlled by Thermal Oxidizer C18 – Modified 2005 – (Only three coaters can be operated at a time)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Particulate Matter Emissions</p>	<p>(a) Emissions may not exceed 0.24 pounds per hour.⁴⁴ [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall only fire natural gas and/or propane in the curing ovens and thermal oxidizer.⁴⁵ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p>b. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) No owner or operator of a miscellaneous metal parts or products coating line using a baked or specially cured coating technology may cause, allow or permit the emissions of any VOCs in excess of:</p> <p>(i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings;</p> <p>(ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings;</p> <p>(iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis Adm. Code]</p>	<p>(a) The permittee shall comply with the limitations of I.B.4.b.(1)(a) by one of the following methods:</p> <p>(i) The application of low solvent content coating technology [s. NR 422.04(2)(a), Wis. Adm. Code];</p> <p>(ii) Thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidizer are oxidized to non-organic compounds. [s. NR 422.04(2)(c), Wis. Adm. Code]</p> <p>(iii) <i>Continued on Next Page...</i></p>	<p>(a) The permittee shall collect and record:</p> <p>(i) A unique name or identification number for each coating, as applied;</p> <p>(ii) The VOC content of each coating, as applied, in units of pounds of VOC per gallon, excluding water. [s. NR 439.04(5)(a), Wis. Adm. Code]</p> <p>(b) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁴⁴ This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

⁴⁵ Because the emission limitation in I.B.4.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

4. Process P32, Stack S18 - 4 Roll Coating Machines, with three Natural Gas/Propane Curing Oven rated at 5, 6, and 5.25 mmBtus/hr- Controlled by Thermal Oxidizer C18 - Modified 2005 – (Only three coaters can be operated at a time) - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>	<p>(b) SOLVENT WASHINGS. All VOC emissions from solvent washings shall be considered in the emission limitation in condition I.B.4.b.(1)(a), unless the used wash solvent is directed into containers that prevent evaporation into the atmosphere. [s. NR 422.15(8), Wis. Adm. Code]</p> <p>(c) The permittee may not coat paper or vinyl plastic with roll coaters P32. This requirement is necessary to avoid being subject to the requirements of s. NR 422.07 or NR 422.08. [s. 285.65(3), Wis. Stats.]</p> <p>(d) Only three roll coating machines may be used at a time. [s. 285.65(7), Wis. Stats.]</p>	<p><i>Continued from previous page...</i></p> <p>(iii) IN-LINE AVERAGING. The permittee may achieve compliance through a daily volume-weighted average of all coatings applied on P32 subject to the same numerical limit in I.B.4.b.(1)(a). The permittee may not cause, allow or permit the daily volume-weighted average VOC content to exceed the corresponding emission limitation in I.B.4.b.(1)(a). The daily volume-weighted average VOC content shall be calculated by using the following equation:</p> $VOC_A = \frac{\sum_{i=1}^n C_i V_i}{V_T}$ <p>where: VOC_A is the volume-weighted average VOC content of 2 or more coatings applied on P32 during any day in pounds per gallon of coating, excluding water; i is the subscript denoting an individual coating n is the number of different coating subject to the same numerical emission limit applied during any day on P32; C_i is the VOC content of each coating (i) as applied during any day on P32 in pounds per gallon of coating, excluding water; V_i is the volume of each coating (i), excluding water, as applied during any day on the P32 in gallons; V_T is the total volume of all n coatings subject to the same numerical limit in I.B.4.b.(1)(a), excluding water, applied during any day on P32 in gallons. [s. NR 422.04(1)(a), Wis. Adm. Code]</p>	<p>(c) If demonstrating compliance through the use of in-line averaging, the permittee shall collect and record the following for each day of operation:</p> <p>(i) The name or identification number of each coating applied on P32;</p> <p>(ii) The volume of each coating applied in gallons, excluding water.</p> <p>(iii) The daily volume-weighted average VOC content of all coatings applied on P32 as calculated under I.B.4.b.(2)(a)(iii). [s. NR 439.04(5)(g), Wis. Adm. Code]</p> <p>(d) If achieving compliance through the use of a thermal oxidizer, the permittee shall collect and record:</p> <p>(i) The allowable emission rate from I.B.4.b.(1)(a) in pounds per gallon of coating, excluding water;</p> <p>(ii) The amount of each coating in gallons, delivered to the applicator;</p> <p>(iii) The volume fraction of solids in each coating delivered to the applicator;</p> <p>(iv) The density of the VOC used in each coating or ink in pounds per gallon, delivered to the applicator;</p> <p>(v) The total allowable emissions as calculated under I.B.4.b.(2)(b);</p> <p>(vi) The actual emissions for those coatings for which allowable emissions were calculated under I.B.4.b.(2)(b) when considering the control device;</p> <p>(vii) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line operation;</p> <p>(viii) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages. [s. NR 439.04(5)(e), Wis. Adm. Code]</p>

4. Process P32, Stack S18 - 4 Roll Coating Machines, with three Natural Gas/Propane Curing Oven rated at 5, 6, and 5.25 mmBtus/hr - Controlled by Thermal Oxidizer C18 – Modified 1005 – (Only three coaters can be operated at a time) - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>		<p>(b) The design, operation and efficiency of any capture system used with the incinerator required by I.B.4.b.(2)(a)(ii) shall be certified in writing by the permittee. The efficiency of the capture system is subject to approval by the Department. The efficiency of the capture system shall be great enough to insure that for any day either 95% overall control is achieved or the emissions from the controlled line are less than or equal to the amount determined using the following equation:</p> $E = \sum_{i=1}^n (A_i B_i C_i / D_i)$ <p>where: E is the total allowable daily emissions of VOCs in pounds from all coatings subject to the same numerical emission limitation applied on P32. i is the subscript denoting an individual coating; n is the number of different coatings applied; A_i is the allowable emission rate from I.B.4.b.(1)(a) in pounds per gallon of coating, excluding water, delivered to the applicator; B_i is the amount of coating in gallons, delivered to the applicator during the actual production day; D_i is the theoretical volume fraction of solids in the coating necessary to meet the allowable emission rate from I.B.4.b.(1)(a) calculated from: $D_i = 1 - [A_i / P_i]$ where P_i is the density of the VOC used in the coating delivered to the applicator during the actual production day in pounds per gallon. If the coating does not contain any VOCs, or if the actual density cannot be demonstrated by the permittee, a value of 7.36 pounds per gallon shall be used for P. [s. NR 422.04(4), Wis. Adm. Code.]</p> <p>(c) The operating temperature of the thermal incinerator shall be maintained at no less than 1260 degrees F. [s. 285.65(3), Wis. Stats and s. NR 407.09(1)(a), Wis. Adm. Code]</p>	<p>(e) If operating a thermal oxidizer to achieve compliance as required by I.B.4.b.(2)(a)(ii), the permittee shall continuously monitor and record the operating temperature of the oxidizer. [ss. NR 439.055(1) and (2), and NR 439.04(5)(e), Wis. Adm. Code]</p> <p>(f) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(g) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p>

4. Process P32, Stack S18 - 4 Roll Coating Machines, with three Natural Gas/Propane Curing Oven rated at 5, 6, and 5,25 mmBtus/hr - Controlled by Thermal Oxidizer C18 – Modified 2005 – (Only three coaters can be operated at a time) - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
b. Volatile Organic Compounds - (Continued)		<p>(d) Where the requirements of I.B.4.b.(1)(a) are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code. [s. NR 425.04(4), Wis. Adm. Code]</p> <p>(e) <u>Compliance Testing:</u> Compliance emission testing of the incinerator shall be conducted as follows: (i) Testing shall be conducted within 30 days of starting operation of the incinerator after the expiration or revocation of any Cooperative Agreement entered into with the Department under s. 299.80 Wis. Stats to demonstrate compliance with volatile organic compound emission limitations; (ii) In accordance with the compliance testing requirements in I.B.18.b.(1)(a). [ss. NR 439.075(1)(b) and NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(h) The permittee shall retain copies of the results of the tests required by I.B.4.b.(2)(e) at the facility for five years. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the curing ovens and the thermal oxidizer. ⁴⁷ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁴⁷ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

5. Process P33, Stack S19 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (P-33-18S-1B and P-33-18S-2B) - Installed 1993

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	<p>(a) Emissions may not exceed the most restrictive of:⁴⁹</p> <p>(i) 0.40 pounds per 1000 pounds gas;</p> <p>(ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(iii) 0.91 pounds per hour.</p> <p>[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate a paint overspray filter system on each spray booth to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across each overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across each paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>b. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) No owner or operator of a miscellaneous metal parts or products coating line using a baked or specially cured coating technology may cause, allow or permit the emissions of any VOCs in excess of:</p> <p>(i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings;</p> <p>(ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings;</p> <p>(iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis Adm. Code]</p>	<p>(a) The permittee shall comply with the limitations of I.B.5.b.(1)(a) by one of the following methods:</p> <p>(i) The application of low solvent content coating technology [s. NR 422.04(2)(a), Wis. Adm. Code];</p> <p>(ii) Thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidation are oxidized to non-organic compounds. [s. NR 422.04(2)(c), Wis. Adm. Code]</p> <p>(iii) <i>Continued on Next Page...</i></p>	<p>(a) The permittee shall collect and record:</p> <p>(i) A unique name or identification number for each coating, as applied;</p> <p>(ii) The VOC content of each coating, as applied, in units of pounds of VOC per gallon, excluding water. [s. NR 439.04(5)(a), Wis. Adm. Code]</p> <p>(b) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁴⁹ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.1 tons per hour and a stack gas flow rate of 3700 ACFM. The limitation of 0.91 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

5. Process P33, Stack S19 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>	<p>(b) SOLVENT WASHINGS. All VOC emissions from solvent washings shall be considered in the emission limitation in condition I.B.5.b.(1)(a), unless the used wash solvent is directed into containers that prevent evaporation into the atmosphere. [s. NR 422.15(8), Wis. Adm. Code]</p>	<p><i>Continued from previous page...</i></p> <p>(iii) IN-LINE AVERAGING. The permittee may achieve compliance through a daily volume-weighted average of all coatings applied on P33 subject to the same numerical limit in I.B.5.b.(1)(a). The permittee may not cause, allow or permit the daily volume-weighted average VOC content to exceed the corresponding emission limitation in I.B.5.b.(1)(a). The daily volume-weighted average VOC content shall be calculated by using the following equation:</p> $VOC_A = \frac{\sum_{i=1}^n C_i V_i}{V_T}$ <p>where: VOC_A is the volume-weighted average VOC content of 2 or more coatings applied on P33 during any day in pounds per gallon of coating, excluding water; i is the subscript denoting an individual coating n is the number of different coating subject to the same numerical emission limit applied during any day on P33; C_i is the VOC content of each coating (i) as applied during any day on P33 in pounds per gallon of coating, excluding water; V_i is the volume of each coating (i), excluding water, as applied during any day on the P33 in gallons; V_T is the total volume of all n coatings subject to the same numerical limit in I.B.5.b.(1)(a), excluding water, applied during any day on P33 in gallons. [s. NR 422.04(1)(a), Wis. Adm. Code]</p>	<p>(c) If demonstrating compliance through the use of in-line averaging, the permittee shall collect and record the following for each day of operation:</p> <ul style="list-style-type: none"> (i) The name or identification number of each coating applied on P33; (ii) The volume of each coating applied in gallons, excluding water. (iii) The daily volume-weighted average VOC content of all coatings applied on P33 as calculated under I.B.5.b.(2)(a)(iii). [s. NR 439.04(5)(g), Wis. Adm. Code] <p>(d) If achieving compliance through the use of a thermal oxidizer, the permittee shall collect and record:</p> <ul style="list-style-type: none"> (i) The allowable emission rate from I.B.5.b.(1)(a) in pounds per gallon of coating, excluding water; (ii) The amount of each coating in gallons, delivered to the applicator; (iii) The volume fraction of solids in each coating delivered to the applicator; (iv) The density of the VOC used in each coating or ink in pounds per gallon, delivered to the applicator; (v) The total allowable emissions as calculated under I.B.5.b.(2)(b); (vi) The actual emissions for those coatings for which allowable emissions were calculated under I.B.5.b.(2)(b) when considering the control device; (vii) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line operation; (viii) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages. [s. NR 439.04(5)(e), Wis. Adm. Code]

5. Process P33, Stack S19 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>		<p>(b) The design, operation and efficiency of any capture system used with the incinerator required by I.B.5.b.(2)(a)(ii) shall be certified in writing by the permittee. The efficiency of the capture system is subject to approval by the Department. The efficiency of the capture system shall be great enough to insure that for any day either 95% overall control is achieved or the emissions from the controlled line are less than or equal to the amount determined using the following equation:</p> $E = \sum_{i=1}^n (A_i B_i C_i / D_i)$ <p>where: E is the total allowable daily emissions of VOCs in pounds from all coatings subject to the same numerical emission limitation applied on P33. i is the subscript denoting an individual coating; n is the number of different coatings applied; A_i is the allowable emission rate from I.B.5.b.(1)(a) in pounds per gallon of coating, excluding water, delivered to the applicator; B_i is the amount of coating in gallons, delivered to the applicator during the actual production day; D_i is the theoretical volume fraction of solids in the coating necessary to meet the allowable emission rate from I.B.5.b.(1)(a) calculated from: $D_i = 1 - [A_i / P_i]$ where P_i is the density of the VOC used in the coating delivered to the applicator during the actual production day in pounds per gallon. If the coating does not contain any VOCs, or if the actual density cannot be demonstrated by the permittee, a value of 7.36 pounds per gallon shall be used for P. [s. NR 422.04(4), Wis. Adm. Code.]</p> <p>(c) The operating temperature of the thermal incinerator shall be maintained at no less than 1260 degrees F. [s. 285.65(3), Wis. Stats and s. NR 407.09(1)(a), Wis. Adm. Code]</p>	<p>(e) If operating a thermal oxidizer to achieve compliance as required by I.B.5.b.(2)(a)(ii), the permittee shall continuously monitor and record the operating temperature of the oxidizer. [ss. NR 439.055(1) and (2), and NR 439.04(5)(e), Wis. Adm. Code]</p> <p>(f) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(g) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p>

5. Process P33, Stack S19 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
b. Volatile Organic Compounds - (Continued)		<p>(d) Where the requirements of I.B.5.b.(1)(a) are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code. [s. NR 425.04(4), Wis. Adm. Code]</p> <p>(e) <u>Compliance Testing:</u> Compliance emission testing of the incinerator shall be conducted as follows: (i) Testing shall be conducted within 30 days of starting operation of the incinerator after the expiration or revocation of any Cooperative Agreement entered into with the Department under s. 299.80 Wis. Stats to demonstrate compliance with volatile organic compound emission limitations; (ii) In accordance with the compliance testing requirements in I.B.18.b.(1)(a). [ss. NR 439.075(1)(b) and NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(h) The permittee shall retain copies of the results of the tests required by I.B.5.b.(2)(e) at the facility for five years. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The compliance demonstration methods outlined in I.B.5.a.(2)(a) and (b) shall also serve as compliance demonstration methods for condition I.B.5.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The monitoring and records required by I.B.5.a.(3)(b) shall also serve as the monitoring and records for the visible emission limitations. [s. NR 407.09(1)(c)1., Wis. Adm. Code]</p>

6. Process P37, Stack S53 - 3 Screening Lines each with a Natural Gas/Propane Curing - (P-37-12S, P-43-SOS, P171-SOS)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions may not exceed 0.13 pounds per hour. ⁵⁰ [s. NR 415.06(2)(a), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(a) The permittee shall only fire natural gas and/or propane in the non-electric curing ovens. ⁵¹ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Volatile Organic Compounds	(a) <u>Latest Available Control Techniques:</u> The permittee may not use coatings or inks with a VOC content greater than 6.9 pounds per gallon as applied. [s. NR 424.03(2)(c), Wis. Adm. Code]	(a) The permittee shall maintain the records required by I.B.6.b.(3)(c) to demonstrate compliance with I.B.6.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code] (b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code] (c) The permittee shall keep the following records for each ink and other VOC containing materials used on P37: (i) A unique name of identification number for each ink and other VOC containing material, as applied; and (ii) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.] (d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]

⁵⁰ This more restrictive limitation is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

⁵¹ Because the emission limitation in I.B.6.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

6. Process P37, Stack S53 - 3 Screening Lines each with a Natural Gas/Propane Curing - (P-37-12S, P-43-SOS, P171-SOS) - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the curing ovens. ⁵³ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions</u> : Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]

⁵³ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

7. Process P57, Stack S57 - Plastic Spray Booth (this booth uses same curing oven and thermal oxidizer used for P33) - (P-58-PBS)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Particulate Matter Emissions</p>	<p>(a) Emissions may not exceed the most restrictive of:⁵⁵ (i) 0.40 pounds per 1000 pounds gas; (ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or (iii) 0.06 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across each paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>b. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) <u>Latest Available Control Techniques:</u> The permittee may not use coatings or inks with a VOC content greater than 6.3 pounds per gallon as applied. [s. NR 424.03(2)(b), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.7.b.(3)(c) to demonstrate compliance with I.B.7.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on P57: (a) A unique name of identification number for each ink and other VOC containing material, as applied; and (b) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p>

⁵⁵ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.025 tons per hour and a stack gas flow rate of 1400 ACFM. The limitation of 0.06 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

7. Process P57, Stack S57 - Plastic Spray Booth (this booth uses same curing oven and thermal oxidizer used for P33) - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
b. Volatile Organic Compounds - (Continued)			(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The compliance demonstration methods outlined in I.B.7.a.(2)(a) and (b) shall also serve as compliance demonstration methods for condition I.B.7.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The monitoring and records required by I.B.7.a.(3)(b) shall also serve as the monitoring and records for the visible emission limitations. [s. NR 407.09(1)(c)1., Wis. Adm. Code]

8. Process P63, Stack S63 - Miscellaneous Facility Wide Cleanup

Because cleanup is performed using a wipe cleaning operation and the facility is located outside of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha counties, it is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(g)1., Wis. Adm. Code. The cleanup solvent use is subject to general emission limitations for volatile organic compounds outline in ss. NR 419.03 and NR 419.04, Wis. Adm. Code which are included in Part II of this operation permit.

9. Process P72, Stack S72 - Towel Dryer - Installed 1991

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) No person may cause, allow or permit organic compound emissions into the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution. [s. NR 419.03(1), Wis. Adm. Code]</p> <p>(b) No person may cause, allow or permit organic compounds to be used or handled without using good operating practices and taking reasonable precautions to prevent the spillage, escape or emission of organic compounds, solvents or mixtures. [s. NR 419.03(2), Wis. Adm. Code]</p> <p>(c) No person may cause, allow or permit the disposal of more than 1.5 gallons of any liquid VOC waste, or of any liquid, semisolid or solid waste materials containing more than 1.5 gallons of any VOC, in any one day from a facility in a manner that would permit their evaporation into the ambient air during the ozone season, except as provided for in s. NR 419.07. [s. NR 419.04(1), Wis. Adm. Code]</p> <p>(d) Disposal during the ozone season shall be by methods approved by the department, such as incineration, recovery for reuse, or transfer in closed containers to an acceptable disposal facility, such that the quantity of VOC which evaporates into the ambient air does not exceed 15% (by weight) or 1.5 gallons in any one day, whichever is larger. [s. NR 419.04(2), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.9.a.(3)(b) to demonstrate compliance with I.B.9.a.(1). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) For each batch of towels dried the permittee shall keep records of (i) the weight of the towels before drying; (ii) the weight of the towels after drying; and (iii) the calculated amount of VOCs that are emitted from the towel dryer. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

10. Process P41, Stack S41 - Two Litho Presses with Two UV Ovens - Installed 2001

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques</u>: Monthly VOC emissions from this process line may not exceed 1666 pounds per month. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) Each calendar month the permittee shall calculate the total volatile organic compound emissions from process P41 as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{monthly}} = [(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n) +]$ <p>where: E_{monthly} is the monthly VOC emissions (pounds/month); U is the amount of each ink, coating, clean-up solvent, or other VOC containing material used during the month (gallons/month); W is the density of each ink, coating, clean-up solvent, or other VOC containing material used during the month (pounds/gallon); G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content; C is the VOC content of each ink, coating, clean-up solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25); n identifies each ink, coating, clean-up solvent or other VOC containing material used during the month.</p> <p>This calculation shall be performed within fifteen calendar days of the end of each calendar month.</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content</u>: Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the following: (i) A unique name or identification number for each ink, coating, clean-up solvent, or other VOC containing material used on process P41; (ii) The VOC content, expressed as a weight fraction (C_n) of each ink, coating, clean-up solvent, or other VOC containing material used on process P41; (iii) The amount of each ink, coating, clean-up solvent, or other VOC containing material used in gallons per month (U_n); (iv) The density of each ink, coating, clean-up solvent, or other VOC containing material used in pounds per gallon (W_n); (v) The G multiplier factor for the VOC in the material (G_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor; and (vi) The total monthly VOC emissions from process P41 in pounds per month (E_{monthly}), as calculated in I.B.10.a.(2)(a). [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

11. Process P43, Stack S43 - One Screening Machines and Three Small Screening Machines with One Electric Drying Oven - Installed 2001

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques</u>: Monthly VOC emissions from this process line may not exceed 1666 pounds per month. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) Each calendar month the permittee shall calculate the total volatile organic compound emissions from process P43 as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{monthly}} = [(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n)]$ <p>where: E_{monthly} is the monthly VOC emissions (pounds/month); U is the amount of each ink, coating, clean-up solvent, or other VOC containing material used during the month (gallons/month); W is the density of each ink, coating, clean-up solvent, or other VOC containing material used during the month (pounds/gallon); C is the VOC content of each ink, coating, clean-up solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25); G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content; and n identifies each ink, coating, clean-up solvent or other VOC containing material used during the month.</p> <p>This calculation shall be performed within fifteen calendar days of the end of each calendar month.</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content</u>: Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the following: (i) A unique name or identification number for each ink, coating, clean-up solvent, or other VOC containing material used on process P43; (ii) The VOC content, expressed as a weight fraction (C_n) of each ink, coating, clean-up solvent, or other VOC containing material used on process P43; (iii) The amount of each ink, coating, clean-up solvent, or other VOC containing material used in gallons per month (U_n); (iv) The density of each ink, coating, clean-up solvent, or other VOC containing material used in pounds per gallon (W_n); (v) The G multiplier factor for the VOC in the material (G_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor; and (vi) The total monthly VOC emissions from process P43 in pounds per month (E_{monthly}), as calculated in I.B.11.a.(2)(a). [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

12. Process P42, Stack S42 - Two Roll Coaters with Four Electric Drying Ovens - Utilized for R&D Activities - Installed 2001

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>RACT Exemption</u>: This process is exempt from the requirements of ss. NR 422.04 to NR 422.155, Wis. Adm. Code provided:</p> <p>(i) The surface coating process sources are used exclusively for chemical and physical analysis or determination of product quality and commercial acceptance;</p> <p>(ii) The operation of the equipment is not an integral part of the production process; and</p> <p>(iii) The total emissions from R&D activities (process P42 and P44 combined) do not exceed 800 pounds per calendar month.⁵⁷ [s. NR 422.03(5), Wis. Adm. Code]</p> <p>(b) <u>Latest Available Control Techniques</u>: Monthly VOC emissions from processes P42 and P44 combined may not exceed 800 pounds per month. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.12.a.(3)(b) to demonstrate compliance with I.B.12.a.(1)(a) and (b). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall keep records to demonstrate that the volatile organic compound emissions from processes P42 and P44 combined are less than 800 pounds per calendar month. [s. NR 439.04(4), Wis. Adm. Code]</p>

⁵⁷ Note: For this process to be exempt from construction permit requirements, VOC emissions must not exceed 1666 pounds per month pursuant to s. NR 406.04(1)(g), Wis. Adm. Code.

13. Process P44, Stack S44 - Spraybooth - Utilized for R&D Activities - Installed 2001

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>RACT Exemption</u>: This process is exempt from the requirements of ss. NR 422.04 to NR 422.155, Wis. Adm. Code provided:</p> <p>(i) The surface coating process sources are used exclusively for chemical and physical analysis or determination of product quality and commercial acceptance;</p> <p>(ii) The operation of the equipment is not an integral part of the production process; and</p> <p>(iii) The emissions from the source do not exceed 800 pounds per calendar month. [s. NR 422.03(5), Wis. Adm. Code]</p> <p>(b) <u>Latest Available Control Techniques</u>: Monthly VOC emissions from processes P42 and P44 combined may not exceed 800 pounds per month. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.13.a.(3)(b) to demonstrate compliance with I.B.13.a.(1)(a) and (b). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall keep records to demonstrate that the volatile organic compound emissions from processes P42 and P44 combined is less than 800 pounds per calendar month. [s. NR 439.04(4), Wis. Adm. Code]</p>

13. Process P44, Stack S44 - Spraybooth - Utilized for R&D Activities - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Particulate Matter Emissions</p>	<p>(a) Emissions may not exceed the most restrictive of:⁵⁸ (i) 0.40 pounds per 1000 pounds gas; (ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or (iii) 0.36 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.] (b) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.18.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall monitor and record the pressure drop across the paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>c. Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The compliance demonstration methods outlined in I.B.13.b.(2)(a) and (b) shall also serve as compliance demonstration methods for condition I.B.13.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The monitoring and records required by I.B.13.b.(3)(b) shall also serve as the monitoring and records for the visible emission limitations. [s. NR 407.09(1)(c)1., Wis. Adm. Code]</p>

⁵⁸ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.025 tons per hour and a stack gas flow rate of 2000 ACFM. The limitation of 0.36 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

14. Process P75, Stack S75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) No owner or operator of a miscellaneous metal parts or products coating line using a baked or specially cured coating technology may cause, allow or permit the emissions of any VOCs in excess of:</p> <p>(i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings;</p> <p>(ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings;</p> <p>(iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis Adm. Code]</p> <p>(b) SOLVENT WASHINGS. Whenever P75 is used to coat metal substrates, all VOC emissions from solvent washings shall be considered in the emission limitation in condition I.B.14.a.(1)(a), unless the used wash solvent is directed into containers that prevent evaporation into the atmosphere. [s. NR 422.15(8), Wis. Adm. Code]</p>	<p>(a) The permittee shall comply with the limitations of I.B.14.a.(1)(a) by one of the following methods:</p> <p>(i) The application of low solvent content coating technology [s. NR 422.04(2)(a), Wis. Adm. Code];</p> <p>(ii) Thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidizer are oxidized to non-organic compounds. [s. NR 422.04(2)(c), Wis. Adm. Code]</p> <p>(iii) <i>Continued on Next Page...</i></p>	<p>(a) The permittee shall collect and record:</p> <p>(i) A unique name or identification number for each coating, as applied;</p> <p>(ii) The VOC content of each coating, as applied, in units of pounds of VOC per gallon, excluding water. [s. NR 439.04(5)(a), Wis. Adm. Code]</p> <p>(b) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

14. Process P75, Stack S75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>	<p>(c) The permittee may not coat paper or vinyl plastic with roll coaters P75. This requirement is necessary to avoid being subject to the requirements of s. NR 422.07 or NR 422.08. [s. 285.65(3), Wis. Stats.]</p> <p>(d) When coating plastic products, the permittee may not use more than 10,000 gallons of coating in any 12 consecutive months. [s. 285.65(7), Wis. Stats.]</p> <p>(e) When coating plastic parts, the permittee shall use the latest available control technique and operating practices (LACT):</p> <p>(i) the coatings applied may not contain more than 6.8 pounds of VOC per gallon.</p>	<p><i>Continued from previous page...</i></p> <p>(iii) IN-LINE AVERAGING. The permittee may achieve compliance through a daily volume-weighted average of all coatings applied on P75 subject to the same numerical limit in I.B.14.a.(1)(a). The permittee may not cause, allow or permit the daily volume-weighted average VOC content to exceed the corresponding emission limitation in I.B.14.a.(1)(a). The daily volume-weighted average VOC content shall be calculated by using the following equation:</p> $VOC_A = \frac{\sum_{i=1}^n C_i V_i}{V_T}$ <p>where: VOC_A is the volume-weighted average VOC content of 2 or more coatings applied on P75 during any day in pounds per gallon of coating, excluding water; i is the subscript denoting an individual coating n is the number of different coating subject to the same numerical emission limit applied during any day on P75; C_i is the VOC content of each coating (i) as applied during any day on P75 in pounds per gallon of coating, excluding water; V_i is the volume of each coating (i), excluding water, as applied during any day on the P75 in gallons; V_T is the total volume of all n coatings subject to the same numerical limit in I.B.14.a.(1)(a), excluding water, applied during any day on P75 in gallons. [s. NR 422.04(1)(a), Wis. Adm. Code]</p>	<p>(c) If demonstrating compliance through the use of in-line averaging, the permittee shall collect and record the following for each day of operation:</p> <p>(i) The name or identification number of each coating applied on P75;</p> <p>(ii) The volume of each coating applied in gallons, excluding water.</p> <p>(iii) The daily volume-weighted average VOC content of all coatings applied on P75 as calculated under I.B.14.a.(2)(a)(iii). [s. NR 439.04(5)(g), Wis. Adm. Code]</p> <p>(d) If achieving compliance through the use of a thermal oxidizer, the permittee shall collect and record:</p> <p>(i) The allowable emission rate from I.B.14.a.(1)(a) in pounds per gallon of coating, excluding water;</p> <p>(ii) The amount of each coating in gallons, delivered to the applicator;</p> <p>(iii) The volume fraction of solids in each coating delivered to the applicator;</p> <p>(iv) The density of the VOC used in each coating or ink in pounds per gallon, delivered to the applicator;</p> <p>(v) The total allowable emissions as calculated under I.B.14.a.(2)(b);</p> <p>(vi) The actual emissions for those coatings for which allowable emissions were calculated under I.B.14.a.(2)(b) when considering the control device;</p> <p>(vii) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line operation;</p> <p>(viii) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages. [s. NR 439.04(5)(e), Wis. Adm. Code]</p>

14. Process P75, Stack S75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>		<p>(b) The design, operation and efficiency of any capture system used with the incinerator required by I.B.14.a.(2)(a)(ii) shall be certified in writing by the permittee. The efficiency of the capture system is subject to approval by the Department. The efficiency of the capture system shall be great enough to insure that for any day either 95% overall control is achieved or the emissions from the controlled line are less than or equal to the amount determined using the following equation:</p> $E = \sum_{i=1}^n (A_i B_i C_i / D_i)$ <p>where: E is the total allowable daily emissions of VOCs in pounds from all coatings subject to the same numerical emission limitation applied on P75. i is the subscript denoting an individual coating; n is the number of different coatings applied; A_i is the allowable emission rate from I.B.14.a.(1)(a) in pounds per gallon of coating, excluding water, delivered to the applicator; B_i is the amount of coating in gallons, delivered to the applicator during the actual production day; D_i is the theoretical volume fraction of solids in the coating necessary to meet the allowable emission rate from I.B.14.a.(1)(a) calculated from: $D_i = 1 - [A_i / P_i]$ where P_i is the density of the VOC used in the coating delivered to the applicator during the actual production day in pounds per gallon. If the coating does not contain any VOCs, or if the actual density cannot be demonstrated by the permittee, a value of 7.36 pounds per gallon shall be used for P. [s. NR 422.04(4), Wis. Adm. Code.]</p> <p>(c) The operating temperature of the thermal incinerator shall be maintained at no less than 1260 degrees F. [s. 285.65(3), Wis. Stats and s. NR 407.09(1)(a), Wis. Adm. Code]</p>	<p>(e) If operating a thermal oxidizer to achieve compliance as required by I.B.14.a.(2)(a)(ii), the permittee shall continuously monitor and record the operating temperature of the oxidizer. [ss. NR 439.055(1) and (2), and NR 439.04(5)(e), Wis. Adm. Code]</p> <p>(f) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(g) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(h) The permittee shall retain copies of the results of the tests required by I.B.14.a.(2)(e) at the facility for five years. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

14. Process P75, Stack S75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds - (Continued)</p>		<p>(d) Where the requirements of I.B.14.a.(1)(a) are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code. [s. NR 425.04(4), Wis. Adm. Code]</p> <p>(e) Compliance Testing: Compliance emission testing of the incinerator shall be conducted as follows: (i) Testing shall be conducted within 30 days of starting operation of the incinerator after the expiration or revocation of any Cooperative Agreement entered into with the Department under s. 299.80 Wis. Stats to demonstrate compliance with volatile organic compound emission limitations; (ii) In accordance with the compliance testing requirements in I.B.18.b.(1)(a). [ss. NR 439.075(1)(b) and NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(i) The permittee shall keep and maintain monthly records of the amounts of coatings used in P75 when coating plastic parts. [s. NR 439.04, Wis. Adm. Code]</p> <p>(j) The permittee shall keep and maintain monthly records of the VOC contents of coatings used in P75 when coating plastic parts. [s. NR 439.04, Wis. Adm. Code]</p> <p>(k) The permittee shall maintain the material safety data sheets MSDS showing the VOC contents of the coatings and thinning solvents used to coat plastic parts in P75. [s. NR 439.04, Wis. Adm. Code]</p>
<p>b. Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The permittee shall only fire natural gas and/or propane in the curing ovens and the thermal oxidizer.⁶⁰ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(a) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁶⁰ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

15. Process P79, Stack S79 – 2 Screening Lines, One with 1 screening machine and 1 UV oven and One with 2 screening machines and 1 UV oven

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> The permittee may not use inks with a VOC content greater than 0.3 pounds per gallon as applied. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.15.a.(3)(c) to demonstrate compliance with I.B.15.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on P79: (i) A unique name of identification number for each ink and other VOC containing material, as applied; and (ii) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

16. Process P80, Stack S80 - Roll Coating Machine (and replacement coater) with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions may not exceed 0.15 lbs/mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the non-electric curing ovens. ⁵¹ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Volatile Organic Compounds	(a) <u>Latest Available Control Techniques:</u> The permittee may not use coatings with a VOC content greater than 0.5 pounds per gallon as applied. [s. NR 424.03(2)(c), Wis. Adm. Code]	(a) The permittee shall maintain the records required by I.B.16.b.(3)(c) to demonstrate compliance with I.B.16.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code] (b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code] (c) The permittee shall keep the following records for each ink and other VOC containing materials used on P80: (i) A unique name of identification number for each coating and other VOC containing material, as applied; and (ii) The VOC content of each coating and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.] (d) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]

⁵¹ Because the emission limitation in I.B.16.a.(1)(a) is less than the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

16. Process P80, Stack S80 - Roll Coating Machine (and replacement coater) with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the curing ovens. ⁵³ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	<p>(a) <u>Reference Test Method for Visible Emissions</u>: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site a statement indicating that natural gas and propane are the only fuels available for combustion at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁵³ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

17. Synthetic Minor Conditions Applicable to the Entire Facility

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p> <p><i>Continued on Next Page...</i></p>	<p>(a) Volatile organic compound emissions from the entire facility may not exceed 8.01 tons per month averaged over each 12 consecutive month period. [s. 285.65(7), Wis. Stats.]</p>	<p>(a) For each day the permittee shall calculate the total volatile organic compound emissions from the facility as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{daily}} = (1 \text{ ton}/2000 \text{ lbs}) \times [(U_1 \times W_1 \times C_1 \times G_1) + (U_2 \times W_2 \times C_2 \times G_2) + \dots + (U_n \times W_n \times C_n \times G_n) + (1 - O_{\text{eff}})(U_{\text{controlled}} \times W_{\text{controlled}} \times C_{\text{controlled}} \times G_{\text{controlled}})]$ <p>where: E_{daily} is the daily VOC emissions (tons/day); U is the daily usage of each ink, coating, solvent, or other VOC containing material used during the day (gallons/day); W is the density of each ink, coating, solvent, or other VOC containing material used during the day (pounds/gallon); C is the VOC content of each ink, coating, solvent, or other VOC containing material used during the day expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25); G is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content; n identifies each ink, coating, solvent or other VOC containing material used during the day;</p> <p>If the permittee wishes to take credit for VOCs controlled by the thermal oxidizer the following variables shall be included in the above equation: O_{eff} is the control efficiency of the thermal oxidizer as established during the most recent stack test that demonstrated compliance with VOC emission limitations; $U_{\text{controlled}}$ is the daily usage of each ink, coating, solvent, or other VOC containing material used on processes controlled by the thermal oxidizer (gallons/day); $W_{\text{controlled}}$ is the density of each ink, coating, solvent, or other VOC containing material used on processes controlled by the thermal oxidizer (pounds/gallons); $C_{\text{controlled}}$ is the VOC content of each ink, coating, solvent, or other VOC containing material used on processes controlled by the thermal oxidizer expressed as a weight fraction; and $G_{\text{controlled}}$ is a multiplier for VOC containing materials for which the VOC is emitted at other than 100 percent of its content.</p>	<p>(a) The permittee shall keep daily records of the following: (i) A unique name or identification number for each ink, coating, solvent, or other VOC containing material used at the facility; (ii) The VOC content, expressed as a weight fraction (C_n) of each ink, coating, solvent, or other VOC containing material used at the facility; (iii) The amount of each ink, coating, solvent, or other VOC containing material used in gallons per day (U_n); (iv) The density of each ink, coating, solvent, or other VOC containing material used in pounds per gallon (W_n); (v) The G multiplier factor for the VOC in the material (G_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor; and (vi) The total daily VOC emissions from the facility in tons per day (E_{daily}), as calculated in I.B.17.a.(2)(a). [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds - (Continued)</p>		<p>(b) For each calendar month the permittee shall calculate the total monthly VOC emissions as follows. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{monthly}} = \Sigma E_{\text{daily}} - \{(1 \text{ ton}/2000 \text{ lbs}) \times [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]\}$ <p>where: E_{monthly} is the monthly VOC emissions (tons/month) taking into account credit for the waste solvents that are collected and shipped off site for disposal; ΣE_{daily} is the sum of the daily VOC emissions calculated in I.B.17.a.(2)(a) totaled for the calendar month; S is the amount of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site (gallons/month); P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site in pounds per gallon; m identifies each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site.</p> <p>(c) To demonstrate compliance with condition I.B.17.a.(1)(a), the permittee shall calculate the total tons of volatile organic compound emissions from the facility, averaged over each 12 consecutive month period by dividing the total monthly volatile organic compound emissions as calculated in I.B.17.b.(2)(b) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(b) The permittee shall keep monthly records of: (i) The monthly sum of the daily VOC emissions as calculated in I.B.17.a.(2)(b), ($3E_{\text{daily}}$); (ii) The amount of spent ink, coating, solvent, or other VOC containing material recovered each month and shipped off site in gallons per month (S_m); (iii) The VOC content of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site in pounds per gallon (P_m); (iv) The total monthly VOC emissions from the facility in tons per month as calculated in I.B.17.a.(2)(b), (E_{monthly}); and (v) The total amount of VOC emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.17.a.(2)(c). [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(c) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content (C_n) and the density (W_n) of the of the inks, coatings, solvents or other VOC containing materials used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) The permittee shall analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content (P) no less than: (i) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (ii) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Hazardous Air Pollutants Regulated by the Clean Air Act</p> <p><i>Continued on Next Page...</i></p>	<p>(a) The permittee may not emit any single hazardous air pollutant regulated by the Clean Air Act at a rate greater than 0.83 tons per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p> <p>(b) The permittee may not emit a total of all hazardous air pollutants regulated by the Clean Air Act combined at a rate greater than 2.08 tons per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p>	<p>(a) For each day the permittee shall calculate the total facility emissions of <u>each hazardous air pollutant</u> regulated by the Clean Air Act as follows:⁶⁷</p> $E_x = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times H_1 \times F_1) + (U_2 \times W_2 \times H_2 \times F_2) + \dots + (U_n \times W_n \times H_n \times F_n)] + (1 - O_{\text{eff}})(U_{\text{controlled}} \times W_{\text{controlled}} \times H_{\text{controlled}} \times F_{\text{controlled}})\}$ <p>where:</p> <p>E_x is the daily emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/day);</p> <p>x identifies each HAP emitted from the facility</p> <p>U is the daily usage of each ink, coating, solvent, or other HAP containing material used during the day (gallons/day);</p> <p>W is the density of each ink, coating, solvent, or other HAP containing material used during the day (pounds/gallon);</p> <p>H is the HAP content of each ink, coating, solvent, or other HAP containing material used during the day expressed as a weight fraction (i.e. if a material is 25% HAP by weight H would be 0.25);</p> <p>F is a multiplier for HAP containing materials for which the HAP is emitted at other than 100% of its content. For those HAP containing materials for which the HAP is 100% emitted, F equals 1 and does not have to be specifically considered in the equation.;</p> <p>n identifies each ink, coating, solvent or other HAP containing material used during the day;</p>	<p>(a) The permittee shall keep daily records of the following:</p> <p>(i) A unique name or identification number for each ink, coating, solvent, or other HAP containing material used at the facility;</p> <p>(ii) The weight fraction of each HAP contained in the material (H_n) of each ink, coating, solvent, or other HAP containing material used at the facility;</p> <p>(iii) The F multiplier factor for the HAP in the material (F_n), including adequate documentation to show the derivation and appropriateness of the multiplier factor;</p> <p>(iv) The amount of each ink, coating, solvent, or other HAP containing material used in gallons per day (U_n);</p> <p>(v) The density of each ink, coating, solvent, or other HAP containing material used in pounds per gallon (W_n);</p> <p>(vi) The facility total daily emissions of each HAP in tons per day (E_x), as calculated in I.B.17.b.(2)(a); and</p> <p>(vii) The total daily HAP emissions from the facility in tons per day (E_{hap}), as calculated in I.B.17..b.(2)(d).</p> <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁶⁷ This calculation shall be performed for each hazardous air pollutant regulated by the Clean Air Act that is emitted from the facility.

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Hazardous Air Pollutants Regulated by the Clean Air Act - (Continued)</p> <p><i>Continued on Next Page...</i></p>		<p>If the permittee wishes to take credit for HAPs controlled by the thermal oxidizer the following variables shall be included in the above equation: O_{eff} is the control efficiency of the thermal oxidizer as established during the most recent stack test that demonstrated compliance with VOC emission limitations; $U_{controlled}$ is the daily usage of each ink, coating, solvent, or other HAP containing material used on processes controlled by the thermal oxidizer (gallons/day); $W_{controlled}$ is the density of each ink, coating, solvent, or other HAP containing material used on processes controlled by the thermal oxidizer (pounds/gallons); $H_{controlled}$ is the VOC content of each ink, coating, solvent, or other HAP containing material used on processes controlled by the thermal oxidizer expressed as a weight fraction; and $F_{controlled}$ is a multiplier for HAP containing materials for which the HAP is emitted at other than 100% of its content. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) For each calendar month the permittee shall calculate the total monthly as emissions of <u>each</u> hazardous air pollutant regulated by the Clean Air Act as follows. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_y = (\sum E_x)_i - \{(1 \text{ ton}/2000 \text{ lbs}) \times [(S_1 \times I_1) + (S_2 \times I_2) + \dots + (S_m \times I_m)]\}$ <p>where: E_y is the monthly emissions of each HAP (tons/month) taking into account credit for the waste solvents that are collected and shipped off site for disposal; $(\sum E_x)_i$ is the sum of the daily emissions of <u>each</u> HAP (i) calculated in I.B.17.b.(2)(a) totaled for the calendar month; S is the amount of each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site (gallons/month); I is the HAP content of each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site in pounds per gallon; m identifies each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site.</p>	<p>(b) The permittee shall keep monthly records of:</p> <ul style="list-style-type: none"> (i) The monthly sum of the daily emissions of each HAP regulated by the Clean Air Act as calculated in I.B.17.b.(2)(b), $(\sum E_x)_i$; (ii) The amount of spent ink, coating, solvent, or other HAP containing material recovered each month and shipped off site in gallons per month (S_m); (iii) The amount of each HAP contained in each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site in pounds per gallon (I_m); (iv) The total monthly emissions of each HAP in tons per month as calculated in I.B.17.b.(2)(b), (E_y); (v) The total amount of each HAP emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.17.b.(2)(c); (vi) The total monthly emissions of all HAPs combined in tons per month as calculated in I.B.17.b.(2)(e); and (vii) The total amount of all HAPs combined emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.17.b.(2)(f). <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Hazardous Air Pollutants Regulated by the Clean Air Act - (Continued)</p>		<p>(e) To demonstrate compliance with condition I.B.17.b.(1)(a), the permittee shall calculate the emissions of <u>each</u> hazardous air pollutant regulated by the Clean Air Act, averaged over each 12 consecutive month period by dividing the total monthly emissions of each hazardous air pollutant regulated by the Clean Air Act as calculated in I.B.17.b.(2)(b) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(d) Each day the permittee shall calculate the <u>total</u> emissions of hazardous air pollutants regulated by the Clean Air Act as follows:</p> $E_{hap} = \sum E_x$ <p>where: E_{hap} is the daily total emissions of all hazardous air pollutants regulated by the Clean Air Act that are emitted by the facility (tons/day); E_x is the daily emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/day) as calculated in I.B.17.b.(1)(a); x identifies each HAP emitted from the facility. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(e) For each calendar month the permittee shall total the daily emissions of <u>all</u> hazardous air pollutant regulated by the Clean Air Act combined by totaling the monthly emissions of each HAP (E_x) as calculated in I.B.17.b.(2)(b) to determine the monthly emissions in tons per month. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(f) To demonstrate compliance with condition I.B.17.b.(1)(b), the permittee shall calculate the total emissions of <u>all</u> hazardous air pollutants regulated by the Clean Air Act, averaged over each 12 consecutive month period by dividing the total monthly emissions of all hazardous air pollutants regulated by the Clean Air Act as calculated in I.B.17.b.(2)(e) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(c) The permittee shall use coating manufacturer's formulation data to determine the HAP content (H_n) of the of the inks, coatings, solvents or other HAP containing materials used. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) The permittee shall analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content (H) no less than: (i) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (ii) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>c. * Formaldehyde</p> <p><i>Continued on Next Page...</i></p>	<p>(a) * The permittee may not emit formaldehyde at a rate greater than 11.4 pounds per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p>	<p>(a) * Each month the permittee shall calculate the total facility emissions of formaldehyde as follows:</p> $E_{\text{form}} = [(V_1 \times W_1 \times F_1) + (V_2 \times W_2 \times F_2) + \dots + (V_n \times W_n \times F_n)] - [(R_1 \times G_1) + (R_2 \times G_2) + \dots + (R_m \times G_m)]$ <p>where: E_{form} is the monthly emissions of formaldehyde (pounds/month); V is the monthly usage of each ink, coating, solvent, and other material containing formaldehyde used during the month (gallons/month); W is the density of each ink, coating, solvent, or other material containing formaldehyde used during the month (pounds/gallon); F is the formaldehyde content of each ink, coating, solvent, or other material containing formaldehyde used during the month expressed as a weight fraction (i.e. if a material is 25% formaldehyde by weight F would be 0.25); n identifies each ink, coating, solvent or other material containing formaldehyde used during the month; R is the amount of each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site (gallons/month); G is the formaldehyde content of each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site in pounds per gallon; m identifies each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site during. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) *To demonstrate compliance with condition I.B.17.c.(1)(a), the permittee shall calculate the emissions of formaldehyde, averaged over each 12 consecutive month period by dividing the total monthly emissions of formaldehyde as calculated in I.B.17.c.(2)(a) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(a) *The permittee shall keep monthly records of the following:</p> <ul style="list-style-type: none"> (i) A unique name or identification number for each ink, coating, solvent, or other material containing formaldehyde used at the facility; (ii) The weight fraction of formaldehyde (F_n) of each ink, coating, solvent, or other material used at the facility; (iii) The amount of each ink, coating, solvent, or other material containing formaldehyde used in gallons per month (V_n); (iv) The density of each ink, coating, solvent, or other material containing formaldehyde used in pounds per gallon (W_n); (v) The amount of spent ink, coating, solvent, or other material containing formaldehyde recovered each month and shipped off site in gallons per month (R_m); (vi) The amount of each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site in pounds per gallon (G_m); (vii) The facility total monthly emissions of formaldehyde in pounds per month (E_{form}), as calculated in I.B.17.c.(2)(a); and (viii) The total amount of formaldehyde emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.17.c.(2)(b). <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

17. Synthetic Minor Conditions Applicable to the Entire Facility - Continued

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>c. * Formaldehyde - (Continued)</p>			<p>(b) *The permittee shall use coating manufacturer's formulation data to determine the formaldehyde (F_n) of the of the inks, coatings, solvents or other materials containing formaldehyde used at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(c) *The permittee shall analyze the spent ink, coating, solvent and other materials containing formaldehyde recovered and shipped off site to determine the HAP content (G) no less than: (i) each time there is a change to materials or process operations that may affect the waste stream; or (ii) annually, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) <u>Reference Test Method for Formaldehyde Emissions:</u> Whenever compliance emission testing is required, US EPA Method 0011 shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]</p>
<p>d. Nitrogen Oxides</p>	<p>(a) The permittee may not burn more than a total of 310,350 gallons of propane per month averaged over each 12 consecutive month period at the facility.⁶⁸ [s. 285.65(7), Wis. Adm. Code]</p>	<p>(a) To demonstrate compliance with condition I.B.17.d.(1)(a), the permittee shall calculate the total gallons of propane used at the facility, averaged over each 12 consecutive month period by dividing the total gallons of propane used during each consecutive 12 month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Nitrogen Oxide Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 7 shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code]</p> <p>(b) To demonstrate compliance status with condition I.B.17.d.(1)(a), the permittee shall keep monthly records of:</p> <p>(i) The total gallons of propane used at the facility;</p> <p>(ii) The gallons of propane used at the facility averaged over each 12 consecutive month period as calculated in condition I.B.17.d.(2)(a). [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁶⁸ The permittee elected the limitation in I.B.17.d.(1)(a) in their original operation permit to restrict the facility wide potential nitrogen oxide emissions to less than the major source threshold level of 100 tons per year so that the facility is considered a synthetic minor non-Part 70 source. Because a number of nitrogen oxide emissions units have been removed this limitation is no longer necessary to limit facility wide potential nitrogen oxide emissions to less than 100 tons per year, however removing this limitation would result in an increase in emissions that would require a construction permit and this limitation may be necessary to ensure the NAAQS for nitrogen oxide is attained and maintained. Please refer to the compliance plan in condition I.18.c.(1) for more information.

18. Conditions Applicable to the Entire Facility

CONDITION TYPE	(1) CONDITIONS
a. Reporting	<p>(a) Submit the results of monitoring or a summary of monitoring results required by this permit to the Department annually.</p> <p>(i) The time period to be addressed by the submittal are: January 1 to December 31.</p> <p>(ii) The report shall be submitted to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.</p> <p>(iii) All deviations from and violations of applicable requirements shall be clearly identified in the submittal.</p> <p>(iv) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(b), Wis. Adm. Code]</p> <p>(b) Submit a certification of compliance with the requirements of this permit to the Department annually.</p> <p>(i) The time period to be addressed by the report is the January 1 to December 31 period which precedes the report.</p> <p>(ii) The report shall be submitted to the Wisconsin Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.</p> <p>(iii) The information included in the report shall comply with the requirements of Part II Section N of this permit.</p> <p>(iv) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(c), Wis. Adm. Code]</p>
b. Compliance Testing	<p>(a) Whenever compliance emission tests are required by the Department:</p> <p>(i) Any compliance emission tests required by the Department shall be conducted while operating at 100% capacity. If operation at 100% capacity is not feasible, the sources shall operate at a capacity which is approved by the Department in writing.</p> <p>(ii) The reference test methods outlined in this permit shall be used unless an alternate, U.S. EPA approved, test method is approved by the Department in writing.</p> <p>(iii) The Department shall be informed at least 20 working days prior to any tests so a Department representative can witness the testing.</p> <p>(iv) At the time of notification, a compliance test plan shall also be submitted for approval.</p> <p>(v) Two copies of the report on any required tests shall be submitted to the Department for evaluation within 60 days after the tests. [s. NR 439.07, Wis. Adm. Code]</p>

Appendix A4.

**ANALYSIS, PRELIMINARY DETERMINATION AND DRAFT PERMIT FOR
THE RENEWAL OF OPERATION PERMIT NUMBER 642025010-F04
FOR
NORTHERN ENGRAVING CORP,
LOCATED AT
803 S BLACK RIVER ST,
SPARTA, MONROE COUNTY, WISCONSIN
ON THE OPERATION OF
AN EXISTING
DECORATED NAMEPLATE AND AUTOMOTIVE TRIM MANUFACTURING FACILITY**

This review was performed by the Wisconsin Department of Natural Resources in accordance with Sections 285.60 to 285.66, Wis. Stats. and Chapter NR 407, Wis. Adm. Code. This review is for a Synthetic Minor Non-Part 70 source located in an area which is designated attainment/unclassified for all criteria pollutants.

Air Pollution Control Operation Permit: 642025010-F10

Analysis, Preliminary Determination
and Draft Permit prepared by: Mary Oleson Date: 5/4/2007

Approval Element	Initials and Date
Preliminary Determination Document (including calculations)	<i>BKE 5/4/2007</i>
Applicable Requirement	<i>BKE 5/4/2007</i>
Compliance Documentation Methods (compliance inspector concurrence)	<i>MS 5/4/2007</i>
Compliance Plan and Schedule	<i>na</i>
Federal Enforceability of Permit Conditions (synthetic minor conditions)	<i>JEA 5/18/2007</i>

Approved for Public Review and Comment: /s/ Joseph E. Ancel Date: 5/18/2007

cc: AM/7 – OP or Appropriate Region/Service Center
Sparta Free Library, PO Box 347, Court & Main Street, Sparta, WI 54656-0347

INTRODUCTION

Sources which are not exempt from the operation permit requirements under Section 407.03, Wis. Adm. Code, that were issued an operation permit from the Department of Natural Resources, are required to obtain a renewed air pollution control operation permit. Sources subject to the requirements must submit a permit renewal application to the Department by the date set forth in Sections 285.66(3)(a), Wis. Stats., and NR 407.04(2), Wis. Adm. Code. The renewal application is then reviewed following the provisions set forth in Sections 285.62, 285.63 and 285.64, Wis. Stats., and Chapter NR 407, Wis. Adm. Code.

Subject sources are to be reviewed for their air pollution control technology and for their impact upon the air quality. This is to insure compliance with all applicable rules and statutory requirements. The review will show why the source(s) operation should be approved, conditionally approved, or disapproved. It will encompass emission calculations and air quality analysis using US EPA models, if applicable. Emissions from volatile organic compound (VOC) sources and small sources whose emissions are known to be insignificant are normally not modeled. As a precautionary note, the emission estimates may be based on US EPA emission factors (AP-42) or theoretical data and can vary from actual stack test data.

This review is based on information contained within the renewal application submitted for an air pollution control operation permit. A renewed operation permit may be issued if the criteria set forth in sections 285.63, 284.64 and 285.66, Wis. Stats., are met.

A final decision on the renewal will not be made until the public has had an opportunity to comment on the Department's analysis, preliminary determination and draft permit. The conditions proposed in the draft permit may be revised in any final permit issued based on comments received or further evaluation by the Department.

GENERAL APPLICATION INFORMATION

Owner/Operator: Northern Engraving Corp
PO Box 377
Sparta, WI 54656

Responsible Official: Mr. Bruce Corning, VP Management Systems
608-269-6911

Application Contact Person: Mary K Goodman, Air Quality Mgr
608-269-6911

Application Submitted By: Mary K Goodman, Air Quality Mgr
608-269-6911

Date of Administratively Complete Application: 1/1/2007

Dates of Submittal: Renewal Application: 12/11/2006, 4/9/2007, 4/13/2007, 4/27/2007, 4/30/2007

SOURCE DESCRIPTION

Northern Engraving Corporation manufactures decorative plastic and metal automotive trim and nameplates for the automotive and appliance industries. They operate a number of natural gas/propane boilers, roll coating lines, screen printing lines, lithographic printing lines, spray booths, aluminum sheet preparation, spin and punch presses, and resin mixing and press molding machines.

Note: All other air pollution sources at the facility are covered under the original operation permit (permit number 642025010-F01) and subsequent revisions (permit numbers 642025010-F02, 642025010-F03, and 642025010-F04) and details on the sources are included in the preliminary determination documents for those permits.

Changes Since Issuance of Original Operation Permit 632009730-F01: Since the original operation permit was issued to this facility the following permits were issued to the facility:

Construction permit 02-MEC-618/Significant Revision 642025010-F02 (integrated issuance) to cover modifications of P37/S37.

Construction permit 03-POY-016/Significant Revision 642025010-F03 (integrated issuance) to cover modifications of P32/S18 and construction of coating lines P75, P77 and P78 (process P77 and P78 were not installed).

Construction permit 05-MEC-206/Significant Revision 642025010-F04 (integrated issuance) to cover modifications of P32/S18 and a revision of P42/S42.

Construction permit exempt changes of P41/S41 and P42/S42 and installation of P80/S80 exempted by letter dated 4/30/2004.

Construction permit exempt installation of P79/S79, application submitted 3/3/2004.

Changes Identified in the Renewal Application: The permittee identified that all process lines remain the same as covered in the most recent operation permit 642025010-F04 with the following exceptions:

Process P77/S77: This process was covered by construction permit 03-POY-016 and was never installed. The permittee removed this process from their renewal application.

Process P78/S78: This process was covered by construction permit 03-POY-016 and was never installed. The permittee removed this process from their renewal application.

Process P32/S18: Emissions of two additional HAPs (HDI and ethylene glycol are new HAPs emitted from this process, but the MTEs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code.)

Process P33 and S19: Changes to stack parameters, material usage rates and HAP emissions to reflect that this process now consists of 1 spraybooth rather than the two spraybooths identified in the most recent operation permit. (Results in a decrease in VOC and HAP emissions. Carbon black and propylene glycol monomethyl ether are new HAPs emitted, but the MTEs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code.)

Process P37/S53: Changes to HAP emission rates. (Results in a decrease in emissions of existing HAPs. Ethylene glycol, HDI, isobutanol, methanol, propylene glycol monomethyl ether, and toluene are new HAPs emitted, but the MTEs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code.)

Process P41/S41: Changes to stack parameters and number of ovens used. (Does not change emission rates.)

Process P42/S42: Changes to HAP emissions rates. (Results in increases in MTEs for existing HAPs and emission of new HAPs ethylene glycol, formaldehyde, and isobutanol. The MTEs of all HAPs after taking these changes into consideration are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code.)

Process P43/S43: Changes to HAP emissions rates. (Does not results in increases in MTEs for existing HAPs. Ethylene glycol and formaldehyde are new HAPs emitted, but MTEs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code.)

Process P44/S44: Changes to HAP emissions rates. (Does not results in increases in MTEs for existing HAPs with the exception of a slight increase in 2-butoxyethanol. Isobutanol, naphthalene, and propylene monomethyl ether are new HAPs emitted. However, the MTEs of new and increased HAPs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code.)

Process P63/S63: Changes to the material usage and application rates and resulting VOC and HAP emission rates.

(Results in a decrease in VOC MTEs. Does not result in increases in MTEs for existing HAPs with the exception of slight increases in DIBK and glycol ethers. Methylene chloride, perchloroethylene, propylene glycol monomethyl ether, trimethyl benzene and 2,2,4-trimethyl pentane are new HAPs emitted. However, the MTEs of new and increased HAPs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code.)

Process P75/S75: Changes to HAP emission rates. (Does not result in increases in MTEs for existing HAPs with the exception of slight increases in 2-butoxyethanol, cyclohexanone, formaldehyde, and naphthalene. Ethylene glycol, glycol ethers, HDI, isobutanol, methanol, propylene glycol monomethyl ether, trimethyl benzene and xylene are new HAPs emitted. The MTEs of new and increased HAPs are less than the values listed in s. NR 406.04(2)(f), Wis. Adm. Code with the exception of formaldehyde. Potential formaldehyde emissions from the facility are currently limited to less than the s. NR 445.07, Wis. Adm. Code Table A value so the need for a construction permit is not triggered by the increase in formaldehyde MTEs.

Process P79/S79: Changes to the stack parameters, process description and VOC usage and emission rates. (VOC and HAP MTEs are below the values listed in ss. NR 406.04(2)(a) and (f), Wis. Adm. Code.)

Process P80/S80: This process was installed in 2004. An operation permit application for the process was submitted 4/23/2004 and the process was exempted from construction permit requirements in a letter from the Department dated 4/30/2004, pursuant to s. NR 406.04(2)(c), Wis. Adm. Code. This roll coater is a significant emissions unit and will be included in the renewed operation permit.

Facility Wide Formaldehyde Emission Limitation: The permittee has elected to limit facility wide potential formaldehyde emissions to less than the Table A Value for stacks less than 25 feet (i.e. 137 pounds per year). This more restrictive emission limitation would be included in any renewed operation permit issued by the Department. In permit 642025010-F04 all formaldehyde emitted by the facility was emitted from stacks that were 25 feet to less than 40 feet in height so potential formaldehyde emissions were limited to less than the Table A value for this stack height range (i.e. 562 pounds per year). With changes in material formulations submitted with the renewal application, formaldehyde is now also emitted from stacks that are less than 25 feet tall so the permittee has elected to limit facility wide formaldehyde emissions to less than 137 pounds per year.

These changes will be incorporated into any renewed operation permit issued by the Department. (Note: The information above explains why these changes are exempt from construction permit requirements.)

Additionally the permittee requested language changes to the following permit conditions:

I.A.3.c.(1): The permittee requested a change to the compliance demonstration method language so they are required to retain a statement on site indicating that natural gas and propane are the only fuels available for combustion at the facility.

I.A.1.b.(1): The permittee requested changes to this compliance demonstration methods to factor in VOCs that are not 100 percent emitted in to equations for calculating VOC emissions.

These requested changes will be incorporated into any renewed operation permit issued by the Department.

Special Note: The permittee entered into a Cooperative Environmental Agreement with the Department (incorporated into operation permit 642025010-F01 on June 10, 2002) that limits the VOC emissions from the facility to 85 tons in any 12 consecutive months, limits emissions of each HAP regulated by the Clean Air Act to 8 tons in any 12 consecutive months, and limits emissions of all HAPs regulated by the Clean Air Act combined to 20 tons in any 12 consecutive months. These conditions were carried over into revised operation permits 642025010-F02, 642025010-F03 and 642025010-F04. These conditions will also be carried over into this permit renewal. For details on how the Cooperative Environmental Agreement is incorporated into the operation permits issued to Northern Engraving's Sparta facility and for details on the specific variances granted by the Department under this Agreement please refer to the Preliminary Determination for operation permit number 642025010-F01.

At the same time this operation permit is being renewed, the Department is also processing a renewal request for the Cooperative Environmental Agreement. Northern Engraving has requested several changes, of which the following will be reflected in the renewed operation permit:

Six Month Reports of Actual Facility Wide VOC and HAP Emissions: The original Agreement and associated Air Pollution Control Operation Permits require Northern Engraving to submit reports of their actual VOC and

HAP emissions to both US EPA and DNR every six months. (Permit condition I.A.6.c. for Holmen and permit condition I.A.8.c. for Sparta.) Under this reporting requirement, if the actual facility wide emissions of VOC or HAPs have exceeded 50 percent of the allowable emission limitations (i.e. Allowable limitation for VOC is 85 tons per year, allowable limitation for each CAA HAP is 8 tons per year, and allowable limitation for all CAA HAPs combined is 20 tons per year) then Northern Engraving is required to provide an explanation of why emissions reached the levels they did and how they intend to ensure emissions will not exceed the allowable emission limitations.

The US EPA required that this reporting requirement be included in the original Agreement and associated Air Pollution Control Operation Permits as a condition of allowing Northern Engraving to forgo daily record keeping of actual VOC and HAP emissions. At the time of issuance of the original Agreement and associated Air Pollution Control Operation Permits, it was US EPA's policy to require daily record keeping of actual emissions, if VOC and HAP emission limitations appeared in the permit as long term (i.e. monthly or 12 month average) emission limitations rather than usage or material content limitations.

Since the issuance of the original Agreement and associated Air Pollution Control Operation Permits, US EPA has changed their policy on the requirement of daily records when VOC and/or HAP emission limitations appear in the permit as long term emission limitations. The US EPA now allows the use of what they call the "Formula Based Approach" which allows record keeping on a time frame consistent with longer term VOC or HAP emission limitations provided a formula specifying how the permittee will calculate actual emissions is specifically included in the permit.

DNR staff discussed this issue with Constantine Blatheras of the US EPA and he concurred that the requirement to report actual VOC and HAP emissions every 6 months could be removed from the Agreement and associated Air Pollution Control Operation Permits, as the permits meet US EPA's requirements for the Formula Based Approach by specifying how Northern Engraving is required to calculate their actual VOC and HAP emissions. Accordingly, the 6 month reporting requirements will be dropped from the renewed Agreement and renewed Air Pollution Control Operation Permits.

The following is the permit condition from the current Air Pollution Control Operation Permits that will be omitted from the renewed permits:

- “c. Report actual facility wide volatile organic compound and hazardous air pollutant emissions as follows:
- (1) The permittee shall submit a report summarizing the actual, facility wide volatile organic compound and hazardous air pollutant emissions for each consecutive 12 month period as calculated in conditions I.A.1.b.(2) and I.A.2.b.(2) and (4), every 6 months.
 - (2) The period addressed by the report shall be the 6 month period starting on the date the Cooperative Agreement is signed or other date agreed upon and approved by DNR, U.S. EPA and the permittee, and each subsequent 6 month period thereafter.
 - (3) A copy of the report shall be submitted to the DNR (Marty Sellers, Air Management Engineer, Department of Natural Resources, 3550 Mormon Coulee Road, La Crosse, WI 54601) and the U.S. EPA (Steve Rothblatt, Branch Chief, Air Program Branch, U.S. EPA, 77 W. Jackson Blvd., Mailcode: AR-18J, Chicago, IL 60604) within twenty days following the end of the reporting period.
 - (4) If the report shows the actual facility wide volatile organic compound or hazardous air pollutant emissions have exceeded 50 percent of the allowable limitations outlined in conditions I.A.1.a and I.A.2.a.(1) and (2), the permittee shall provide an explanation why emissions reached the levels that they did and how they intend to ensure emissions will not exceed the allowable limitations outlined in conditions I.A.1.a. and I.A.2.a.(1) and (2).
- [s. NR 439.03(1)(a), Wis. Adm. Code]”

Northern Engraving has also requested the following change as part of the Agreement Renewal. This change will appear in the renewed Agreement, but will not appear in the renewed operation permit:

Time Allowed for Construction and Initial Operation under Future Construction Permits: In most cases when the DNR issues an Air Pollution Control Construction Permit for a new or modified process under ch. NR 406, Wis. Adm. Code, a facility is given an initial 18 month period to commence construction or modification with the option of extending the construction permit to allow an additional 18 months to commence construction or modification. If construction or modification is not started within this time period (a total of 36 months), the construction permit will expire and the facility would be required to reapply and obtain a new Air Pollution Control Construction Permit to cover the proposed project. Northern Engraving requested as part of the

renewal of the Agreement, to be allowed longer periods of time to commence construction and/or modification of proposed projects requiring a permit under ch. NR 406, Wis. Adm. Code. In reviewing the DNR’s procedures on this matter it was found that the Department does allow longer periods of time to commence construction and/or modification in the case of large, phased projects. Because longer periods of time are allowed in other cases, the Department will allow Northern Engraving to request periods for commencing construction and/or modification that are longer than 18 months on a case-by-case basis when they submit construction permit applications. Northern Engraving should specify the length of time they are requesting to commence construction and/or modification in any construction permit applications submitted in the future if they would like more than 18 months. The DNR would then allow the longer time period for commencing construction and/or modification under the Air Pollution Control Construction Permit issued for the project provided this does not extend beyond 42 months. Northern Engraving would still be allowed to request an 18 month extension of the construction permit if necessary. Note that the Department does not have the authority to approve construction permit extensions longer than 18 months.

Significant Emissions Units:

1. Process B02 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	B02
Unit description:	FACILITY WIDE SPACE HEATING
Control technology status:	Uncontrolled
Maximum continuous rating (mmBTU/hr):	37.1 mmBtu/hr
Date of construction or last modification:	1994
Construction Permit Requirements:	Because the space heaters fire gaseous fuels and because the maximum heat input rating of each space heater is less than 25.0 mmBtus per hour, they are exempt from construction permit requirements pursuant to s. NR 406.04(1)(a)5., Wis. Adm. Code.

Process B02 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gal	
Maximum Sulfur Content (weight %):	0	0.01	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	0.038 cf6	400 gal	

Stack S02 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S02	Exhaust flow rate, normal (ACFM):	30000
Exhausting Unit(s):	B02	Exhaust gas temperature, normal (°F):	70
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Horizontal
Discharge height above ground level (ft):	25 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	4 ft. x 4.5 ft.		

2. Process B22 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	B22
Unit description:	Clever Brooks Boiler
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	8.4 mmBtu/hr
Date of construction or last modification:	1961
Construction Permit Requirements:	This boiler was covered by permit EOP-10-KJC-83-42-077 issued on September 7, 1984

Process B22 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gal	
Maximum Sulfur Content (weight %):	0	0.01	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	8400 cf	91.3 gals	

Stack S12 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S12	Exhaust flow rate, normal (ACFM):	8000
Exhausting Unit(s):	B22	Exhaust gas temperature, normal (°F):	340
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	27 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.3 ft.		

3. Process B23 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	B23
Unit description:	Industrial Kewanee Boiler
Control technology status:	Uncontrolled
Maximum continuous rating (mmBTU/hr):	10.6 mmBtu/hr
Date of construction or last modification:	1971
Construction Permit Requirements:	This boiler was originally covered by EOP-10-KJC-83-42-077 issued on September 7, 1984.

Process B23 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gal	
Maximum Sulfur Content (weight %):	0	0.01	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	10600 cf	115 gals	

Stack S13 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S13	Exhaust flow rate, normal (ACFM):	10000
Exhausting Unit(s):	B23	Exhaust gas temperature, normal (°F):	340
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	28 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.3 ft.		

4. Process B24 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	B24
Unit description:	Industrial Kewanee Boiler
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	10.6
Date of construction or last modification:	1971
Construction Permit Requirements:	This boiler was originally covered by EOP-10-KJC-83-42-077 issued on September 7, 1984.

Process B24 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gal	
Maximum Sulfur Content (weight %):	0	0.01	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	10600 cf	115 gals	

Stack S14 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S14	Exhaust flow rate, normal (ACFM):	10000
Exhausting Unit(s):	B24	Exhaust gas temperature, normal (°F):	340

Stack S14 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	up
Discharge height above ground level (ft):	28 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.3 ft.		

5. Process B25 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	B25
Unit description:	Industrial Clever Brooks Boiler
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	6.3 mmBtu/hr
Date of construction or last modification:	1961
Construction Permit Requirements:	This boiler was originally covered by EOP-10-KJC-83-42-077 issued on September 7, 1984.

Process B25 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gal	
Maximum Sulfur Content (weight %):	0	0.01	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	6300 cf	68 gals	

Stack S15 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S15	Exhaust flow rate, normal (ACFM):	10000
Exhausting Unit(s):	B25	Exhaust gas temperature, normal (°F):	340
This stack has an actual exhaust point:	Yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	28 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.3 ft.		

6. Process P03 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P03
Unit description:	5 Lithographic Lines with UV Curing
Control technology status:	Uncontrolled

6. Process P03 – Emission Unit Information.

Process Parameter	Description
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	1995
Construction Permit Requirements:	These emissions units are not subject to construction permit requirements because the maximum theoretical emissions are less than 5.7 pounds per hour, pursuant to s. NR 406.04(2), Wis. Adm. Code.

Process P03 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Not applicable		

Stack S03 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S03	Exhaust flow rate, normal (ACFM):	4000
Exhausting Unit(s):	P03	Exhaust gas temperature, normal (°F):	200
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	23 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	2.5 ft.		

7. Process P32 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P32
Unit description:	4 roll coating machines and 3 natural gas/propane curing ovens rated at 5 mmBtu/hr, 6 mmBtu/hr, and 5.25 mmBtu/hr (Only 3 coaters can be operated at a time).
Control technology status:	Controlled by thermal oxidizer C18
Maximum continuous rating (mmBTU/hr):	16.25 mmBtu/hr
Date of construction or last modification:	P32-1S installed 1984, P32-10S installed 1989, P32-87S installed 1993. Modified 2003 and 2005.
Construction Permit Requirements:	The roll coating lines were originally covered by permit 92-POY-157 issued April 2, 1993 and permit 91-POY-088 issued on October 22, 1991. Modifications covered by 03-POY-016/642025010-F03 and 05-MEC-206/642025010-F04.

Process P32 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gal	

Process P32 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Maximum Sulfur Content (weight %):	0	0.01	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	16250 cf	176.6	

Stack S18 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S18	Exhaust flow rate, normal (ACFM):	14400
Exhausting Unit(s):	P32	Exhaust gas temperature, normal (°F):	350
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	26 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	5.2 ft.		

Control Device Information.

Properties	Description
Control Device Number:	C18
Unit Description:	Thermal Oxidizer controlling P32, P33, P57, P75, P78
Volatile Organic Compound Control Efficiency	95%
{Cooperative Environmental Agreement allows operation of P32 without control device C18. This is allowed provide the Cooperative Agreement remains in affect.}	

8. Process P33 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P33
Unit description:	1 Metal spraybooth with a 0.4 mmBtu per hour natural gas/propane curing oven. (P-33-18S-2B)
Control technology status:	Controlled by paper paint filters (C19) and Thermal Oxidizer (C18)
Maximum continuous rating (mmBTU/hr):	0.4 mmBtu/hr
Date of construction or last modification:	1993
Construction Permit Requirements:	This process was originally covered by permits 91-POY-088 issued on October 22, 1991 and 92-POY-157 issued on April 2, 1993.

Process P33 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gal	
Maximum Sulfur Content (weight %):	0	0.01	

Process P33 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	400 cf	4.3 gals	

Stack S19 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S19	Exhaust flow rate, normal (ACFM):	2700
Exhausting Unit(s):	P33	Exhaust gas temperature, normal (°F):	100
This stack has an actual exhaust point:	Yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	26 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.5 ft.		

Control Device Information.

Properties	Description
Control Device Number:	C18
Unit Description:	Thermal Oxidizer controlling P32, P33, P57, P75, P78
Volatile Organic Compound Control Efficiency	95%
{Cooperative Environmental Agreement allows operation of P32 without control device C18. This is allowed provide the Cooperative Agreement remains in affect.}	

Control Device Information.

Properties	Description
Control Device Number:	C19
Unit Description:	paper paint filters
Particulate matter emissions control efficiency	95%

9. Process P37 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P37
Unit description:	3 Screening lines each with a natural gas/propane curing oven (P-37-12S, P-43-SOS, P171-SOS)
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	8.5 mmBtu/hr
Date of construction or last modification:	2002
Construction Permit Requirements:	This process was originally covered by permits 92-POY-068, EOP-10-KJC-83-42-077A, and EOP-10-KJC-83-42-077. Modifications to the process were covered by 02-MEC-618/642025010-F02.

Process P37 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gals	
Maximum Sulfur Content (weight %):	0	0.01	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	8500 cf6	92.3 gals	

Stack S53 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S53	Exhaust flow rate, normal (ACFM):	10000
Exhausting Unit(s):	P37	Exhaust gas temperature, normal (°F):	270
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	23 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	2.6 ft.		

10. Process P41 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P41
Unit description:	2 Lithographic presses with 2 UV ovens
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	2001
Construction Permit Requirements:	These emissions units are not subject to construction permit requirements because the maximum theoretical VOC emissions are less than 5.7 pounds per hour, pursuant to s. NR 406.04(2), Wis. Adm. Code.

Process P41 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Not applicable		

Stack S41 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S41	Exhaust flow rate, normal (ACFM):	2500
Exhausting Unit(s):	P41	Exhaust gas temperature, normal (°F):	300
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	20 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	2.1 ft.	(equiv diameter of 7 stacks)	

11. Process P42 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number	P42
Unit description:	Two Roll Coaters with one Electric Drying Oven and 3 small electric ovens. Utilized for R&D activities.
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	2001
Construction Permit Requirements:	Because this process will not emit greater than 1666 pounds of volatile organic compounds per month it is exempt from construction permit requirements pursuant to s. NR 406.04(1)(g), Wis. Adm. Code.

Process P42 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Not applicable		

Stack S42 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S42	Exhaust flow rate, normal (ACFM):	5000
Exhausting Unit(s):	P42	Exhaust gas temperature, normal (°F):	300
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	25 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.4 ft.	(equiv. dia of 8 stacks)	

12. Process P43 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P43
Unit description:	One screening machine and 3 small screening machines with one electric oven.
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	2001
Construction Permit Requirements:	These emissions units are not subject to construction permit requirements because the maximum theoretical VOC emissions are less than 5.7 pounds per hour, pursuant to s. NR 406.04(2), Wis. Adm. Code.

Process P43 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Not applicable		

Stack S43 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S43	Exhaust flow rate, normal (ACFM):	1500
Exhausting Unit(s):	P43	Exhaust gas temperature, normal (°F):	300
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	20 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.9 ft.	(Equiv dia of 2 stacks)	

13. Process P44 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P44
Unit description:	Spraybooth utilized for R&D Activities
Control technology status:	Paint Overspray Filters C44
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	01/01/1991
Construction Permit Requirements:	This emissions unit is not subject to construction permit requirements because the maximum theoretical VOC emissions are less than 5.7 pounds per hour and the maximum theoretical PM emissions are less than 5.7 pounds per hour, pursuant to s. NR 406.04(2), Wis. Adm. Code.

Process P44 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Not applicable		

Stack S44 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S44	Exhaust flow rate, normal (ACFM):	2000
Exhausting Unit(s):	P44	Exhaust gas temperature, normal (°F):	70
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	20 ft.	Stack equipped with any obstruction:	No
Inside dimensions at outlet (ft):	1.5 ft.		

Control Device Information.

Properties	Description

Control Device Information.

Properties	Description
Control Device Number:	C44
Unit Description:	Paint Overspray Filters
Particulate matter emission control efficiency	90.0 %

14. Process P57 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P57
Unit description:	Plastic Spraybooth (this booth uses the same curing oven used for P33) (P-58-PBS)
Control technology status:	Paint Overspray Filters C57
Maximum continuous rating (mmBTU/hr):	(See curing oven for P33)
Date of construction or last modification:	1989
Construction Permit Requirements:	This unit is covered by permit 642025010-N01 issued on March 2, 1989.

Process P57 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	(See P33)		

Stack S57 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S57	Exhaust flow rate, normal (ACFM):	6000
Exhausting Unit(s):	P57	Exhaust gas temperature, normal (°F):	70
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	26 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	2 ft.		

Control Device Information.

Properties	Description
Control Device Number:	C57
Unit Description:	paper paint filters
Particulate matter emissions control efficiency	95.0%

15. Process P63 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P63
Unit description:	Miscellaneous Facility Wide Cleanup
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	1994
Construction Permit Requirements:	Clean-up activities were included in the construction permits issued for each process.

Process P63 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Not applicable		

Stack S63 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S63	Exhaust flow rate, normal (ACFM):	
Exhausting Unit(s):	P63	Exhaust gas temperature, normal (°F):	
This stack has an actual exhaust point:	No	Exhaust gas discharge direction:	

16. Process P72 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P72
Unit description:	Towel Dryer
Control technology status:	Uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	1991
Construction Permit Requirements:	This unit was covered by permit 90-IRS-135 issued on January 25, 1991.

Process P72 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Not applicable		

Stack S72 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S72	Exhaust flow rate, normal (ACFM):	200
Exhausting Unit(s):	P72	Exhaust gas temperature, normal (°F):	70

Stack S72 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	25 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	0.7 ft.		

17. Process P75 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P75
Unit description:	Roll Coating Machine with 1.6 mmBtu/hr NG/Propane oven
Control technology status:	Controlled by Thermal Oxidizer C18
Maximum continuous rating (mmBTU/hr):	1.6 mmBtu/hr
Date of construction or last modification:	2003
Construction Permit Requirements:	This process was covered by construction permit 03-POY-016.

Process P75 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gal	
Maximum Sulfur Content (weight %):	0	0.01	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	1600 cf	17.3 gals	

Stack S75 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S75	Exhaust flow rate, normal (ACFM):	7000
Exhausting Unit(s):	P75	Exhaust gas temperature, normal (°F):	70
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	26 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.0 ft.		

Control Device Information.

Properties	Description
Control Device Number:	C18
Unit Description:	Thermal Oxidizer controlling P32, P33, P57, P75, P78
Volatile Organic Compound Control Efficiency	95%
{Cooperative Environmental Agreement allows operation of P32 without control device C18. This is allowed provide the Cooperative Agreement remains in affect.}	

18. Process P79 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P79
Unit description:	2 Screening Lines - One with 1 screening machine and UV oven and one with 2 screening machines and UV oven
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	Not applicable
Date of construction or last modification:	2004
Construction Permit Requirements:	Exempt from construction permit requirements because maximum theoretical VOC emissions are less than 5.7 pounds per hour, pursuant to s. NR 406.04(2), Wis. Adm.Code.

Process P79 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Not applicable		

Stack S79 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S79	Exhaust flow rate, normal (ACFM):	3000
Exhausting Unit(s):	P79	Exhaust gas temperature, normal (°F):	300
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	25 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	2.1 ft.		

19. Process P80 – Emission Unit Information.

Process Parameter	Description
Process/boiler/furnace/ number:	P80
Unit description:	Roll Coating Machine (w/replacement) with NG/LPG oven
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	1.6 mmBtu/hr
Date of construction or last modification:	2004
Construction Permit Requirements:	This process is exempt from construction permit requirements because the maximum theoretical VOC emissions are less than 5.7 pounds per hour, pursuant to s. NR 406.04(2), Wis. Adm. Code.

Process P80 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2

Process P80 – Process Fuel Information.

Fuel Parameter	Primary Fuel	Backup Fuel #1	Backup Fuel #2
Fuel Name:	Natural gas	Propane	
Higher Heating Value:	1000 mmBtu/cf6	92,000 Btu/gal	
Maximum Sulfur Content (weight %):	0	0.01	
Maximum Ash Content (weight %):	0	0	
Maximum hourly consumption:	1.6 mmBtu/hr	1.6 mmBtu/hr	

Stack S80 – Stack Information.

Stack Parameter	Description	Stack Parameter	Description
Stack Identification Number:	S80	Exhaust flow rate, normal (ACFM):	3000
Exhausting Unit(s):	P80	Exhaust gas temperature, normal (°F):	150
This stack has an actual exhaust point:	yes	Exhaust gas discharge direction:	Up
Discharge height above ground level (ft):	26 ft.	Stack equipped with any obstruction:	no
Inside dimensions at outlet (ft):	1.5 ft.		

Stack Parameter Summary:

Stack ID	Actual Exhaust Point or Fugitive	Circular or Rectangular	Discharge Direction	Exhaust Obstacle	Diameter or Width (if rect.)	Length (if rect.)	Height	Temp.	Normal Flow Rate	Maximum Flow Rate
			U, D, H	True/False	ft (m)	ft (m)	ft (m)	°F	ACFM	ACFM
S02	Area source (equivalent stack info. provided)	Rectangular	H	F	4 ft.	4.5 ft.	25 ft.	70	30000	30000
S03	Actual	Circular	U	F	2.5 ft.		23 ft.	200	4000	4000
S12	Actual	Circular	U	F	1.3 ft.		27 ft.	340	8000	8000
S13	Actual	Circular	U	F	1.3 ft.		28 ft.	340	10000	10000
S14	Actual	Circular	U	F	1.3 ft.		28 ft.	340	10000	10000
S15	Actual	Circular	U	F	1.3 ft.		28 ft.	340	10000	10000
S18	Actual	Circular	U	F	5.2 ft.		26 ft.	350	14400	14400
S19	Actual	Circular	U	F	1.5 ft.		26 ft.	100	2700	2700
S41	Actual	Circular	U	F	2.1 ft.		20 ft.	300	2500	2500
S42	Actual	Circular	U	F	1.4 ft.		25 ft.	300	5000	5000
S43	Actual	Circular	U	F	1.9 ft.		20 ft.	300	1500	1500
S44	Actual	Circular	U	F	1.5 ft.		20 ft.	70	2000	2000
S53	Actual	Circular	U	F	1.5 ft.		23 ft.	270	10000	10000
S57	Actual	Circular	U	F	2.0 ft.		26 ft.	70	6000	7500
S63	Indoor fugitive									
S72	Actual	Circular	U	F	0.7 ft.		25 ft.	70	200	200
S75	Actual	Circular	U	F	1.0 ft.		26 ft.	70	7000	7000
S79	Actual	Circular	U	F	2.1 ft.		25 ft.	300	3000	3000
S80	Actual	Circular	U	F	1.5 ft.		26 ft.	150	3000	3000

Insignificant Emissions Units:

Boiler, Turbine, and HVAC System Maintenance.
 Convenience Water Heating.
 Demineralization and Oxygen Scavenging of Water for Boilers.
 Fire Control Equipment.
 Internal Combustion Engines Used for Warehousing and Material Transport.
 Janitorial Activities.
 Maintenance of Grounds, Equipment, and Buildings (lawn care, painting, etc.).
 Office Activities.
 Pollution Control Equipment Maintenance.
 Sanitary Sewer and Plumbing Venting.
 Carpentry shop, Diamond cutting, powder coat
 Adhesive application
 Norlens
 Paint Lab, reactor, ink mill
 Screenmaking
 Injection molding, water quality lab
 Litho lab
 Sheet Prep
 Art Dept.
 Tool Room
 Distillation
 Underground storage tanks
 Punch Presses

APPLICABLE REQUIREMENTS AND EMISSION CALCULATIONS

The applicable requirements and emission calculations for the following emissions units were reviewed under the preliminary determinations for operation permits 642025010-F01, 642025010-F02, 642025010-F03 and 642025010-F04 and under the preliminary determinations for construction permits 02-MEC-618, 03-POY-016, 04-MEC-109 and remain unchanged as a result of this renewal:

- Stack S02, Boiler B02 - Natural Gas/Propane Space Heaters with a Total Rating of 37.1 mmBtu/hr - Installed 1994**
- Stack S12, Boiler B22 - Natural Gas/Propane Boiler Rated at 8.4 mmBtu/hr - Installed 1961**
- Stack S13, Boiler B23 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**
- Stack S14, Boiler B24 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**
- Stack S15, Boiler B25 - Natural Gas/Propane Boiler Rated at 6.3 mmBtu/hr - Installed 1961**
- Stack S03, Process P03 - 5 Lithographic Lines with UV Curing - Installed 1988**
- Stack S18, Process P32 - 4 Roll Coating Machines, and 3 Natural Gas/Propane Curing Oven rated at 5 mmBtus/hr, 6 mmBtus/hr, and 5.25 mmBtus/hr - Controlled by Thermal Oxidizer C18 (P32-1S Installed 1984; P32-10S Installed 1989; P32-87S Installed 1993) (Only 3 can be operated at a time.) - Modified 2003 and 2005.**
- Stack S19, Process P33 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (P-33-18S-2B) - Installed 1993**
- Stack S53, Process P37 - 3 Screening Lines each with a Natural Gas/Propane Curing - (P-37-12S; P-43-SOS; P171-SOS)**
- Stack S41, Process P41 - Two Litho Pressess with Two UV Ovens - Installed 2001**
- Stack S43, Process P43 - One Screening Machine and Three Small Screening Machines with One Electric Drying Oven - Installed 2001**
- Stack S42, Process P42 - Two Roll Coaters with Four Electric Drying Ovens - Utilized for R&D Activities - Installed 2001**
- Stack S44, Process P44 - Spraybooth - Utilized for R&D Activities - Installed 2001**

Stack S57, Process P57 - Plastic Spray Booth with (this booth uses same curing oven used for P33) - (P-58-PBS)

Stack S63, Process P63 - Miscellaneous Facility Wide Cleanup

Stack S72, Process P72 - Towel Dryer - Installed 1991

Stack S75, Process P75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven - Installed 2003

Please refer to the preliminary determinations for permits 642025010-F01, 02-MEC-618/642025010-F02, 03-POY-016/642025010-F03 and 05-MEC-206/642025010-F04 for a detailed description of the applicable requirements and emission calculations for these emissions units.

The following are the applicable requirements and emission calculations for emissions units that are either new or changed as a result of this renewal:

Stack S79, Process P79 - Two Screening Lines, One with 1 Screening Machine and 1 UV Oven, One with 2 Screening Machines and 1 UV Oven: Maximum theoretical emissions were calculated using worst case material usage rates, volatile organic compound contents and hazardous air pollutant contents. The printing lines are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques or operating practices demonstrating best current technology. The permittee submitted information dated 4/9/2007 showing 85 percent control of volatile organic compound emissions is technologically infeasible. The Department determined LACT to be the use of inks with a VOC content no greater than of 0.3 pounds per gallon as applied.

Stack S80, Process P80 - Roll Coating Machine (and replacement coater) with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven: Maximum theoretical emissions were calculated using worst case usage rates, volatile organic compound contents and hazardous air pollutant contents. Because the roll coater was installed or last modified after April 1, 1972 and particulate matter emissions are created from fuel combustion in the oven, the coater is subject to s. NR 415.06(2)(a), Wis. Adm. Code which limits particulate matter emissions to not more than 0.15 pounds per mmBtu of heat input. Because the coater was constructed or last modified after April 1, 1972, it is subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

Because this process coats plastic substrates and metal substrates with adhesives, it is exempt from the RACT requirements for miscellaneous metal parts and products, pursuant to s. NR 422.15(1)(e), Wis. Adm. Code. Because the maximum theoretical VOC emissions from the process are greater than 15 pounds per day, P80 would not be exempt from the requirements of s. NR 424.03(2), Wis. Adm. Code, pursuant to s. NR 424.03(1)(a)4., Wis. Adm. Code. Therefore P80 is subject to s. NR 424.03(2)(b), Wis. Adm. Code which requires control of VOCs by at least 85 percent. The facility submitted information (dated April 23, 2004) to demonstrate that 85 percent control of VOCs is technologically infeasible, therefore the roll coater is subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. The Department has determined that LACT for this process is the use of coatings with a VOC content that does not exceed 0.5 pounds per gallon as applied. These requirements would be included in any operation permit issued by the Department.

The coater is subject to the general emission limitations for sulfur dioxide, carbon monoxide and nitrogen oxides contained in ss. NR 417.03, NR 426.03, and NR 428.03, Wis. Adm. Code, respectively. These general limitations would be included in Part II of any operation permit issued by the Department.

Chapter NR 445, Wis. Adm. Code – Hazardous Air Pollutant Analysis: Maximum theoretical emissions of all non-exempt hazardous pollutants regulated by ch. NR 445, Wis. Adm. Code are below the corresponding Table A Values with the exception of 2-butoxyethanol, cyclohexanone, formaldehyde, isophorone, methylene bis 4-cyclohexylisocyanate, and naphthalene (note that all stacks are within 10 degrees of vertical and are unobstructed). See the facility emission table below for a summary of hazardous air pollutant emissions from the facility. The permittee has elected to limit facility wide potential formaldehyde emissions to less than the Table A Value for stacks less than 25 feet (i.e. 137 pounds per year). This more restrictive emission limitation would be included in any renewed operation permit issued by the Department. [Note: In permit 642025010-F04 all formaldehyde emitted by the facility was emitted from stacks that were 25 feet to less than 40 feet in height so potential formaldehyde emissions were limited to less than the Table A value for this stack height range (i.e. 562 pounds per

year). With changes in material formulations submitted with the renewal application, formaldehyde is now also emitted from stacks that are less than 25 feet tall so the permittee has elected to limit facility wide formaldehyde emissions to less than 137 pounds per year.] A dispersion modeling analysis performed by John Roth indicates the facility impact of 2-butoxyethanol, cyclohexanone, isophorone, methylene bis 4-cyclohexylisocyanate, and naphthalene should be less than their respective acceptable ambient concentration. See the Air Quality Review section for more details. [Note: For the original operation permit review and subsequent revisions, hazardous air pollutant emissions were compared to the values in Tables 1 through 5 of Subchapter II of chapter NR 445, Wis. Adm. Code. For this operation permit renewal, hazardous air pollutant emissions were compared to the revised values in Table A of Subchapter III of chapter NR 445, Wis. Adm. Code. Any renewed operation permit issued by the Department would ensure compliance with Subchapter III of chapter NR 445, Wis. Adm. Code.]

Compliance Assurance Monitoring (CAM) Applicability: Because this facility is a synthetic minor, non-Part 70 source it is not subject to Compliance Assurance Monitoring (CAM) requirements.

AIR QUALITY REVIEW

An air quality modeling analysis was conducted by John Roth of the Bureau of Air Management. The results of this analysis are summarized below and in a memo dated May 3, 2007:

A. INTRODUCTION

This dispersion analysis for a Title V operation permit compares model results to National Ambient Air Quality Standards (NAAQS) for the 5 criteria pollutants and several HAPs. The facility is located at 803 S Black River St, Sparta, Monroe County, Wisconsin. PSD baselines for PM HAVE been set for Monroe County

B. MODELING ANALYSIS

- ◆ Mary Oleson supplied the emission parameters used in this analysis. Building dimensions were determined using USEPA's Building Profile Input Program Prime (BPIP-Prime) with measurements taken on plot plans provided with the application. Please refer to the source parameter table.
- ◆ Five years (1998-2002) of preprocessed meteorological data was used in this analysis. The surface data was collected in Wisconsin Rapids, and the upper air meteorological data originated in Green Bay.
- ◆ The AMS/EPA Regulatory Model (AERMOD) was also used in the analysis. The model used rural dispersion coefficients with the regulatory default options. These allow for calm wind correction, buoyancy induced dispersion, and building downwash.
- ◆ The receptors used in this analysis consisted of a grid conforming to the physical layout of the building and grounds about the facility (424 receptors) with 25-meter resolution near the facility and extending some 400 meters from a point identified as (0,0) of the Cartesian axis on which this facility was placed via supplied plot plans. Points within known fences or on top of buildings were not considered. Terrain is a factor in the area, so receptor elevations were considered.
- ◆ All sources vent vertically and without obstruction except as noted elsewhere within this document.
- ◆ The increment-consuming devices are as noted elsewhere within this document.
- ◆ There is no other source in the area that consumes increment.
- ◆ PSD baselines for NO₂ and SO₂ have NOT been set for Monroe County.
- ◆ The USEPA and WDNR default ambient ratio of 0.75 was applied to NO_x emission rates to convert them into equivalent NO₂ emission rates.

C. MODEL RESULTS

NAAQS Analysis	TSP 24-hr	PM ₁₀ 24-hr	PM ₁₀ Annual
Facility Impact	74.0	74.0	17.1
Background	41.8	27.4	9.2
Total	125.8	101.4	26.3
NAAQS	150.0	150.0	50.0
% NAAQS	83.9	67.6	52.6

NAAQS Analysis	SO ₂ 3-hr	SO ₂ 24-hr	SO ₂ Annual
Facility Impact	8.6	3.8	0.8
Background	128.3	33.5	7.9
Total	136.9	37.3	8.7
NAAQS	1300	365	80
% NAAQS	10.5	10.2	10.9

NAAQS Analysis	CO 1-hr	CO 8-hr	NO ₂ Annual
Facility Impact	807.1	466.8	86.5
Background	3188	890.4	4.7
Total	3,995.1	1,357.2	91.2
NAAQS	40000	10000	100
% NAAQS	10.0	13.6	91.2

Increment Analysis	PM ₁₀ 24-hr	PM ₁₀ Annual
Facility Impact	21.1	3.5
Increment	30	17
% Increment	70.3	20.6

AAS Analysis	2-Butoxyethanol 24-hr	2-Butoxyethanol Annual	cyclohexanone 24-hr
Facility Impact	1,928.0	482	1,677.8
AAS	2320	13000	2311
% AAS	83.1	3.7	72.6

AAS Analysis	isophorone 1-hr	Methylene bis 4 isocyanate 24-hr	naphthalene 24-hr
Facility Impact	2,477.5	0.28	225.9
AAS	2826	1.29	1258
% AAS	87.7	21.7	18.0

D. CONCLUSION

The results of the modeling analysis demonstrate that the applicable air quality standards will be met assuming the emissions rates, stack parameters and all other restrictions listed in this document.

ID	LOCATION (UTM)				PHYSICALS			
	Descrip	X	Y	Z	Height (m)	Temp (K)	Vel (m/s)	Dia (m)
S18A	P32	675168.4	4867030	234.47	7.92	421.9	8.62	0.46
S18B	P32	675168.4	4867021	234.37	9.14	380.2	4.69	0.61
S18C	P32	675104.1	4866991	234.07	7.92	449.7	8.62	0.46
S19A	P33	675112.4	4867010	234.26	7.92	310.8	7.76	0.46
S19B	P33	675076.8	4866972	234.16	7.92	294.1	5.75	0.46
S53A	P37	675148.4	4867018	234.34	7	410.8	13.94	0.46
S53B	P37	675149.3	4867005	234.21	7.01	444.1	11.5	0.46
S53C	P37	675153.7	4866991	234.06	7.62	449.7	12.94	0.46
S72	P72	675153.3	4866973	233.77	7.62	294	6.47	0.21
S75	P75	675113	4866965	233.81	7.9	422	32.3	0.30
S41	P41	674989.1	4867012	234.98	6.096	422.04	1.467	0.6401
S42	P42	674996.9	4867032	235.1	7.62	422.04	4.62	0.4267
S43	P43	674977.3	4867021	235.07	6.096	422.04	6.092	0.5791
S44	P44	674996.4	4866986	234.81	6.096	294.26	5.749	0.4572
S12	B22	675042.8	4866994	234.43	8.23	444.26	30.62	0.3962
S13	B23	675037.2	4866975	234.42	8.53	444.26	38.27	0.3962
S14	B24	675035.8	4866957	234.35	8.53	444.26	38.27	0.3962
S15	B25	675034.8	4866936	234.21	8.53	444.26	30.16	0.3962
S79	P79	674976.9	4867035	235.2	7.62	422.04	4.40	0.6401
S80	P80	674976	4867034	235.21	7.9248	338.71	8.63	0.4572
S57	P57	675121	4867033	234.5	7.92	294.1	9.71	0.61
Volume	Source	X	Y	Z	Ht	Sig-Y	Sig-x	
V02A	Heat	675046	4867000	234.5	2.74	46.5	2.55	N/a
V02B	Heat	675135	4867000	234.5	2.74	46.5	2.55	N/a

ID	EMISSION RATES (LBS/HR)								
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	2-but	cyclo	Isophor	MBI	naphth	PM	NOx	SO2	CO
S18A	10.6	11.6	8.30	0.003	1.50	0.08	1.12	0.03	0.46
S18B	10.6	11.6	8.30	0.003	1.50	0.08	1.12	0.03	0.46
S18C	10.6	11.6	8.30	0.003	1.50	0.08	1.12	0.03	0.46
S19A	1.20	-	-	-	0.21	0.46	0.04	0.0001	0.02
S19B	1.20	-	-	-	0.21	0.46	0.04	0.0001	0.02
S53A	12.6	8.47	-	-	0.96	0.04	0.72	0.002	0.29
S53B	12.6	8.47	-	-	0.96	0.04	0.72	0.002	0.29
S53C	12.6	8.47	-	-	0.96	0.04	0.72	0.002	0.29
S72	0.04	2.50	-	-	-	-	-	-	-
S75	8.67	9.51	-	0.003	1.23	0.24	0.33	0.001	0.13
S41	0.085	-	-	-	-	-	-	-	-
S42	4.00	2.82	-	-	1.17	-	-	-	-
S43	2.13	1.77	-	-	0.22	-	-	-	-
S44	1.20	-	-	-	0.21	0.36	-	-	-

S12	-	-	-	-	-	0.06	1.73	0.005	0.71
S13	-	-	-	-	-	0.08	2.19	0.006	0.89
S14	-	-	-	-	-	0.08	2.19	0.006	0.89
S15	-	-	-	-	-	0.05	1.30	0.004	0.53
S80	-	-	-	-	-	0.24	0.33	0.001	0.13
S57	1.80	-	-	-	-	0.06	0.33	-	-
V02A	-	-	-	-	-	0.14	3.83	0.011	1.56
V02B	-	-	-	-	-	0.14	3.83	0.011	1.56

FACILITY EMISSIONS

Actual emissions are the total emissions generated by the emission sources identified below over the specified time period taking into account any reductions made by a control device or technique. Maximum theoretical emissions are the quantity of air contaminants that theoretically could be emitted by the emissions sources identified below, without considering emission control devices, based on the design capacity of the source. Potential to emit is the maximum capacity of the emission sources identified below to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air contaminant shall be treated as part of its design if the limitation is Federally enforceable.

A. Stack Emissions:

1. B02, Stack S02 - Nat. Gas/Propane Space Heaters with a Total Rating of 37.1 mmBtu/hr

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.28	1.23	0.28	1.23	5.57	24.37
Sulfur Dioxide	0.022	0.097	0.022	0.097	0.022	0.097
Nitrogen oxides	7.66	33.56	7.66	33.56	7.66	33.56
Carbon Monoxide	3.11	13.65	3.11	13.65	3.11	13.65
VOCs	0.20	0.89	0.20	0.89	0.20	0.89

2. P03, Stack S03 - 5 Lithographic Lines with UV Curing - Installed 1988

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	1.75	7.67	1.75	#	1.75	7.67

3. B22, Stack S12 - Natural Gas/Propane Boiler Rated at 8.4 mmBtu/hr - Installed 1961

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.06	0.28	0.06	0.28	5.04	22.08
Sulfur Dioxide	0.005	0.2	0.005	0.2	0.005	0.2
Nitrogen oxides	1.73	7.60	1.73	7.60	1.73	7.60
Carbon Monoxide	0.71	3.09	0.71	3.09	0.71	3.09
VOCs	0.05	0.20	0.05	0.20	0.05	0.20

4. B23, Stack S13 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY

Particulate matter emissions	0.08	0.35	0.08	0.35	6.36	27.86
Sulfur Dioxide	0.006	0.03	0.006	0.03	0.006	0.03
Nitrogen oxides	2.19	9.59	2.19	9.59	2.19	9.59
Carbon Monoxide	0.89	3.90	0.89	3.90	0.89	3.90
VOCs	0.06	0.26	0.06	0.26	0.06	0.26

5. B24, Stack S14 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.08	0.35	0.08	0.35	6.36	27.86
Sulfur Dioxide	0.006	0.03	0.006	0.03	0.006	0.03
Nitrogen oxides	2.19	9.59	2.19	9.59	2.19	9.59
Carbon Monoxide	0.89	3.90	0.89	3.90	0.89	3.90
VOCs	0.06	0.26	0.06	0.26	0.06	0.26

6. B25, Stack S15 - Natural Gas/Propane Boiler Rated at 6.3 mmBtu/hr - Installed 1961

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.05	0.21	0.05	0.21	3.78	16.56
Sulfur Dioxide	0.004	0.018	0.004	0.018	0.004	0.018
Nitrogen oxides	1.30	5.70	1.30	5.70	1.30	5.70
Carbon Monoxide	0.53	2.32	0.53	2.32	0.53	2.32
VOCs	0.03	0.15	0.03	0.15	0.03	0.15

7. P32, Stack S18 - 4 Roll Coating Machines and 3 Natural Gas/Propane Curing Ovens rated at 5 mmBtu/hr, 6 mmBtu/hr, and 5.25 mmBtu/hr - Controlled by Thermal Oxidizer C18 (Modified 2005) - (Only three coating machines can operate at any one time)

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.12	0.54	0.12	0.54	2.44	10.68
Sulfur Dioxide	0.010	0.042	0.010	0.042	0.010	0.042
Nitrogen oxides	3.36	14.70	3.36	14.70	3.36	14.70
Carbon Monoxide	1.37	5.98	1.37	5.98	1.37	5.98
VOCs	159.99	700.75	90.46	#	90.48	396.29

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P32

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol *	31.8	139.28	31.8	139.28
n-butyl alcohol *	15.5	67.89	15.5	67.89
cumene	1.6	7.01	1.6	##
cyclohexanone *	34.9	152.86	34.9	152.86
diacetone alcohol *	10.8	47.30	10.8	47.30
ethyl benzene	15.1	66.14	15.1	##
formaldehyde	0.2	0.88	0.2	##
Ethylene glycol	2.16	9.46	2.16	##
glycol ether	23.2	101.62	23.2	##

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
Hexamethylene 1,6-diisocyanate	0.0002	0.0009	0.0002	0.0009
isobutyl alcohol *	4.5	19.71	4.5	19.71
isophorone	16.6	130.96	29.9	##
methanol	1.4	6.13	1.4	##
MAK *	4.7	20.59	4.7	20.59
MEK	29.7	130.09	29.7	##
MIBK	4.5	19.71	4.5	##
Methylene bis(4cycloisocyanate) *	0.009	0.039	0.009	0.039
naphthalene	4.5	19.71	4.5	##
propylene glycol monobutyl ether	25.2	110.38	25.2	##
toluene	7.4	32.71	7.4	##
trimethyl benzene *	13.4	58.69	13.4	58.69
xylene	49.9	218.56	49.9	##

8. P33, Stack S19 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer (C18) - (P-33-18S-2B) - Installed 1993

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	2.05	8.97	0.91	3.98	0.91	3.98
Sulfur Dioxide	0.0002	0.001	0.0002	0.001	0.0002	0.001
Nitrogen oxides	0.083	0.36	0.083	0.36	0.083	0.36
Carbon Monoxide	0.034	0.15	0.034	0.15	0.034	0.15
VOCs	7.84	34.34	7.84	#	7.84	34.34

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P33

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol *	2.40	10.51	2.40	##
n-butyl alcohol *	0.41	1.80	0.41	##
Carbon black	0.14	0.61	0.14	
Diacetone alcohol *	0.26	1.14	0.26	
ethyl benzene	0.41	1.80	0.41	##
glycol ether	0.80	3.50	0.80	##
isobutyl alcohol	0.41	1.80	0.41	##
naphthalene	0.41	1.80	0.41	##
Propylene glycol monomethyl ether *	1.28	5.61	1.28	##
toluene	0.43	1.88	0.43	##
xylene	2.04	8.94	2.04	##

9. P37, Stack S53 - 3 Screening Lines each with a Natural Gas/Propane Curing Oven, (P-37-12S; P-43-SOS; P-171-SOS)

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.08	0.35	0.08	0.35	1.56	6.90
Sulfur Dioxide	0.0063	0.03	0.0063	0.03	0.0063	0.03
Nitrogen oxides	2.17	9.50	2.17	9.50	2.17	9.50
Carbon Monoxide	0.88	3.86	0.88	3.86	0.88	3.86
VOCs	49.04	214.78	49.04	#	49.04	214.78

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P37

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol *	37.7	165.13	37.7	##
n-butyl alcohol *	4.9	21.46	4.9	##
Cyclohexanone	25.4	111.25	25.4	##
diacetone alcohol *	3.0	13.14	3.0	##
Ethyl benzene	2.6	11.39	2.6	
Ethylene glycol	0.96	4.20	0.96	
glycol ethers	39.6	173.45	39.6	##
Hexamethylene 1,6-diisocyanate	0.00003	0.00013	0.00003	
Isobutyl alcohol *	1.92	8.41	1.92	
Methanol	0.48	2.10	0.48	##
naphthalene	2.88	12.61	2.88	
Propylene glycol monomethyl ether *	6.96	30.48	6.96	
stoddard solvent *	1.9	8.32	1.9	##
Toluene	0.72	3.15	0.72	##
Trimethyl benzene*	3.8	16.64	3.8	
Xylene	10.3	45.11	10.3	##

10. P41, Stack S41 - Two Litho Presses with Two UV Ovens - Installed 2001

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	2.7	11.83	2.7	#	2.7	11.83

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P41

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol *	0.085	0.37		
diisobutyl ketone *	0.02	0.09		
glycol ether	0.07	0.31		
toluene	0.01	0.04		
xylene	0.006	0.025		

11. P42, Stack S42 - Two Roll Coaters with Four Electric Drying Ovens - Installed 2001

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	7.65	33.52	7.65	#	7.65	33.52

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P42

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	0.69	3.02		
2-butoxyethanol *	4.0	17.52		
cyclohexanone *	2.82	12.35		
diacetone alcohol *	0.86	3.77		
ethyl benzene	1.68	7.36		
Ethylene glycol	0.18	0.79		
formaldehyde	0.02	0.088		
glycol ethers	4.93	21.59		
Isobutanol *	0.82	3.59		
MIBK	0.50	2.19		
naphthalene	1.17	5.12		
toluene	0.50	2.19		
trimethyl benzene *	0.87	3.81		
xylene	5.54	24.27		

12. P43, Stack S43 – One Screening Machine and Three Small Screening Machines with One Electric Drying Oven - Installed 2001

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	3.99	17.47	3.99	#	3.99	17.47

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P43

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	0.22	0.96		
2-butoxyethanol *	2.13	9.33		
cyclohexanone *	1.77	7.75		
diacetone alcohol *	0.21	0.92		
ethyl benzene	0.18	0.79		
Ethylene glycol	0.05	0.22		
formaldehyde	0.005	0.022		
glycol ethers	2.75	12.05		
naphthalene	0.22	0.96		
stoddard solvent	0.34	1.49		
trimethyl benzene *	0.26	1.14		
xylene	0.72	3.15		

13. P44, Stack S44 - Spraybooth - Installed 2001

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate Matter Emissions	1.91	8.38	0.36	1.60	0.36	1.60
VOCs	3.49	15.29	3.49	#	3.49	15.29

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P44

Pollutant	Maximum Theoretical	Potential to Emit
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	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	0.69	3.02		
2-butoxyethanol *	1.2	5.26		
carbon black *	0.06	0.26		
diacetone alcohol *	0.67	2.93		
diisobutyl ketone *	0.55	2.41		
ethyl benzene	0.70	3.07		
glycol ether	0.84	3.69		
isobutanol	0.21	0.92		
MEK (fed)	0.63	2.76		
MIBK	0.59	2.58		
naphthalene	0.21	0.92		
Propylene monomethyl ether *	0.64	2.80		
stoddard solvent	0.22	0.96		
toluene	1.60	7.01		
xylene	2.76	12.09		

14. P57, Stack S57 - Plastic Spray Booth (uses same oven as P33) - (P-58-PBS)

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	1.0	4.38	0.06	0.26	0.36	1.60
VOCs	3.15	13.80	3.15	#	3.15	13.08

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P57

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol	1.8	7.88	1.8	##
n-butyl alcohol	1.6	7.01	1.6	##
diacetone alcohol	1.0	4.38	1.0	##
2-ethoxy ethyl acetate	0.69	3.02	0.69	##
MEK	1.44	6.31	1.44	##
MIBK	0.60	2.63	0.60	##
stoddard solvent	0.8	3.50	0.8	##
toluene	7.6	33.29	7.6	##
xylene	4.0	17.52	4.0	##

15. P63, Stack S63 - Miscellaneous Facility Wide Cleanup

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	50.0	150.0	50.0	#	50.0	150.0

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P63

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol *	0.08	0.35	0.08	
cumene	0.03	0.13	0.03	
cyclohexanone	0.06	0.26	0.06	

diisobutyl ketone	1.06	4.64	1.06	
glycol ethers	0.58	2.54	0.58	
Methylene chloride	4.03	17.65	4.03	
perchloroethylene	2.21	9.68	2.21	
Propylene glycol monomethyl ether *	0.15	0.66	0.15	
stoddard solvent *	0.25	1.10	0.25	
toluene	0.08	0.35	0.08	
Trimethyl benzene *	0.31	1.36	0.31	
2,2,4-trimethyl pentane	0.05	0.22	0.05	
xylene	0.06	0.26	0.06	

16. P72, Stack S72 - Towel Dryer - Installed 1991

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	25.0	73.0	25.0	#	25.0	73.0

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P72

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol	0.04	0.18	0.04	##
cumene	0.5	2.19	0.5	##
cyclohexanone	2.5	10.95	2.5	##
diacetone alcohol	0.4	1.75	0.4	##
diisobutyl ketone	1.3	5.69	1.3	##
ethyl benzene	0.03	0.13	0.03	##
glycol ether	0.04	0.18	0.04	##
MIBK	0.4	1.75	0.4	##
stoddard solvent	3.8	16.64	3.8	##
toluene	2.5	10.95	2.5	##
xylene	0.45	1.97	0.45	##

17. P75, Stack S75 – Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.012	0.053	0.012	0.053	0.24	1.05
Sulfur dioxide	0.0010	0.004	0.0010	0.004	0.0010	0.004
Nitrogen oxides	0.33	1.45	0.33	1.45	0.33	1.45
Carbon monoxide	0.13	0.59	0.13	0.59	0.13	0.59
VOCs	34.1	148.96	34.1	#	34.1	148.96

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P75

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol *	8.67	38.37	8.67	
Butyl alcohol *	4.30	18.83	4.30	
cumene	0.45	1.97	0.45	

cyclohexanone	9.51	41.65	9.51	
diacetone alcohol *	3.00	13.14	3.00	
ethyl benzene	4.20	18.40	4.20	
Ethylene glycol	0.6	2.63	0.6	
formaldehyde	0.1	0.44	0.1	
glycol ethers	7.14	31.27	7.14	
Hexylmethylene 1,6-diisocyanate	0.00005	0.00022	0.00005	
Isobutanol *	1.23	5.39	1.23	
MEK	8.25	36.14	8.25	
MIBK	1.25	5.48	1.25	
MAK	2.15	9.42	2.15	
methanol	0.24	1.05	0.24	
Methylene bis(4-cylcohexylisocyanate) *	0.003	0.013	0.003	
naphthalene	1.23	5.39	1.23	
Propylene glycol monomethyl ether *	7.0	30.66	7.0	
toluene	2.05	8.98	2.05	
Trimethyl benzene *	3.66	16.03	3.66	
xylene	13.85	60.66	13.85	

18. P79, Stack S79 – 2 screening lines, one with 1 screening machine and 1 UV oven, one with 2 screening machines and 1 UV oven.

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	2.07	9.07	2.07	#	2.07	9.07

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P79

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
diisobutyl ketone	0.053	0.23	0.053	##
glycol ether	0.38	1.66	0.38	##

19. P80, Stack S80 – Roll Coating Machine (and replacement coater) with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.012	0.053	0.012	0.053	0.24	1.05
Sulfur dioxide	0.0010	0.004	0.0010	0.004	0.0010	0.004
Nitrogen oxides	0.33	1.45	0.33	1.45	0.33	1.45
Carbon monoxide	0.13	0.59	0.13	0.59	0.13	0.59
VOCs	2.15	9.42	2.15	#	2.15	9.42

B. Facility Emissions Summary:

Pollutant	Maximum Theoretical Emissions	Potential to Emit Under Title V Operation Permit	Maximum Allowable Emissions	Potential to Emit Under the Cooperative Agreement
	TPY	TPY	TPY	TPY

Particulate Matter Emissions	16.19	5.29	141.62	5.29
Sulfur Dioxide	0.46	0.46	0.46	0.46
Nitrogen Oxides	93.5	62.64	93.5	62.64
Carbon Monoxide	38.03	38.03	38.03	38.03
VOCs	1441.66	99.0	1136.48	87.34 #
Total CAA HAPs	2785.71	24.96	2785.71	20

VOC emissions from coating and printing and associated clean-up processes at the facility are limited to 85 tons per year. There is a small amount of VOC emitted from fuel burning operation at the facility that bring the facility total potential VOC emissions to 87.34 tons per year.

Total HAPs Emitted from Stacks 25 Feet to < 40 Feet in Height (Excludes Stacks S41, S43, S44, S53, S63)					
Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Table A Value (stacks 25 to <40 ft)		PTE greater than Table Value?
	(lbs/hr)	(lbs/yr)		Units	
2-butoxyethanol*	48.71	426,612	20.2	lbs/hr	yes
n-butyl alcohol*	22.5	197,100	36	lbs/hr	no
carbon black*	0.41	3591.6	0.73	lbs/hr	no
cumene	2.55	<20,000	51.3	lbs/hr	no
cyclohexanone*	49.73	435,635	20.1	lbs/hr	yes
diacetone alcohol*	16.32	142,963	49.6	lbs/hr	no
diisobutyl ketone*	1.35	11,852	30.4	lbs/hr	no
Ethylene glycol	2.94	<20,000	23.8	lbs/hr	no
ethyl benzene	21.42		90.6	lbs/hr	no
		<20,000	730,000	tpy	no
2-ethoxy ethyl acetate*	0.69	6,044	5.64	lbs/hr	no
formaldehyde	0.32	136.8	562	lbs/yr	no
glycol ethers	36.49	<20,000	na		na
Hexamethylene-1,6-diisocyanate	0.00025		0.00718	lbs/hr	no
		2.19	7.31	lbs/yr	no
isobutyl alcohol*	6.96	60,970	31.6	lbs/hr	no
isophorone	16.6	<20,000	6.72	lbs/hr	yes
methyl n-amyl* ketone	6.85	60,006	48.7	lbs/hr	no
MEK	39.39	<20,000	na		na
methanol	1.64	14,366	na		na
methylene bis4-cyclohexylisocyanate *	0.012	105.12	0.0112	lbs/hr	yes
MIBK	7.25	<20,000	42.7	lbs/hr	no
naphthalene	7.31	<20,000	10.9	lbs/hr	no
Propylene glycol monomethyl ether *	8.28	72,533	1,460,000	lbs/yr	no
propylene glycol monobutyl ether	25.2	<20,000	1,460,000	lbs/yr	no
stoddard solvent*	4.6	40,296	119	lbs/hr	no
toluene	20.48		39.3	lbs/hr	no
		<20,000	292,000	lbs/yr	no

Total HAPs Emitted from Stacks 25 Feet to < 40 Feet in Height (Excludes Stacks S41, S43, S44, S53, S63)					
Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Table A Value (stacks 25 to <40 ft)		PTE greater than Table Value?
	(lbs/hr)	(lbs/yr)		Units	
trimethyl benzene*	17.93		25.6	lbs/hr	no
xylene	75.78		90.6	lbs/hr	no
Total HAPS regulated by the CAA	##				

Total HAPs Emitted from Stacks Shorter Than 25 Feet (S41, S43, S44, S53)					
Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Table A Value (stacks <25 ft)		PTE greater than Table Value?
	(lbs/hr)	(lbs/yr)		Units	
2-butoxyethanol*	41.12	360,211	5.19	lbs/hr	yes
n-butyl alcohol*	5.81	50,896	11.3	lbs/hr	no
carbon black*	0.06	526	0.188	lbs/hr	no
cyclohexanone*	27.17	238,009	5.17	lbs/hr	yes
diacetone alcohol*	3.88	33,989	12.8	lbs/hr	no
diisobutyl ketone*	0.58	5431	7.81	lbs/hr	no
ethyl benzene	3.48		23.3	lbs/hr	no
		<20,000	177,688	lbs/yr	no
Ethylene glycol	1.01	8848	7.47	lbs/hr	no
formaldehyde	0.005	43.8	137	lbs/yr	no
glycol ethers	43.26	<20,000	na		
Hexamethylene-1,6-diisocyanate	0.00003		0.00185	lbs/hr	no
		0.26	1.78	lbs/yr	no
Isobutanol *	2.13	18,659	8.14	lbs/hr	no
methanol	0.48	4205	na		na
MEK	0.63	5519	na		na
MIBK	0.59	5168	11.0	lbs/hr	no
naphthalene	3.31	<20,000	2.82	lbs/hr	yes
Propylene glycol monomethyl ether *	7.6	66,576	355,375	lbs/yr	no
stoddard solvent*	2.46	21,550	30.8	lbs/hr	no
toluene	2.33		10.1	lbs/hr	no
		<20,000	71,075	lbs/yr	no
trimethyl benzene*	4.06	35,566	6.6	lbs/hr	no
xylene	13.79	<20,000	23.3	lbs/hr	no
Total HAPS regulated by the CAA	##				

Total HAPs Emitted as Indoor Fugitive Emissions (S63)					
Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Table A Value		PTE greater than Table Value?
	(lbs/hr)	(lbs/yr)		Units	

Total HAPs Emitted as Indoor Fugitive Emissions (S63)				
Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Table A Value	PTE greater than Table Value?
	(lbs/hr)	(lbs/yr)		
2-butoxyethanol *	0.08	700.8		exempt
cumene	0.03	262.8		exempt
Cyclohexanone *	0.06	525.6		exempt
diisobutyl ketone *	1.06	9285.6		exempt
glycol ethers	0.58	5080.8		na
Methylene chloride	4.03	<20,000		exempt
perchloroethylene	2.21	19,359.6		exempt
Propylene glycol monomethyl ether *	0.15	1314		exempt
stoddard solvent *	0.25	2190		exempt
toluene	0.08	700.8		exempt
Trimethyl benzene *	0.31	2715.6		exempt
2,2,4-trimethyl pentane	0.05	438		exempt
xylene	0.06	525.6		exempt
Total HAPS regulated by the CAA	##			

HAP = hazardous air pollutant

CAA = Clean Air Act

na = not applicable

* denotes state-only HAPs

The permittee elected restrictions to limit the potential VOC emissions from the facility to not more than 85 tons per year while operating under the Cooperative Agreement and to less than 100 tons per year otherwise. See total facility emissions summarized above. These more restrictive limitations are included in the facility’s original operation permit and would be retained in any revised Operation Permit issued by the Department. Note: VOC emissions from use of materials containing VOCs will be limited to 85 tons per year. The additional 2.8 tons of VOCs per year are from combustion of natural gas and propane at the facility

The permittee elected restrictions to limit the potential emissions of all HAPs regulated by the Clean Air Act to not more than 20 tons per year while operating under the Cooperative Agreement and to less than 25 tons per year otherwise. The permittee has elected restrictions to limit the potential emissions of each HAP regulated by the Clean Air Act to not more than 8 tons per year while operating under the Cooperative Agreement and to less than 10 tons per year otherwise. These more restrictive limitations are included in the facility’s original operation permit and would be retained in any revised Operation Permit issued by the Department.

FACILITY STATUS UNDER PART 70

The facility is located in an area designated as attainment/unclassified for all criteria pollutants. The facility would be considered a synthetic minor, non-part 70 source because the permittee elected limitations to restrict the potential emissions of volatile organic compounds and the potential emissions of nitrogen oxides to each less than the major source threshold of 100 tons per year. The potential emissions of each other criteria pollutant are less than the major source threshold level of 100 tons per year. Additionally, the permittee elected limitations to restrict the potential emissions of each hazardous air pollutant regulated by the Clean Air Act to less than 10 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined to less than 25 tons per year.

Note: The permittee has elected to restrict the potential emissions of volatile organic compounds to not more than 85 tons per year while operating under a Cooperative Agreement with the Department. Additionally, the permittee elected to restrict the potential emissions of each hazardous air pollutant regulated by the Clean Air Act to not more than 8 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined to not more than 20 tons per year, while operating under a Cooperative Agreement with the Department.

COMPLIANCE DEMONSTRATION METHODS

The compliance demonstration methods for the following emissions units were reviewed under the preliminary determinations for operation permits 642025010-F01, 642025010-F02, 642025010-F03, 642025010-F04 and the preliminary determinations for construction permits 02-MEC-618, 03-POY-016, 05-MEC-206 and remain unchanged as a result of this renewal:

- Stack S02, Boiler B02 - Natural Gas/Propane Space Heaters with a Total Rating of 37.1 mmBtu/hr - Installed 1994**
- Stack S12, Boiler B22 - Natural Gas/Propane Boiler Rated at 8.4 mmBtu/hr - Installed 1961**
- Stack S13, Boiler B23 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**
- Stack S14, Boiler B24 - Natural Gas/Propane Boiler Rated at 10.6 mmBtu/hr - Installed 1971**
- Stack S15, Boiler B25 - Natural Gas/Propane Boiler Rated at 6.3 mmBtu/hr - Installed 1961**
- Stack S03, Process P03 - 5 Lithographic Lines with UV Curing - Installed 1988**
- Stack S18, Process P32 - 4 Roll Coating Machines, and 3 Natural Gas/Propane Curing Oven rated at 5 mmBtus/hr, 6 mmBtus/hr, and 5.25 mmBtus/hr - Controlled by Thermal Oxidizer C18 (P32-1S Installed 1984; P32-10S Installed 1989; P32-87S Installed 1993) (Only 3 can be operated at a time.) - Modified 2003 and 2005.**
- Stack S19, Process P33 - 1 Metal Spray Booths, With a 0.4 mmBtu per hour Natural Gas/Propane Curing Oven - Controlled by Paper Paint Filters (C19) and a Thermal Oxidizer C18 - (P-33-18S-2B) - Installed 1993**
- Stack S53, Process P37 - 3 Screening Lines each with a Natural Gas/Propane Curing - (P-37-12S; P-43-SOS; P171-SOS)**
- Stack S41, Process P41 - Two Litho Pressess with Two UV Ovens - Installed 2001**
- Stack S43, Process P43 - One Screening Machine and Three Small Screening Machines with One Electric Drying Oven - Installed 2001**
- Stack S42, Process P42 - Two Roll Coaters with Four Electric Drying Ovens - Utilized for R&D Activities - Installed 2001**
- Stack S44, Process P44 - Spraybooth - Utilized for R&D Activities - Installed 2001**
- Stack S57, Process P57 - Plastic Spray Booth with (this booth uses same curing oven used for P33) - (P-58-PBS)**
- Stack S63, Process P63 - Miscellaneous Facility Wide Cleanup**
- Stack S72, Process P72 - Towel Dryer - Installed 1991**
- Stack S75, Process P75 - Roll Coating Machine with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven - Installed 2003**

Please refer to the preliminary determinations for permits 642025010-F01, 02-MEC-618/642025010-F02, 03-POY-016/642025010-F03, and 05-MEC-206/642025010-F04 for a description of the compliance demonstration methods for these emissions units.

The following are the compliance demonstration methods for emissions units that are either new or changed as a result of this renewal:

Stack S79, Process P79 - Two Screening Lines, One with 1 Screening Machine and 1 UV Oven, One with 2 Screening Machines and 1 UV Oven: To demonstrate compliance with the LACT VOC content restriction, the facility shall keep the following records for each coating and other VOC containing material used on P79: (1) A unique name or identification number for each coating and other VOC containing material, as applied; and (2) The VOC content of each coating and other VOC containing material, as applied in pounds per gallon. The permittee shall use US EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the coatings used. In the case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results shall govern. Additionally, the facility shall only burn natural gas and/or propane in the curing oven associated with P80. These requirements would be included in any operation permit issued by the Department.

Stack S80, Process P80 - Roll Coating Machine (and replacement coater) with a 1.6 mmBtu per hour Natural Gas/Propane Curing Oven: To demonstrate compliance with the LACT VOC content restriction, the facility shall keep the following records for each coating and other VOC containing material used on P80: (1) A unique name or identification number for each coating and other VOC containing material, as applied; and (2) The VOC content of each coating and other VOC containing material, as applied in pounds per gallon. The permittee shall use US EPA

Method 24, or coating manufacturer's formulation data to determine the VOC content of the coatings used. In the case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results shall govern. Additionally, the facility shall only burn natural gas and/or propane in the curing oven associated with P80. These requirements would be included in any operation permit issued by the Department.

Additionally, the following compliance demonstration methods in permit 642025010-F04 were changed as described below:

I.A.3.c.(1): The permittee requested a change to the compliance demonstration method language so they are required to retain a statement on site indicating that natural gas and propane are the only fuels available for combustion at the facility. This change makes the record keeping requirements in Part A of the permit consistent with Part B of the permit.

I.A.1.b.(1): The permittee requested changes to this compliance demonstration method to factor in VOCs that are not 100 percent emitted in to equations for calculating VOC emissions. A multiplier was added to the equation allowing the permittee to factor in an emission rate for VOC that are not 100 percent emitted.

I.A.1.b.(5), I.B.10.a.(2)(a), and I.B.11.a.(2)(a): These conditions require the calculation of monthly VOC emissions from process P41, P42, and P43 to demonstrate that the monthly VOC emissions from each process is less than 1666 pounds per month to ensure that these process are exempt from construction permit requirements. Similar to condition I.A.1.b.(1), a multiplier was added to the equation in each condition to calculate monthly VOC emissions to allow for VOC that are not emitted at 100% of the content of the raw material.

I.B.17.a.(2)(a): Similar to condition I.A.1.b.(1), a multiplier was added to this equation for calculating monthly VOC emissions to allow the permittee to factor in an emission rate for VOCs that are not emitted at 100 percent of their content.

I.A.1.c.(2) and (3), I.B.10.a.(3)(c), I.B.11.a.(3)(c), I.B.17.a.(3)(a): A requirement was added to each of these conditions indicating that the permittee must keep records of the VOC emission rate multiplier used for each VOC containing raw material.

Note: The compliance plan and schedule from current permit 642025010-F04 was removed from the draft permit renewal as the permittee has complied with all the requirements of the plan.

FACILITY COMPLIANCE STATUS

The Department finds that:

1. The source will meet applicable emission limits and other requirements.
2. The source will not cause nor exacerbate a violation of an ambient air quality standard or ambient air increment.

PRELIMINARY DETERMINATION

The Wisconsin Department of Natural Resources has reviewed the permit application and other materials submitted by Northern Engraving Corporation and hereby makes a preliminary determination that an operation permit may be issued with the following Draft Applicable Limits and Draft Permit Conditions.



Appendix A5

PART I

SPECIFIC PERMIT CONDITIONS FOR NORTHERN ENGRAVING WEST SALEM

- A. *Part I.A. of this operation permit is effective so long as the permittee is operating under a Cooperative Agreement with the Department as entered into under s. 299.80 Wis. Stats. If any such Cooperative Agreement expires or is revoked for any reason, Part I.A. of this operation permit is no longer effective and Part I.B. becomes the effective operation permit for the facility. If any such Cooperative Agreement expires or is revoked for any reason, the permittee shall comply with any delayed compliance deadlines and practical interim requirements established by the Department in a written revocation decision until the Department issues the approvals required under chs. 280 to 295, Wis. Stats, that were replaced by the above referenced Cooperative Agreement.*

1. **Volatil Organic Compound Emissions**

a. **Limitations:**

(1) The total volatile organic compound emissions from the facility may not exceed 85 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats and s. 285.65(7), Wis. Stats.]

(2) The volatile organic compound emissions from process P149 (One Roll Coating Machine) may not exceed 1666 pounds per month. (Note: This limitation is necessary for this process to be exempt from construction permit requirements.) [s. NR 406.04(1)(g), Wis. Adm. Code]

b. **Compliance Demonstration Methods:**

(1) Each month the permittee shall calculate the total volatile organic compound emissions from the facility as follows:

$$E = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times C_1) + (U_2 \times W_2 \times C_2) + \dots + (U_n \times W_n \times C_n)] - [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]\}$$

where:

E is the monthly VOC emissions (tons/month);

U is the monthly usage of each ink, coating, solvent, or other VOC containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other VOC containing material used during the month (pounds/gallon)

C is the VOC content of each ink, coating, solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);

n identifies each ink, coating, solvent or other VOC containing material used during the month;

S is the amount of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month (gallons/month);

P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month in pounds per gallon;

m identifies each spent ink, coating, solvent or other VOC containing material recovered and shipped off site during the month.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) To demonstrate compliance with condition I.A.1.a.(1), the permittee shall calculate the total volatile organic compound emissions from the facility over each 12 consecutive month period by summing the monthly volatile

organic compound emissions as calculated in I.A.1.b.(1) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(3) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content (C_n) and the density (W_n) of the of the inks, coatings, solvents or other VOC containing materials used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content (P) no less than: (a) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (b) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

(5) To demonstrate compliance with condition I.A.1.a.(2) the permittee shall calculate the total monthly volatile organic compound emissions from process P149 as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]

$$E_{\text{monthly}} = [(U_1 \times W_1 \times C_1) + (U_2 \times W_2 \times C_2) + \dots + (U_n \times W_n \times C_n) +]$$

where:

E_{monthly} is the monthly VOC emissions (pounds/month);

U is the amount of each ink, coating, clean-up solvent, or other VOC containing material used on process P149 during the month (gallons/month);

W is the density of each ink, coating, clean-up solvent, or other VOC containing material used on process P149 during the month (pounds/gallon);

C is the VOC content of each ink, coating, clean-up solvent, or other VOC containing material used on process P149 during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);
n identifies each ink, coating, clean-up solvent or other VOC containing material used on process P149 during the month.

This calculation shall be performed within twenty calendar days of the end of each calendar month.

c. Record Keeping and Monitoring Requirements:

(1) The permittee shall keep records of the following for each ink, coating, solvent, or other VOC containing material used at the facility:

- (a) A unique name or identification number; and
 - (b) The VOC content, expressed as a weight fraction (C_n).
- [s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall keep monthly records of:

- (a) The amount of each ink, coating, solvent, or other VOC containing material used in gallons per month (U_n);
 - (b) The density of each ink, coating, solvent, or other VOC containing material used in pounds per gallon (W_n);
 - (c) The amount of spent ink, coating, solvent, or other VOC containing material recovered and shipped off site in gallons per month (S_m);
 - (d) The VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site in pounds per gallon (P_m).
 - (e) The total monthly VOC emissions from the facility in tons per month (E), as calculated in I.A.1.b.(1); and
 - (f) The total VOC emissions from the facility in tons per year as calculated in I.A.1.b.(2).
- [s. NR 439.04(1)(d), Wis. Adm. Code]

(3) To demonstrate compliance with condition I.A.1.a.(2) the permittee shall keep records of the following for process P149:

- (i) A unique name or identification number for each ink, coating, clean-up solvent, or other VOC containing material used on process P149;
- (ii) The VOC content, expressed as a weight fraction (C_n) of each ink, coating, clean-up solvent, or other VOC containing material used on process P149;

- (iii) The amount of each ink, coating, clean-up solvent, or other VOC containing material used on process P149 in gallons per month (U_n);
- (iv) The density of each ink, coating, clean-up solvent, or other VOC containing material used on process P149 in pounds per gallon (W_n); and
- (v) The total monthly VOC emissions from process P149 in pounds per month (E_{monthly}), as calculated in I.A.1.b.(5).
[s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

- (1) Reference Test Method for Volatile Organic Compound Emissions: Whenever compliance emission testing is required, US EPA Method 18, 25, 25A or 25B shall be used to demonstrate compliance. [s. NR 439.06(3)(a), Wis. Adm. Code]
- (2) Reference Test Method for Volatile Organic Compound Content: Whenever VOC content testing is required, US EPA Method 24 or 24A shall be used to determine the organic solvent content, the volume of solids, the weight of solids, the water content and the density of inks. [s. NR 439.06(3)(b), Wis. Adm. Code]

2. Hazardous Air Pollutant Emissions

a. Limitations:

- (1) The emissions of each hazardous air pollutant regulated by the Clean Air Act shall be less than 8 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats.] [s. 285.65(7), Wis. Stats.]
- (2) The total emissions of all hazardous air pollutants regulated by the Clean Air Act combined shall be less than 20 tons for each 12 consecutive month period. [s. 299.80(4)(b), Wis. Stats.] [s. 285.65(7), Wis. Stats.]

b. Compliance Demonstration Methods:

- (1) Each month the permittee shall calculate the total emissions of each hazardous air pollutant from the facility regulated by the Clean Air Act as follows:¹ [s. NR 407.09(4)(a)1., Wis. Adm. Code]

$$E_x = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times H_1) + (U_2 \times W_2 \times H_2) + \dots + (U_n \times W_n \times H_n)] - [(S_1 \times I_1) + (S_2 \times I_2) + \dots + (S_m \times I_m)]\}$$

where:

E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month);

x identifies each HAP emitted from the facility

U is the monthly usage of each ink, coating, solvent, or other HAP containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other HAP containing material used during the month (pounds/gallon)

H is the HAP content of each ink, coating, solvent, or other HAP containing material used during the month expressed as a weight fraction (i.e. if a material is 25% HAP by weight H would be 0.25);

n identifies each ink, coating, solvent or other HAP containing material used during the month;

S is the amount of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month (gallons/month);

I is the HAP content of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month in pounds per gallon;

m identifies each spent ink, coating, solvent or other HAP containing material recovered and shipped off site during the month.

- (2) To demonstrate compliance with condition I.A.2.a.(1), the permittee shall calculate the emissions of each hazardous air pollutant regulated by the Clean Air Act over each 12 consecutive month period by summing the

¹ This calculation shall be performed for each hazardous air pollutant regulated by the Clean Air Act that is emitted from the facility.

monthly emissions of each hazardous air pollutant regulated by the Clean Air Act as calculated in I.A.2.b.(1) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(3) Each month the permittee shall calculate the total emissions of hazardous air pollutants regulated by the Clean Air Act as follows:

$$E_{\text{hap}} = \Sigma E_x$$

where:

E_{hap} is the monthly total emissions of all hazardous air pollutants regulated by the Clean Air Act that are emitted by the facility (tons/month);

E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month) as calculated in I.A.2.b.(1);

x identifies each HAP emitted from the facility.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(4) To demonstrate compliance with condition I.A.2.a.(2), the permittee shall calculate the total emissions of all hazardous air pollutants regulated by the Clean Air Act over each 12 consecutive month period by summing the monthly emissions of all hazardous air pollutants regulated by the Clean Air Act as calculated in I.A.2.b.(3) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(5) The permittee shall use coating manufacturer's formulation data to determine the HAP content (H_n) of the of the inks, coatings, solvents or other HAP containing materials used. [s. NR 439.04(1)(d), Wis. Adm. Code]

(6) The permittee shall analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content (H) no less than: (a) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (b) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

c. Record Keeping and Monitoring Requirements:

(1) The permittee shall keep records of the following for each ink, coating, solvent, or other HAP containing material used at the facility:

(a) A unique name or identification number; and

(b) The weight fraction of each HAP contained in the material (H_n).

[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) The permittee shall keep monthly records of:

(a) The amount of each ink, coating, solvent, or other HAP containing material used in gallons per month (U_n);

(b) The density of each ink, coating, solvent, or other HAP containing material used in pounds per gallon (W_n);

(c) The amount of spent ink, coating, solvent, or other HAP containing material recovered and shipped off site in gallons per month (S_m);

(d) The amount of each HAP contained in each spent ink, coating, solvent or other HAP containing material recovered and shipped off site in pounds per gallon (I_m);

(e) The facility total monthly emissions of each HAP in tons per month (E_x), as calculated in I.A.2.b.(1);

(f) The total monthly HAP emissions from the facility in tons per month (E_{hap}), as calculated in I.A.2.b.(3);

(g) The facility total emissions of each HAP in tons per year as calculated in I.A.2.b.(2).

(h) The total HAP emissions from the facility in tons per year as calculated in I.A.2.b.(4).

[s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Hazardous Air Pollutant Emissions: Whenever compliance emission testing is required, a method approved by the Department in writing shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

3. Particulate Matter Emissions

a. Particulate Matter Emission Limitations:	b. Compliance Demonstration Methods:	c. Record Keeping and Monitoring:
(1) Particulate matter emissions from each of boilers B20 and B21 may not exceed 0.15 pounds per million Btu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code]	(1) The permittee shall only fire natural gas and/or propane in each boiler (B20 and B21). ² [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(1) The permittee shall retain on site, plans and specifications that indicate each boiler’s fuel usage design capabilities. ³ [s. NR 439.04(1)(d), Wis. Adm. Code]
(2) Particulate matter emissions from P76 may not exceed 0.15 pounds per mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]	(2) The permittee shall only fire natural gas and/or propane in the curing oven associated with P76. ⁴ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(2) The permittee shall retain on site, plans and specifications that indicate the curing oven’s fuel usage design capabilities. ⁵ [s. NR 439.04(1)(d), Wis. Adm. Code]
(3) Particulate matter emissions from P28 may not exceed 0.15 pounds per mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]	(3) The permittee shall only fire natural gas and/or propane in the curing oven associated with P28. ⁶ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(3) The permittee shall retain on site, plans and specifications that indicate the curing oven’s fuel usage design capabilities. ⁷ [s. NR 439.04(1)(d), Wis. Adm. Code]
(4) Particulate matter emissions from P29	(4) The permittee shall only fire natural gas	(4) The permittee shall retain on site,

² Because the emission limitations listed in I.B.1.b.(1)(a) are equal to the maximum theoretical emissions for each boiler while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

³ These plans and specifications are sufficient because each boiler is designed to only burn natural gas and/or propane.

⁴ Because the emission limitation in I.B.9.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

⁵ These plans and specifications are sufficient because the curing oven is designed to only burn natural gas and/or propane.

⁶ Because the emission limitation in I.B.8.b.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

⁷ These plans and specifications are sufficient because the curing oven is designed to only burn natural gas and/or propane.

a. Particulate Matter Emission Limitations:	b. Compliance Demonstration Methods:	c. Record Keeping and Monitoring:
may not exceed 0.15 pounds per mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]	and/or propane in the curing oven and thermal oxidizer associated with P29. ⁸ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	plans and specifications that indicate the thermal oxidizer's and the curing oven's fuel usage design capabilities. ⁹ [s. NR 439.04(1)(d), Wis. Adm. Code]
(5) Particulate matter emissions from P37 may not exceed 0.15 pounds per mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]	(5) The permittee shall only fire natural gas and/or propane in the curing oven and thermal oxidizer associate with P37. ¹⁰ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(5) The permittee shall retain on site, plans and specifications that indicate the thermal oxidizer's and the curing oven's fuel usage design capabilities. ¹¹ [s. NR 439.04(1)(d), Wis. Adm. Code]
(6) Particulate matter emissions from P56 may not exceed the most restrictive of: ¹² (a) 0.40 pounds per 1000 pounds gas; (b) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or (c) 0.45 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	(6) The permittee shall operate overspray filters to control particulate matter emissions whenever the P56 is operating. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.] (7) The permittee shall maintain the pressure drop across the overspray filters at not less than 0.4 inches of water and not greater than 0.9 inches of water or within a different normal operating range approved by the Department in writing, whenever P56 is operating. [s. NR 407.09(1), Wis. Adm. Code] (8) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(6) The permittee shall monitor and record the pressure drop across the paint overspray filters once for every 8 hours of operation or once per day of operation, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code] (7) The permittee shall keep records of the results of the inspections required by I.A.3.b.(8) which include: (a) the date of the inspection; (b) the initials of the individual performing the inspection; (c) a description of the findings of the inspection; (d) a description of any repairs or maintenance or filter replacements performed. [s. NR 439.04(1)(d), Wis. Adm. Code]

⁸ Because the emission limitation in I.B.9.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

⁹ These plans and specifications are sufficient because the curing oven and the thermal oxidizer are designed to only burn natural gas and/or propane.

¹⁰ Because the emission limitation in I.B.8.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

¹¹ These plans and specifications are sufficient because the curing oven and the thermal oxidizer are designed to only burn natural gas and/or propane.

¹² In this case the process weight rate is the most restrictive based on a maximum raw material throughput

a. Particulate Matter Emission Limitations:	b. Compliance Demonstration Methods:	c. Record Keeping and Monitoring:
<p>(7) Particulate matter emissions from P108 may not exceed the most restrictive of:¹³</p> <p>(a) 0.40 pounds per 1000 pounds gas;</p> <p>(b) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(c) 0.22 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(9) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever P108 is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(10) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.19.c.(1)(a), whenever P108 is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(8) The permittee shall monitor and record the pressure drop across each paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>(8) Particulate matter emissions from P113 may not exceed the most restrictive of:¹⁴</p> <p>(i) 0.40 pounds per 1000 pounds gas;</p> <p>(ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(iii) 0.33 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(11) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever P113 is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(12) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.19.c.(1)(a), whenever P113 is operating. [s. NR 407.09(1), Wis. Adm. Code]</p>	<p>(9) The permittee shall monitor and record the pressure drop across each paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>
<p>(9) Particulate matter emissions from P134 may not exceed the most restrictive of:¹⁵</p> <p>(a) 0.40 pounds per 1000 pounds gas;</p> <p>(b) $E = 3.59 P^{0.62}$</p>	<p>(13) The permittee shall operate overspray filters to control particulate matter emissions whenever P134 is operating. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(10) The permittee shall monitor and record the pressure drop across the paint overspray filters once for every 8 hours of operation or once per day of operation, whichever yields the</p>

of 0.3 tons per hour, a stack gas flow rate of 10,500 ACFM, and an exhaust gas temperature of 80°F. The limitation of 0.45 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

¹³ The limitation of 0.22 pounds per hour was determined as part of the review for construction permit 93-POY-092 and is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

¹⁴ The limitation of 0.33 pounds per hour was determined as part of the review for construction permit 93-POY-092 and is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

¹⁵ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.3 tons per hour, a stack gas flow rate of 9000 ACFM, and an exhaust gas temperature of 80°F. The limitation of 0.45 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

a. Particulate Matter Emission Limitations:	b. Compliance Demonstration Methods:	c. Record Keeping and Monitoring:
<p>where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or (c) 0.45 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(14) The permittee shall maintain the pressure drop across the overspray filters at not less than 0.05 inches of water and not greater than 0.8 inches of water or within a different normal operating range approved by the Department in writing, whenever P134 is operating. [s. NR 407.09(1), Wis. Adm. Code]</p> <p>(15) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p> <p>(11) The permittee shall keep records of the results of the inspections required by I.A.3.b.(15) which include: (a) the date of the inspection; (b) the initials of the individual performing the inspection; (c) a description of the findings of the inspection; (d) a description of any repairs or maintenance or filter replacements performed. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p>(10) Particulate matter emissions from P139 may not exceed the most restrictive of:¹⁶ (a) 0.40 pounds per 1000 pounds gas; (b) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or (c) 0.45 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(16) The permittee shall operate overspray filters to control particulate matter emissions whenever P139 is operating. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(17) The permittee shall maintain the pressure drop across the overspray filters at not less than 0.05 inches of water and not greater than 0.7 inches of water or within a different normal operating range approved by the Department in writing, whenever P139 is operating. [s. NR 407.09(1), Wis. Adm. Code]</p> <p>(18) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(12) The permittee shall monitor and record the pressure drop across the paint overspray filters once for every 8 hours of operation or once per day of operation, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p> <p>(13) The permittee shall keep records of the results of the inspections required by I.A.3.b.(18) which include: (a) the date of the inspection; (b) the initials of the individual performing the inspection; (c) a description of the findings of the inspection; (d) a description of any repairs or maintenance or filter replacements performed. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p>(11) Particulate matter emissions from P145 may not exceed the most restrictive of:¹⁷</p>	<p>(19) The permittee shall operate overspray filters to control particulate matter emissions whenever P145 is operating. [ss. NR</p>	<p>(14) The permittee shall monitor and record the pressure drop across the paint overspray filters once for every</p>

¹⁶ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.2 tons per hour, a stack gas flow rate of 10,000 ACFM, and an exhaust gas temperature of 80°F. The limitation of 0.45 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

¹⁷ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 1.0 tons per hour, a stack gas flow rate of 12,000 ACFM, and an exhaust gas temperature of 80°F. The limitation of 1.45 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

a. Particulate Matter Emission Limitations:	b. Compliance Demonstration Methods:	c. Record Keeping and Monitoring:
(a) 0.40 pounds per 1000 pounds gas; (b) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or (c) 1.45 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]	407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.] (20) The permittee shall maintain the pressure drop across the overspray filters at not less than 0.02 inches of water and not greater than 0.35 inches of water or within a different normal operating ranges approved by the Department in writing, whenever P145 is operating. [s. NR 407.09(1), Wis. Adm. Code] (21) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	8 hours of operation or once per day of operation, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code] (15) The permittee shall keep records of the results of the inspections required by I.A.3.b.(21) which include: (a) the date of the inspection; (b) the initials of the individual performing the inspection; (c) a description of the findings of the inspection; (d) a description of any repairs or maintenance or filter replacements performed. [s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]

4. Formaldehyde Emissions*

a. Limitations:

(1) * The permittee may not emit formaldehyde at a rate greater than 20.8 pounds per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]

b. Compliance Demonstration Methods:

(1) * Each month the permittee shall calculate the total facility emissions of formaldehyde as follows:

$$E_{form} = [(V_1 \times W_1 \times F_1) + (V_2 \times W_2 \times F_2) + \dots + (V_n \times W_n \times F_n)] - [(R_1 \times G_1) + (R_2 \times G_2) + \dots + (R_m \times G_m)]$$

where:

E_{form} is the monthly emissions of formaldehyde (pounds/month);

x identifies each HAP emitted from the facility

V is the monthly usage of each ink, coating, solvent, and other material containing formaldehyde used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other material containing formaldehyde used during the month (pounds/gallon);

F is the formaldehyde content of each ink, coating, solvent, or other material containing formaldehyde used during the month expressed as a weight fraction (i.e. if a material is 25% formaldehyde by weight F would be 0.25);

n identifies each ink, coating, solvent or other material containing formaldehyde used during the month;

R is the amount of each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site (lbs/month);

G is the formaldehyde content of each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site expressed as a weight fraction (i.e. if a spent material is 25% formaldehyde by weight G would be 0.25);

m identifies each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site during.
[s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) *To demonstrate compliance with condition I.A.4.a.(1), the permittee shall calculate the emissions of formaldehyde, averaged over each 12 consecutive month period by dividing the total monthly emissions of formaldehyde as calculated in I.A.4.b.(1) for each 12 consecutive month period by 12. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

c. Record Keeping and Monitoring Requirements:

(1) *The permittee shall keep monthly records of the following:

- (a) A unique name or identification number for each ink, coating, solvent, or other material containing formaldehyde used at the facility;
- (b) The weight fraction of formaldehyde (F_n) of each ink, coating, solvent, or other material used at the facility;
- (c) The amount of each ink, coating, solvent, or other material containing formaldehyde used in gallons per month (V_n);
- (d) The density of each ink, coating, solvent, or other material containing formaldehyde used in pounds per gallon (W_n);
- (e) The amount of spent ink, coating, solvent, or other material containing formaldehyde recovered each month to be shipped off site in pounds per month (R_m);
- (f) The weight fraction of each spent ink, coating, solvent or other material containing formaldehyde recovered each month to be shipped off site, expressed as a weight fraction (G_m);
- (g) The facility total monthly emissions of formaldehyde in pounds per month (E_{form}), as calculated in I.A.4.b.(1); and
- (h) The total amount of formaldehyde emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.A.4.b.(2).

[s. NR 439.04(1)(d), Wis. Adm. Code]

(2) *The permittee shall use coating manufacturer's formulation data to determine the formaldehyde (F_n) of the of the inks, coatings, solvents or other materials containing formaldehyde used at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]

(3) *The permittee shall analyze the spent ink, coating, solvent and other materials containing formaldehyde recovered and shipped off site to determine the HAP content (G) no less than: (i) each time there is a change to materials or process operations that may affect the waste stream; or (ii) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Formaldehyde Emissions: Whenever compliance emission testing is required, US EPA Method 0011 shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

5. Visible Emissions

a. Limitations:

(1) The visible emissions from stacks exhausting the emissions units at the facility may not exceed 20% opacity.
[s. NR 431.05, Wis. Adm. Code]

b. Compliance Demonstration Methods:

(1) The compliance demonstration methods listed for particulate matter emissions in I.A.3.b.(1) through (21) shall also serve as compliance demonstration methods for the visible emissions limitations in I.A.5.a.(1). [s. NR 407.09(4), Wis. Adm. Code]

c. Record Keeping and Monitoring Requirements:

(1) The record keeping and monitoring requirements listed for particulate matter emissions in I.A.3.c.(1) through (15) shall also serve as the record keeping and monitoring requirements for the visible emission limitations in I.A.5.a.(1). [s. NR 407.09(1)(c)1., Wis. Adm. Code]

d. Reference Test Methods:

(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

6. Operational Flexibility

a. New Equipment Construction and Modification: The permittee may commence construction or modification (but not operation) of new process equipment prior to obtaining a construction permit, provided the following conditions are met. The following conditions do not apply if a proposed project is exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(1) The permittee shall submit the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department:

- (a) Two copies of a complete construction and operation permit application describing the proposed equipment;
 - (b) An application fee of \$1350 or other amount as required by s. NR 410.03(1)(d), Wis. Adm. Code; and
 - (c) Information describing how the interested persons group was notified of the proposed project.
- [ss. 299.80(10) and (11)(b), Wis. Stats.]

(2) The Department shall process the permit application in accordance with ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code, however, the permittee need not wait for permit issuance to commence construction. The Department shall process the permit application as both a construction permit and a significant revision to this operation permit and issue both permits simultaneously to reduce the administrative burden of issuing a construction permit that expires 18 months after issuance followed by an operation permit. The Department shall send an invoice outlining the fees required for processing the construction permit for the proposed project, including the fees for an expedited permit review authorized by s. NR 410.03(o), Wis. Adm. Code, less the \$1350 permit application fee. [ss. 299.80(2)(h), (4)(b), (10) and (11)(b), Wis. Stats.]

(3) The permittee shall pay the total amount of the fee invoice within 30 days of receipt.¹⁸ [s. 299.80(10), Wis. Stats.]

(4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.¹⁹ [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

¹⁸ Pursuant to s. 299.80(10), Wis. Stats., a participant in a cooperative agreement shall pay the same fees required under chs. 280 to 295, Wis. Stats. that it would be required to pay if it had not entered into a cooperative agreement. Therefore, while the requirement to obtain a construction permit prior to installation is waived, the permittee is still required to pay the fees that would have been assessed had a construction permit been issued under ch. NR 406, wis. Adm. Code.

¹⁹ By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air

(5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction of the equipment in question immediately.

b. New Equipment Operation: The permittee may operate new process equipment, provided one of the following alternate scenarios are met. The following conditions do not apply if a proposed project is exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(1) *Alternate Scenario #1:* The permittee may operate new process equipment provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.6.a. and the Department issues a construction permit pursuant to ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code. The permittee shall operate the new process equipment in compliance with the conditions contained in any construction permit issued by the Department. [s. NR 406.03, Wis. Adm. Code]

(2) *Alternate Scenario #2:* The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.6.a. and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

- (a) The permittee shall submit two copies of the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department, 14 calendar days prior to the date of initial operation:
- (i) Information identifying all applicable requirements from the Wisconsin Statutes, Wisconsin Administrative Code, and federal Clean Air Act for the proposed equipment;
 - (ii) A quantification of the air pollution emissions that would result from the proposed project;
 - (iii) A computer dispersion modeling analysis showing the National Ambient Air Quality Standards will be protected if the proposed project results in an increase in potential particulate matter, sulfur dioxide, nitrogen oxide, and/or carbon monoxide emissions.
 - (iv) A computer dispersion modeling analysis showing the Acceptable Ambient Concentrations will be protected if the proposed project results in an increase in emissions of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code so that the resulting facility total emissions of the hazardous air pollutant are above the corresponding Table Value(s) OR results in the emission of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code that was not previously emitted, at a rate greater than its corresponding Table Value(s); and

pollutant emissions. Requirement I.A.6.a.(1)(g) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

- (v) An analysis showing the proposed project will not cause the total facility wide potential emissions of particulate matter, sulfur dioxide, nitrogen oxides or carbon monoxide to exceed 100 tons per year. Any proposed new or relocated source that will result in the facility wide potential emissions of any one of these pollutants exceeding 100 tons per year is not eligible for this waiver. If the facility wide potential emissions of any one of the pollutants would be greater than 100 tons per year as the result of a proposed project, the permittee shall comply with the construction permit requirements outlined in ch. NR 406, Wis. Adm. Code and the significant operation permit revision requirements of s. NR 407.13, Wis. Adm. Code.²⁰ [ss. 299.80(10) and (11)(b), Wis. Stats.]
- (b) The Department has 14 calendar days from the date that all the information outlined in (a) is received to request additional information or object to the proposed project. If the Department requests additional information during the original 14 calendar day period the Department shall have an additional 7 calendar days from the date of receipt of the information to request additional information or object to the proposed project. Under no scenario shall the Department have less than 14 days to review original submittal. If the Department does not respond within 14 calendar days from the date that all the information outlined in (a) is submitted, or within 7 days from the date that any additional information requested by the Department is submitted, whichever is later, the permittee may commence initial operation of the proposed equipment. The Department may provide written approval to commence initial operation of the proposed equipment prior to the end of the 14 calendar day period. If this is the case the permittee may commence initial operation upon receipt of this written approval. [ss. 299.80(2)(h) and (11)(b), Wis. Stats.]
- (3) *Alternate Scenario #3:* The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.6.a. and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]
- (a) The Department provides written approval to commence initial operation of the proposed equipment. This written approval shall only be provided after the Department completes an air quality dispersion modeling analysis to ensure that the national ambient air quality standards and acceptable ambient concentrations will be protected while the proposed equipment is operating;
- (b) The permittee shall comply with any specific conditions included in the Department's written approval to commence initial operation;

²⁰ This requirement is necessary because if the potential emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeds 100 tons the facility would be considered a major source for Part 70 purposes and would be required to obtain either a Part 70 source permit or a synthetic minor, non-Part 70 source permit containing conditions that limit the potential emissions of all criteria pollutants to less than 100 tons per year.

(4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.²¹ [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

(5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction and/or operation of the equipment in question immediately.

7. **Facility Wide Reporting Requirements**

a. Submit the results of monitoring or a summary of monitoring results required by Part I.A. of this permit to the Department annually.

- (1) The time period to be addressed by the submittal are: January 1 to December 31.
- (2) The report shall be submitted to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.
- (3) All deviations from and violations of applicable requirements shall be clearly identified in the submittal.
- (4) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(b), Wis. Adm. Code]

b. Submit a certification of compliance with the requirements of Part I.A. of this permit to the Department annually.

- (1) The time period to be addressed by the report is the January 1 to December 31 period which precedes the report.

²¹ By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air pollutant emissions. Requirement I.A.6.a.(1)(g) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

- (2) The report shall be submitted to the Wisconsin Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period.
- (3) The information included in the report shall comply with the requirements of Part II Section N of this permit.
- (4) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report.
[s. NR 439.03(1)(c), Wis. Adm. Code]

c. Report actual facility wide volatile organic compound and hazardous air pollutant emissions as follows:

- (1) The permittee shall submit a report summarizing the actual, facility wide volatile organic compound and hazardous air pollutant emissions for each consecutive 12 month period as calculated in conditions I.A.1.b.(2) and I.A.2.b.(2) and (4), every 6 months.
- (2) The period addressed by the report shall be the 6 month period starting on the date the Cooperative Agreement is signed or other date agreed upon and approved by DNR, U.S. EPA and the permittee, and each subsequent 6 month period thereafter.
- (3) A copy of the report shall be submitted to the DNR (Marty Sellers, Air Management Engineer, Department of Natural Resources, 3550 Mormon Coulee Road, La Crosse, WI 54601) and the U.S. EPA (Steve Rothblatt, Branch Chief, Air Program Branch, U.S. EPA, 77 W. Jackson Blvd., Mailcode: AR-18J, Chicago, IL 60604) within twenty days following the end of the reporting period.
- (4) If the report shows the actual facility wide volatile organic compound or hazardous air pollutant emissions have exceeded 50 percent of the allowable limitations outlined in conditions I.A.1.a and I.A.2.a.(1) and (2), the permittee shall provide an explanation why emissions reached the levels that they did and how they intend to ensure emissions will not exceed the allowable limitations outlined in conditions I.A.1.a. and I.A.2.a.(1) and (2).

[s. NR 439.03(1)(a), Wis. Adm. Code]

8. Compliance Testing Requirements

a. Whenever compliance emission tests are required by the Department:

- (1) Any compliance emission tests required by the Department shall be conducted while operating at 100% capacity. If operation at 100% capacity is not feasible, the sources shall operate at a capacity which is approved by the Department in writing.
- (2) The reference test methods outlined in this permit shall be used unless an alternate, U.S. EPA approved, test method is approved by the Department in writing.
- (3) The Department shall be informed at least 20 working days prior to any tests so a Department representative can witness the testing.
- (4) At the time of notification, a compliance test plan shall also be submitted for approval.
- (5) Two copies of the report on any required tests shall be submitted to the Department for evaluation within 60 days after the tests.

[s. NR 439.07, Wis. Adm. Code]

B. *Part I.A. of this operation permit is effective so long as the permittee is operating under a Cooperative Agreement with the Department as entered into under s. 299.80 Wis. Stats. If any such Cooperative Agreement expires or is revoked for any reason, Part I.A. of this operation permit is no longer effective and Part I.B. becomes the effective operation permit for the facility. If any such Cooperative Agreement expires or is revoked for any reason, the permittee shall comply with any delayed compliance deadlines and practical interim requirements established by the Department in a written revocation decision until the Department issues the approvals required under chs. 280 to 295, Wis. Stats, that were replaced by the above referenced Cooperative Agreement.*

- 1.** **B20, Stack S10 - Natural Gas/Propane Boiler Rated at 10.5 mmBtu/hr - Installed 1977**
B21, Stack S10 - Natural Gas/Propane Boiler Rated at 10.5 mmBtu/hr - Installed 1977

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions from each boiler may not exceed 0.15 pounds per million Btu heat input. [s. NR 415.06(2)(a), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in each boiler. ²² [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site, plans and specifications that indicate each boiler's fuel usage design capabilities. ²³ [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Visible	(a) 20% opacity [s. NR	(a) The permittee shall only fire natural	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance

²² Because the emission limitations listed in I.B.1.b.(1)(a) are equal to the maximum theoretical emissions for each boiler while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

²³ These plans and specifications are sufficient because each boiler is designed to only burn natural gas and/or propane.

²⁴ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
Emissions	431.05, Wis. Adm. Code]	gas and/or propane in each boiler. ²⁴ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The permittee shall retain on site, plans and specifications that indicate each boiler's fuel usage design capabilities. ²⁵ [s. NR 439.04(1)(d), Wis. Adm. Code]

²⁵ These plans and specifications are sufficient because each boiler is designed to only burn natural gas and/or propane.

2. P70, Stack S15 - Sixteen Pad Printers (PPP-WS-44 through PPP-WS-47, PPP-WS-69 through PPP-WS-71, PPP-WS-98 through PPP-WS-102, and PPP-WS-118 through PPP-WS-121) - Installed 1989-1994

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> The permittee may not use coatings or inks with a VOC content greater than 6.5 pounds per gallon as applied. [s. NR 424.03(2)(b), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.2.a.(3)(c) and (d) to demonstrate compliance with I.B.2.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on P70: (i) A unique name of identification number for each ink and other VOC containing material, as applied; and (ii) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon for inks used. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the of the coatings used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

3. P76, Stack S16 - One Plastic Parts Roll Coater with a natural gas/propane fired drying oven rated at 2.25 mmBtu/hr - Installed 1998

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Particulate Matter Emissions</p>	<p>(a) Emissions may not exceed 0.15 pounds per mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]</p>	<p>(a) The permittee shall only fire natural gas and/or propane in the curing oven.²⁶ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site, plans and specifications that indicate the curing oven's fuel usage design capabilities.²⁷ [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p>b. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> (i) When coating plastic parts the VOC content of the coatings applied on this process may not exceed 6.8 lb/gal, as applied;²⁸ and</p>	<p>(a) The permittee shall maintain the records required by I.B.3a.(3)(c) and (d) to demonstrate compliance with I.B.3.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p>

²⁶ Because the emission limitation in I.B.3.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

²⁷ These plans and specifications are sufficient because the curing oven is designed to only burn natural gas and/or propane.

²⁸ The applicant has demonstrated that 85% control of this source is infeasible. The limitation represents LACT for this source.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<i>Continued on Next Page...</i>	(ii) The permittee may not use more than 1,333 gallons of ink per month, as determined by an average over any 12 consecutive months. ²⁹ [s. NR 424.03(2)(c), Wis. Adm. Code and s. 285.65(10), Wis. Stats.]		(b) Reference Test Method for Volatile Organic Compound Content: Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]

²⁹ This condition documents the restriction requested by the permittee which was used for the determination of the feasibility of 85% control.

3. P76, Stack S16 - One Plastic Parts Roll Coater with a natural gas/propane fired drying oven rated at 2.25 mmBtu/hr - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p>	<p>(b) When coating metal parts with baked or specially cured coating technology the permittee may not cause, allow or permit the emissions of any VOCs in excess of:</p> <ul style="list-style-type: none"> (i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings; (ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; (iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis Adm. Code] 	<p>(b) The permittee shall comply with the limitations of I.B.3.b.(1)(b) by the application of low solvent content coating technology [s. NR 422.04(2)(a), Wis. Adm. Code]</p>	<p>(c) The permittee shall keep the following records for each coating and other VOC containing materials used on P76:</p> <ul style="list-style-type: none"> (i) A unique name of identification number for each ink and other VOC containing material, as applied; (ii) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon for inks used; (iii) The amount of each ink and other VOC containing material used on P76 during each calendar month; and (iv) The twelve month rolling average monthly coating usage. [s. NR 439.04(1)(d), Wis. Adm. Code.] <p>(d) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the of the coatings used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p>c. Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The permittee shall only fire natural gas and/or propane in the curing oven.³⁰ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site, plans and specifications that indicate the curing oven's fuel usage design capabilities.³¹ [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

³⁰ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

³¹ These plans and specifications are sufficient because the curing oven is designed to only burn natural gas and/or propane.

4. P77, Stack S17 - Miscellaneous Facility Wide Cleanup

Because cleanup is performed using a wipe cleaning operation and the facility is located outside of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha counties, it is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(g)1., Wis. Adm. Code. The cleanup solvent use is subject to general emission limitations for volatile organic compounds outline in ss. NR 419.03 and NR 419.04, Wis. Adm. Code which are included in Part II of this operation permit.

5. P18, Stack S18 - Five lithographic presses each with an associated UV curing oven (PLO-WS-18, PLO-WS-19, PLO-WS-20, PLO-WS-21, and PLO-WS-22) - 2 installed in 1990, 2 installed in 1996 and 1 installed in 1997

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> The permittee shall only use UV curable inks on the process. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) To demonstrate that only UV curable inks are used per condition I.B.5.a.(1)(a), the line speed through the oven shall be maintained at a minimum of 40 feet per minute. [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall monitor and record the line speed through the oven at least once per shift. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

6. P28, Stack S28 - Two Screening Machines with a natural gas/LP drying oven rated at 3.5 mmBtu/hr - Installed 1997

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Volatile Organic Compounds	<p>(a) <u>Latest Available Control Techniques</u>: (i) The VOC content of the inks applied on this source may not exceed 6.9 lb/gal, as applied.³² (ii) The permittee may not use more than 1,241 gallons of ink per month, as determined by an average over any 12 consecutive months.³³ [s. NR 424.03(2)(c), Wis. Adm. Code and s. 285.65(10), Wis. Stats.]</p>	<p>(a) The permittee shall maintain the records required by I.B.6.a.(3)(c) and (d) to demonstrate compliance with I.B.6.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content</u>: Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on P28:</p> <ul style="list-style-type: none"> (i) A unique name of identification number for each ink and other VOC containing material, as applied; (ii) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon for inks used; (iii) The amount of each ink and other VOC containing material used on P38 during each calendar month; and (iv) The twelve month rolling average monthly coating usage. [s. NR 439.04(1)(d), Wis. Adm. Code.] <p>(d) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the of the coatings used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

³² The applicant has demonstrated that 85% control of this source is infeasible. The limitation represents LACT for this source.

³³ This condition documents the restriction requested by the permittee which was used for the determination of the feasibility of 85% control.

6. P28, Stack S28 - Two Screening Machines with a natural gas/LP drying oven rated at 3.5 mmBtu/hr - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
b. Particulate Matter Emissions	(a) Emissions may not exceed 0.15 pounds per mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the curing oven. ³⁴ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site, plans and specifications that indicate the curing oven's fuel usage design capabilities. ³⁵ [s. NR 439.04(1)(d), Wis. Adm. Code]
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the	(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

³⁴ Because the emission limitation in I.B.6.b.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

³⁵ These plans and specifications are sufficient because the curing oven is designed to only burn natural gas and/or propane.

³⁶ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
		curing ovens. ³⁶ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]	(b) The permittee shall retain on site, plans and specifications that indicate each curing oven's fuel usage design capabilities. ³⁷ [s. NR 439.04(1)(d), Wis. Adm. Code]

³⁷ These plans and specifications are sufficient because the curing oven is designed to only burn natural gas and/or propane.

7. P29, Stack S29 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.75 mmBtu/hr - Installed 1995

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
a. Particulate Matter Emissions	(a) Emissions may not exceed 0.15 pounds per mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]	(a) The permittee shall only fire natural gas and/or propane in the curing oven and thermal oxidizer. ³⁸ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Particulate Matter Emissions</u> : Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code] (b) The permittee shall retain on site, plans and specifications that indicate the thermal oxidizer's and the curing oven's fuel usage design capabilities. ³⁹ [s. NR 439.04(1)(d), Wis. Adm. Code]
b. Volatile Organic Compounds <i>Continued on</i>	(a) No owner or operator of a miscellaneous metal parts or products coating line using a baked or specially cured coating technology may cause, allow or permit the emissions of any VOCs in excess of: (i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings; (ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; (iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other	(a) The permittee shall comply with the limitations of I.B.7.b.(1)(a) by one of the following methods: (i) The application of low solvent content coating technology [s. NR 422.04(2)(a), Wis. Adm. Code]; (ii) Thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidizer are oxidized to non-organic compounds. [s. NR 422.04(2)(c), Wis. Adm. Code] (iii) <i>Continued on Next Page...</i>	(a) The permittee shall collect and record: (i) A unique name or identification number for each coating, as applied; (ii) The VOC content of each coating, as applied, in units of pounds of VOC per gallon, excluding water. [s. NR 439.04(5)(a), Wis. Adm. Code] (b) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]

³⁸ Because the emission limitation in I.B.7.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

³⁹ These plans and specifications are sufficient because the curing oven and the thermal oxidizer are designed to only burn natural gas and/or propane.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<i>Next Page...</i>	coatings. [s. NR 422.15(2), Wis Adm. Code]		

7. P29, Stack S29 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.75 mmBtu/hr - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>	<p>(b) SOLVENT WASHINGS. All VOC emissions from solvent washings shall be considered in the emission limitation in condition I.B.7.b.(1)(a), unless the used wash solvent is directed into containers that prevent evaporation into the atmosphere. [s. NR 422.15(8), Wis. Adm. Code]</p> <p>(c) The permittee may not coat paper or vinyl plastic with roll coaters P29. This requirement is necessary to avoid being subject to the requirements of s. NR 422.07 or NR 422.08. [s. 285.65(3), Wis. Stats.]</p>	<p><i>Continued from previous page...</i></p> <p>(iii) IN-LINE AVERAGING. The permittee may achieve compliance through a daily volume-weighted average of all coatings applied on P29 subject to the same numerical limit in I.B.7.b.(1)(a). The permittee may not cause, allow or permit the daily volume-weighted average VOC content to exceed the corresponding emission limitation in I.B.7.b.(1)(a). The daily volume-weighted average VOC content shall be calculated by using the following equation:</p> $VOC_A = \frac{\sum_{i=1}^n C_i V_i}{V_T}$ <p>where: VOC_A is the volume-weighted average VOC content of 2 or more coatings applied on P29 during any day in pounds per gallon of coating, excluding water; i is the subscript denoting an individual coating n is the number of different coating subject to the same numerical emission limit applied during any day on P29; C_i is the VOC content of each coating (i) as applied during any day on P29 in pounds per gallon of coating, excluding water; V_i is the volume of each coating (i), excluding water, as applied during any day on the P29 in gallons; V_T is the total volume of all n coatings subject to the same numerical limit in I.B.7.b.(1)(a), excluding water, applied during any day on P29 in gallons. [s. NR 422.04(1)(a), Wis. Adm. Code]</p>	<p>(c) If demonstrating compliance through the use of in-line averaging, the permittee shall collect and record the following for each day of operation:</p> <ul style="list-style-type: none"> (i) The name or identification number of each coating applied on P29; (ii) The volume of each coating applied in gallons, excluding water. (iii) The daily volume-weighted average VOC content of all coatings applied on P29 as calculated under I.B.7.b.(2)(a)(iii). [s. NR 439.04(5)(g), Wis. Adm. Code] <p>(d) If achieving compliance through the use of a thermal oxidizer, the permittee shall collect and record:</p> <ul style="list-style-type: none"> (i) The allowable emission rate from I.B.7.b.(1)(a) in pounds per gallon of coating, excluding water; (ii) The amount of each coating in gallons, delivered to the applicator; (iii) The volume fraction of solids in each coating delivered to the applicator; (iv) The density of the VOC used in each coating or ink in pounds per gallon, delivered to the applicator; (v) The total allowable emissions as calculated under I.B.7.b.(2)(b); (vi) The actual emissions for those coatings for which allowable emissions were calculated under I.B.7.b.(2)(b) when considering the control device; (vii) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line operation; (viii) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages. [s. NR 439.04(5)(e), Wis. Adm. Code]

7. P29, Stack S29 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.75 mmBtu/hr - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>		<p>(b) The design, operation and efficiency of any capture system used with the incinerator required by I.B.7.b.(2)(a)(ii) shall be certified in writing by the permittee. The efficiency of the capture system is subject to approval by the Department. The efficiency of the capture system shall be great enough to insure that for any day either 95% overall control is achieved or the emissions from the controlled line are less than or equal to the amount determined using the following equation:</p> $E = \sum_{i=1}^n (A_i B_i C_i / D_i)$ <p>where: E is the total allowable daily emissions of VOCs in pounds from all coatings subject to the same numerical emission limitation applied on P29. i is the subscript denoting an individual coating; n is the number of different coatings applied; A_i is the allowable emission rate from I.B.7.b.(1)(a) in pounds per gallon of coating, excluding water, delivered to the applicator; B_i is the amount of coating in gallons, delivered to the applicator during the actual production day; D_i is the theoretical volume fraction of solids in the coating necessary to meet the allowable emission rate from I.B.7.b.(1)(a) calculated from: $D_i = 1 - [A_i / P_i]$ where P_i is the density of the VOC used in the coating delivered to the applicator during the actual production day in pounds per gallon. If the coating does not contain any VOCs, or if the actual density cannot be demonstrated by the permittee, a value of 7.36 pounds per gallon shall be used for P. [s. NR 422.04(4), Wis. Adm. Code.]</p> <p>(c) The operating temperature of the thermal incinerator shall be maintained at no less than the minimum operating temperature determined to demonstrate compliance in the most recent stack test. [s. 285.65(3), Wis. Stats and s. NR 407.09(1)(a), Wis. Adm. Code]</p>	<p>(e) If operating a thermal oxidizer to achieve compliance as required by I.B.9.b.(2)(a)(ii), the permittee shall continuously monitor and record the operating temperature of the oxidizer. [ss. NR 439.055(1) and (2), and NR 439.04(5)(e), Wis. Adm. Code]</p> <p>(f) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(g) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p>

7. P29, Stack S29 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.75 mmBtu/hr - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p>		<p>(d) Where the requirements of I.B.7.b.(1)(a) are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code. [s. NR 425.04(4), Wis. Adm. Code]</p> <p>(e) <u>Compliance Testing:</u> Compliance emission testing of the incinerator shall be conducted as follows:</p> <p>(i) Testing shall be conducted within 30 days of starting operation of the incinerator after the expiration or revocation of any Cooperative Agreement entered into with the Department under s. 299.80 Wis. Stats to demonstrate compliance with volatile organic compound emission limitations;</p> <p>(ii) In accordance with the compliance testing requirements in I.B.19.b.(1)(a). [ss. NR 439.075(1)(b) and NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(h) The permittee shall retain copies of the results of the tests required by I.B.7.b.(2)(e) at the facility for five years. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p>c. Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The permittee shall only fire natural gas and/or propane in the curing oven and the thermal oxidizer. ⁴⁰ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site, plans and specifications that indicate the thermal oxidizer's and curing oven's fuel usage design capabilities. ⁴¹ [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁴⁰ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

⁴¹ These plans and specifications are sufficient because the curing oven and thermal oxidizer are designed to only burn natural gas and/or propane.

8. P37, Stack S37 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.5 mmBtu/hr - Installed 1995

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Particulate Matter Emissions</p>	<p>(a) Emissions may not exceed 0.15 pounds per mmBtu. [s. NR 415.06(2)(a), Wis. Adm. Code]</p>	<p>(a) The permittee shall only fire natural gas and/or propane in the curing oven and thermal oxidizer.⁴² [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site, plans and specifications that indicate the thermal oxidizer's and the curing oven's fuel usage design capabilities.⁴³ [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p>b. Volatile Organic Compounds</p> <p><i>Continued on</i></p>	<p>(a) No owner or operator of a miscellaneous metal parts or products coating line using a baked or specially cured coating technology may cause, allow or permit the emissions of any VOCs in excess of:</p> <ul style="list-style-type: none"> (i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings; (ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; (iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis Adm. Code] 	<p>(a) The permittee shall comply with the limitations of I.B.8.b.(1)(a) by one of the following methods:</p> <ul style="list-style-type: none"> (i) The application of low solvent content coating technology [s. NR 422.04(2)(a), Wis. Adm. Code]; (ii) Thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidizer are oxidized to non-organic compounds. [s. NR 422.04(2)(c), Wis. Adm. Code] 	<p>(a) The permittee shall collect and record:</p> <ul style="list-style-type: none"> (i) A unique name or identification number for each coating, as applied; (ii) The VOC content of each coating, as applied, in units of pounds of VOC per gallon, excluding water. [s. NR 439.04(5)(a), Wis. Adm. Code] <p>(b) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁴² Because the emission limitation in I.B.8.a.(1)(a) is equal to the maximum theoretical emissions while firing these fuels, limiting the type of fuel used is adequate to demonstrate compliance with the particulate matter emission limit. Maximum theoretical particulate matter emissions were calculated using an emission factor of 7.6 pounds per million cubic feet of natural gas fired from AP-42, 5th edition, ch. 1.4.

⁴³ These plans and specifications are sufficient because the curing oven and the thermal oxidizer are designed to only burn natural gas and/or propane.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<i>Next Page...</i>		<i>(iii) Continued on Next Page...</i>	

8. P37, Stack S37 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.5 mmBtu/hr - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>	<p>(b) SOLVENT WASHINGS. All VOC emissions from solvent washings shall be considered in the emission limitation in condition I.B.8.b.(1)(a), unless the used wash solvent is directed into containers that prevent evaporation into the atmosphere. [s. NR 422.15(8), Wis. Adm. Code]</p> <p>(c) The permittee may not coat paper or vinyl plastic with roll coaters P37. This requirement is necessary to avoid being subject to the requirements of s. NR 422.07 or NR 422.08. [s. 285.65(3), Wis. Stats.]</p>	<p><i>Continued from previous page...</i></p> <p>(iii) IN-LINE AVERAGING. The permittee may achieve compliance through a daily volume-weighted average of all coatings applied on P37 subject to the same numerical limit in I.B.8.b.(1)(a). The permittee may not cause, allow or permit the daily volume-weighted average VOC content to exceed the corresponding emission limitation in I.B.8.b.(1)(a). The daily volume-weighted average VOC content shall be calculated by using the following equation:</p> $VOC_A = \left[\frac{\sum_{i=1}^n C_i V_i}{V_T} \right]$ <p>where: VOC_A is the volume-weighted average VOC content of 2 or more coatings applied on P37 during any day in pounds per gallon of coating, excluding water; i is the subscript denoting an individual coating n is the number of different coating subject to the same numerical emission limit applied during any day on P37; C_i is the VOC content of each coating (i) as applied during any day on P37 in pounds per gallon of coating, excluding water; V_i is the volume of each coating (i), excluding water, as applied during any day on the P37 in gallons; V_T is the total volume of all n coatings subject to the same numerical limit in I.B.8.b.(1)(a), excluding water, applied during any day on P37 in gallons. [s. NR 422.04(1)(a), Wis. Adm. Code]</p>	<p>(c) If demonstrating compliance through the use of in-line averaging, the permittee shall collect and record the following for each day of operation:</p> <ul style="list-style-type: none"> (i) The name or identification number of each coating applied on P37; (ii) The volume of each coating applied in gallons, excluding water. (iii) The daily volume-weighted average VOC content of all coatings applied on P37 as calculated under I.B.8.b.(2)(a)(iii). [s. NR 439.04(5)(g), Wis. Adm. Code] <p>(d) If achieving compliance through the use of a thermal oxidizer, the permittee shall collect and record:</p> <ul style="list-style-type: none"> (i) The allowable emission rate from I.B.8.b.(1)(a) in pounds per gallon of coating, excluding water; (ii) The amount of each coating in gallons, delivered to the applicator; (iii) The volume fraction of solids in each coating delivered to the applicator; (iv) The density of the VOC used in each coating or ink in pounds per gallon, delivered to the applicator; (v) The total allowable emissions as calculated under I.B.8.b.(2)(b); (vi) The actual emissions for those coatings for which allowable emissions were calculated under I.B.8.b.(2)(b) when considering the control device; (vii) A log of operating time for the capture system, control device, monitoring equipment and the associated coating line operation; (viii) A maintenance log for the capture system, control device and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages. [s. NR 439.04(5)(e), Wis. Adm. Code]

8. P37, Stack S37 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.5 mmBtu/hr - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p> <p><i>Continued on Next Page...</i></p>		<p>(b) The design, operation and efficiency of any capture system used with the incinerator required by I.B.8.b.(2)(a)(ii) shall be certified in writing by the permittee. The efficiency of the capture system is subject to approval by the Department. The efficiency of the capture system shall be great enough to insure that for any day either 95% overall control is achieved or the emissions from the controlled line are less than or equal to the amount determined using the following equation:</p> $E = \sum_{i=1}^n (A_i B_i C_i / D_i)$ <p>where: E is the total allowable daily emissions of VOCs in pounds from all coatings subject to the same numerical emission limitation applied on P37. i is the subscript denoting an individual coating; n is the number of different coatings applied; A_i is the allowable emission rate from I.B.8.b.(1)(a) in pounds per gallon of coating, excluding water, delivered to the applicator; B_i is the amount of coating in gallons, delivered to the applicator during the actual production day; D_i is the theoretical volume fraction of solids in the coating necessary to meet the allowable emission rate from I.B.8.b.(1)(a) calculated from: $D_i = 1 - [A_i / P_i]$ where P_i is the density of the VOC used in the coating delivered to the applicator during the actual production day in pounds per gallon. If the coating does not contain any VOCs, or if the actual density cannot be demonstrated by the permittee, a value of 7.36 pounds per gallon shall be used for P. [s. NR 422.04(4), Wis. Adm. Code.]</p> <p>(c) The operating temperature of the thermal incinerator shall be maintained at no less than the minimum operating temperature determined to demonstrate compliance in the most recent stack test. [s. 285.65(3), Wis. Stats and s. NR 407.09(1)(a), Wis. Adm. Code]</p>	<p>(e) If operating a thermal oxidizer to achieve compliance as required by I.B.8.b.(2)(a)(ii), the permittee shall continuously monitor and record the operating temperature of the oxidizer. [ss. NR 439.055(1) and (2), and NR 439.04(5)(e), Wis. Adm. Code]</p> <p>(f) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(g) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p>

8. P37, Stack S37 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.5 mmBtu/hr - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds - (Continued)</p>		<p>(d) Where the requirements of I.B.8.b.(1)(a) are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code. [s. NR 425.04(4), Wis. Adm. Code]</p> <p>(e) <u>Compliance Testing:</u> Compliance emission testing of the incinerator shall be conducted as follows:</p> <p>(i) Testing shall be conducted within 30 days of starting operation of the incinerator after the expiration or revocation of any Cooperative Agreement entered into with the Department under s. 299.80 Wis. Stats to demonstrate compliance with volatile organic compound emission limitations;</p> <p>(ii) In accordance with the compliance testing requirements in I.B.19.b.(10)(a). [ss. NR 439.075(1)(b) and NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(h) The permittee shall retain copies of the results of the tests required by I.B.8.b.(2)(e) at the facility for five years. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>
<p>c. Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The permittee shall only fire natural gas and/or propane in the curing oven and the thermal oxidizer. ⁴⁴ [ss. 285.65(3) and 285.63(1)(a), Wis. Stats.]</p>	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall retain on site, plans and specifications that indicate the thermal oxidizer's and curing oven's fuel usage design capabilities. ⁴⁵ [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁴⁴ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing these fuels. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

⁴⁵ These plans and specifications are sufficient because the curing oven and thermal oxidizer are designed to only burn natural gas and/or propane.

9. P38, Stack S38 - Two Screening Machines using the drying oven associated with P28 - Installed 1998

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> (i) The permittee may not use coatings or inks with a VOC content greater than 6.9 pounds per gallon as applied. (ii) The two screen printing machines coating usage may not exceed a combined total of 1,000 gallons per month based on a twelve month rolling average. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.9.a.(3)(c) and (d) to demonstrate compliance with I.B.9.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each ink and other VOC containing materials used on P38: (i) A unique name of identification number for each ink and other VOC containing material, as applied; (ii) The VOC content of each ink and other VOC containing material, as applied, in pounds per gallon for inks used; (iii) The amount of each ink and other VOC containing material used on P38 during each calendar month; and (iv) The twelve month rolling average monthly coating usage. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the of the coatings used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

10. Process P56, Stack S56, Control Device C56 - Two Spray Booths PSB-WS-56 and PSB-WS-58 with natural gas fired oven SDO-WS-50

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compound Emissions</p>	<p>(a) <u>Latest Available Control Techniques</u>:⁴⁶ The permittee shall operate under an environmental management system (EMS) that addresses VOC emissions from the facility. This environmental management system shall include (but not be limited to): (i) evaluation of the facility’s significant environmental impacts; (ii) establishment of objectives and targets for improving environmental performance based on consideration of the significant impacts; and (iii) implementation of a program to meet targets. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.10.a.(3)(c) and (d) to demonstrate compliance with I.B.10.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(1) <u>Reference Test Method for Volatile Organic Compound Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(2) The permittee shall keep a copy of the environmental management system required by I.B.10.a.(1)(a) at the facility and make it available to authorized Department representatives upon request. [ss. NR 439.04(1)(d) and NR 439.05, Wis. Adm. Code]</p> <p>(3) The permittee shall keep records of: (a) Their evaluation of significant environmental impacts; (b) Objectives and targets for improving environmental performance as related to volatile organic compound emissions; (c) Programs implemented to met the objectives and targets related to volatile organic compound emissions; (d) The progress made in reaching specified objectives and targets related to volatile organic compound emissions. [s. NR 439.04(d), Wis. Adm. Code]</p>
<p>b. Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The compliance demonstration methods outlined in I.B.10.c.(2)(a) through (c) shall also serve as compliance demonstration methods for</p>	<p>(a) <u>Reference Test Method for Visible Emissions</u>: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The monitoring and records required by I.B.10.c.(3)(b) and (c) shall also serve as the monitoring and records for the visible emission limitations. [s. NR</p>

⁴⁶ For purposes of determining that 85% control of volatile organic compound emissions is infeasible a maximum emission rate of 14.26 pounds per hour was used. This emission rate is based on maximum material usage rates and maximum VOC contents. If the permittee intends to increase either value which in turn results in an increase in the maximum emission rate, the need for a construction permit modification and a re-evaluation of 85% control infeasibility must be made prior to making the changes.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
		condition I.B.10.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	407.09(1)(c)1., Wis. Adm. Code]

10. Process P56, Stack S56, Control Device C56 - Two Spray Booths PSB-WS-56 and PSB-WS-58 with natural gas fired oven SDO-WS-50 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. Particulate Matter Emissions	<p>(a) Emissions from this process may not exceed the most restrictive of:⁴⁷</p> <p>(i) 0.40 pounds per 1000 pounds gas;</p> <p>(ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(iii) 0.45 pounds per hour.</p> <p>[ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate overspray filters to control particulate matter emissions whenever the process is operating. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across the overspray filters at not less than 0.4 inches of water and not greater than 0.9 inches of water or within a different normal operating range approved by the Department in writing, whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p> <p>(c) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across the paint overspray filters once for every 8 hours of operation or once per day of operation, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the results of the inspections required by I.B.10.c.(2)(c) which include:</p> <p>(i) the date of the inspection;</p> <p>(ii) the initials of the individual performing the inspection;</p> <p>(iii) a description of the findings of the inspection;</p> <p>(iv) a description of any repairs or maintenance or filter replacements performed.</p> <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁴⁷ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.3 tons per hour, a stack gas flow rate of 10,500 ACFM, and an exhaust gas temperature of 80°F. The limitation of 0.45 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
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11. P108, Stack S108 - Four Spraybooths (PSB-WS-108, PSB-WS-109, PSB-WS-110, and PSB-WS-111) with one natural gas/propane drying oven SDO-WS-112 rated at 1.2 mmBtu per hour and one electric drying oven - Installed 1994

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Particulate Matter Emissions</p>	<p>(a) Emissions may not exceed the most restrictive of:⁴⁸ (i) 0.40 pounds per 1000 pounds gas; (ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or (iii) 0.22 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.19.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p> <p>(c) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across each paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the results of the inspections required by I.B.11.c.(2)(c) which include: (i) the date of the inspection; (ii) the initials of the individual performing the inspection; (iii) a description of the findings of the inspection; (iv) a description of any repairs or maintenance or filter replacements performed. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁴⁸ The limitation of 0.22 pounds per hour was determined as part of the review for construction permit 93-POY-092 and is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

11. P108, Stack S108 - Four Spraybooths (PSB-WS-108, PSB-WS-109, PSB-WS-110, and PSB-WS-111) with one natural gas/propane drying oven SDO-WS-112 rated at 1.2 mmBtu per hour and one electric drying oven - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> (i) The permittee may not use coatings or inks with a VOC content greater than 6.2 pounds per gallon as applied. (ii) The permittee shall use high volume low pressure (HVLP) spraying techniques on parts with the narrowest portion of the surface greater than 1.75 inches and the shallow recesses with depths of less than 0.25 inches. (iii) Air atomization techniques may be used on parts with the narrowest portion of the surface less than or equal to 1.75 inches, or the shallow recesses with depths of greater than or equal to 0.25 inches, or in cases where the permittee can show that customer finish requirements cannot be achieved with HVLP. (iv) The operating pressure of the HVLP spray gun may not exceed 10 pounds per square inch (guage). [s. NR 424.03(2)(b), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.11.b.(3)(c) through (f) to demonstrate compliance with I.B.11.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p> <p>(b) The permittee shall operate a device that monitors the operating pressure of the HVLP spray gun whenever it is in use. [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each coating and other VOC containing materials used on P108: (a) A unique name of identification number for each coating and other VOC containing material, as applied; and (b) The VOC content of each coating and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the of the coatings used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(e) The permittee shall keep an inventory of all parts sprayed which includes: (i) A unique part identifier (name, number, or description); (ii) The narrowest surface dimension and the greatest shallow recess depth of each part; (iii) A log of whether HVLP or air atomization spray techniques where used on each part; and (iv) For parts that meet the dimension requirements of I.B.4.b.(1)(a)(ii) but customer finish requirements cannot be achieved with HVLP the permittee shall provide an explanation demonstrating that air atomization was necessary. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(f) The permittee shall monitor and record the pressure drop across the HVLP spray gun once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>

11. P108, Stack S108 - Four Spraybooths (PSB-WS-108, PSB-WS-109, PSB-WS-110, and PSB-WS-111) with one natural gas/propane drying oven SDO-WS-112 rated at 1.2 mmBtu per hour and one electric drying oven - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The compliance demonstration methods outlined in I.B.11.a.(2)(a) and (b) shall also serve as compliance demonstration methods for condition I.B.11.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Visible Emissions</u> : Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The monitoring and records required by I.B.11.a.(3)(b) shall also serve as the monitoring and records for the visible emission limitations. [s. NR 407.09(1)(c)1., Wis. Adm. Code]

12. P113, Stack S113 - Four Spraybooths (PSB-WS-113, PSB-WS-114, PSB-WS-115, and PSB-WS-116) with one natural gas/propane drying oven SDO-WS-117 rated at 1.2 mmBtu per hour - Installed 1994

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Particulate Matter Emissions</p>	<p>(a) Emissions may not exceed the most restrictive of:⁴⁹ (i) 0.40 pounds per 1000 pounds gas; (ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or (iii) 0.33 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate a paint overspray filter system to control particulate matter emissions whenever the process is in operation. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across the overspray filter system within the normal operating ranges established according to the schedule outlined in I.B.19.c.(1)(a), whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p> <p>(c) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across each paint overspray filter system once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the results of the inspections required by I.B.12.c.(2)(c) which include: (i) the date of the inspection; (ii) the initials of the individual performing the inspection; (iii) a description of the findings of the inspection; (iv) a description of any repairs or maintenance or filter replacements performed. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁴⁹ The limitation of 0.33 pounds per hour was determined as part of the review for construction permit 93-POY-092 and is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

12. P113, Stack S113 - Four Spraybooths (PSB-WS-113, PSB-WS-114, PSB-WS-115, and PSB-WS-116) with one natural gas/propane drying oven SDO-WS-117 rated at 1.2 mmBtu per hour - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Volatile Organic Compounds</p>	<p>(a) <u>Latest Available Control Techniques:</u> (i) The permittee may not use coatings or inks with a VOC content greater than 6.2 pounds per gallon as applied. (ii) The permittee shall use high volume low pressure (HVLP) spraying techniques on parts with the narrowest portion of the surface greater than 1.75 inches and the shallow recesses with depths of less than 0.25 inches. (iii) Air atomization techniques may be used on parts with the narrowest portion of the surface less than or equal to 1.75 inches, or the shallow recesses with depths of greater than or equal to 0.25 inches, or in cases where the permittee can show that customer finish requirements cannot be achieved with HVLP. (iv) The operating pressure of the HVLP spray gun may not exceed 10 pounds per square inch (guage). [s. NR 424.03(2)(b), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.12.b.(3)(c) through (f) to demonstrate compliance with I.B.12.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p> <p>(b) The permittee shall operate a device that monitors the operating pressure of the HVLP spray gun whenever it is in use. [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p> <p>(c) The permittee shall keep the following records for each coating and other VOC containing materials used on P113: (a) A unique name of identification number for each coating and other VOC containing material, as applied; and (b) The VOC content of each coating and other VOC containing material, as applied, in pounds per gallon. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(d) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the of the coatings used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(e) The permittee shall keep an inventory of all parts sprayed which includes: (i) A unique part identifier (name, number, or description); (ii) The narrowest surface dimension and the greatest shallow recess depth of each part; (iii) A log of whether HVLP or air atomization spray techniques where used on each part; and (iv) For parts that meet the dimension requirements of I.B.12.b.(1)(a)(ii) but customer finish requirements cannot be achieved with HVLP the permittee shall provide an explanation demonstrating that air atomization was necessary. [s. NR 439.04(1)(d), Wis. Adm. Code.]</p> <p>(f) The permittee shall monitor and record the pressure drop across the HVLP spray gun once for every 8 hours of operation or once per day, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p>

12. P113, Stack S113 - Four Spraybooths (PSB-WS-113, PSB-WS-114, PSB-WS-115, and PSB-WS-116) with one natural gas/propane drying oven SDO-WS-117 rated at 1.2 mmBtu per hour - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The compliance demonstration methods outlined in I.B.12.a.(2)(a) and (b) shall also serve as compliance demonstration methods for condition I.B.12.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	(a) <u>Reference Test Method for Visible Emissions</u> : Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The monitoring and records required by I.B.12.a.(3)(b) shall also serve as the monitoring and records for the visible emission limitations. [s. NR 407.09(1)(c)1., Wis. Adm. Code]

13. Process P134, Stack S134, Control Device C134 - 4 Spray Booths PSB-WS-134, PSB-WS-135, PSB-WS-136, and PSB-WS-137 with electric oven SDO-WS-138

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compound Emissions</p>	<p>(a) <u>Latest Available Control Techniques:</u>⁵⁰ The permittee shall operate under an environmental management system (EMS) that addresses VOC emissions from the facility. This environmental management system shall include (but not be limited to): (i) evaluation of the facility’s significant environmental impacts; (ii) establishment of objectives and targets for improving environmental performance based on consideration of the significant impacts; and (iii) implementation of a program to meet targets. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.13.a.(3)(a) and (b) to demonstrate compliance with I.B.13.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall keep a copy of the environmental management system required by I.B.13.a.(1)(a) at the facility and make it available to authorized Department representatives upon request. [ss. NR 439.04(1)(d) and NR 439.05, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of: (i) Their evaluation of significant environmental impacts; (ii) Objectives and targets for improving environmental performance as related to volatile organic compound emissions; (iii) Programs implemented to meet the objectives and targets related to volatile organic compound emissions; (iv) The progress made in reaching specified objectives and targets related to volatile organic compound emissions. [s. NR 439.04(d), Wis. Adm. Code]</p>
<p>b. Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The compliance demonstration methods outlined in I.B.13.c.(2)(a) through (c) shall also serve as compliance demonstration methods for condition I.B.13.b.(1)(a).</p>	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The monitoring and records required by I.B.13.c.(3)(b) and (c) shall also serve as the monitoring and records for the visible emission limitations. [s. NR</p>

⁵⁰ For purposes of determining that 85% control of volatile organic compound emissions is infeasible a maximum emission rate of 7.5 pounds per hour was used. This emission rate is based on maximum material usage rates and maximum VOC contents. If the permittee intends to increase either value which in turn results in an increase in the maximum emission rate, the need for a construction permit modification and a re-evaluation of 85% control infeasibility must be made prior to making the changes.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
		[s. NR 407.09(4), Wis. Adm. Code]	407.09(1)(c)1., Wis. Adm. Code]

13. Process P134, Stack S134, Control Device C134 - Four Spray Booths PSB-WS-134, PSB-WS-135, PSB-WS-136, and PSB-WS-137 with electric oven SDO-WS-138
 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>c. Particulate Matter Emissions</p>	<p>(a) Emissions from this process may not exceed the most restrictive of:⁵¹</p> <p>(i) 0.40 pounds per 1000 pounds gas;</p> <p>(ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(c) 0.45 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate overspray filters to control particulate matter emissions whenever the process is operating. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across the overspray filters at not less than 0.05 inches of water and not greater than 0.8 inches of water or within a different normal operating range approved by the Department in writing, whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p> <p>(c) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across the paint overspray filters once for every 8 hours of operation or once per day of operation, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the results of the inspections required by I.B.13.c.(2)(c) which include:</p> <p>(i) the date of the inspection;</p> <p>(ii) the initials of the individual performing the inspection;</p> <p>(iii) a description of the findings of the inspection;</p> <p>(iv) a description of any repairs or maintenance or filter replacements performed. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁵¹ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.3 tons per hour, a stack gas flow rate of 9000 ACFM, and an exhaust gas temperature of 80°F. The limitation of 0.45 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

14. Process P139, Stack S139, Control Device C139 - Four Spray Booths PSB-WS-139, PSB-WS-140, PSB-WS-141 and PSB-WS-142 with two electric ovens SDO-WS-143 and SDO-WS-144

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compound Emissions</p>	<p>(a) <u>Latest Available Control Techniques:</u>⁵² The permittee shall operate under an environmental management system (EMS) that addresses VOC emissions from the facility. This environmental management system shall include (but not be limited to):</p> <ul style="list-style-type: none"> (i) evaluation of the facility’s significant environmental impacts; (ii) establishment of objectives and targets for improving environmental performance based on consideration of the significant impacts; and (iii) implementation of a program to meet targets. [s. NR 424.03(2)(c), Wis. Adm. Code] 	<p>(a) The permittee shall maintain the records required by I.B.14.a.(3)(b) and (c) o demonstrate compliance with I.B14.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall keep a copy of the environmental management system required by I.CC.1.a.(1) at the facility and make it available to authorized Department representatives upon request. [ss. NR 439.04(1)(d) and NR 439.05, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of:</p> <ul style="list-style-type: none"> (i) Their evaluation of significant environmental impacts; (ii) Objectives and targets for improving environmental performance as related to volatile organic compound emissions; (iii) Programs implemented to met the objectives and targets related to volatile organic compound emissions; (iv) The progress made in reaching specified objectives and targets related to volatile organic compound emissions. [s. NR 439.04(d), Wis. Adm. Code]
<p>b. Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The compliance demonstration methods outlined in I.B.14.c.(2)(b) shall also serve as compliance demonstration methods for</p>	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The monitoring and records required by I.B.14.c.(3)(b) and (c) shall also</p>

⁵² For purposes of determining that 85% control of volatile organic compound emissions is infeasible a maximum emission rate of 21.49 pounds per hour was used. This emission rate is based on maximum material usage rates and maximum VOC contents. If the permittee intends to increase either value which in turn results in an increase in the maximum emission rate, the need for a construction permit modification and a re-evaluation of 85% control infeasibility must be made prior to making the changes.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
		condition I.B.14.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	serve as the monitoring and records for the visible emission limitations. [s. NR 407.09(1)(c)1., Wis. Adm. Code]

14. Process P139, Stack S139, Control Device C139 - Four Spray Booths PSB-WS-139, PSB-WS-140, PSB-WS-141 and PSB-WS-142 with two electric ovens SDO-WS-143 and SDO-WS-144 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
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POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. Particulate Matter Emissions	<p>(a) Emissions from this process may not exceed the most restrictive of:⁵³</p> <p>(i) 0.40 pounds per 1000 pounds gas;</p> <p>(ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(iii) 0.45 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate overspray filters to control particulate matter emissions whenever the process is operating. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across the overspray filters at not less than 0.05 inches of water and not greater than 0.7 inches of water or within a different normal operating range approved by the Department in writing, whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p> <p>(c) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions</u>: Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across the paint overspray filters once for every 8 hours of operation or once per day of operation, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the results of the inspections required by I.B.14.c.(2)(c) which include:</p> <p>(i) the date of the inspection;</p> <p>(ii) the initials of the individual performing the inspection;</p> <p>(iii) a description of the findings of the inspection;</p> <p>(iv) a description of any repairs or maintenance or filter replacements performed.</p> <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁵³ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 0.2 tons per hour, a stack gas flow rate of 10,000 ACFM, and an exhaust gas temperature of 80°F. The limitation of 0.45 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

15. Process P145, Stack S145, Control Device C145 - One Spray Booth PSB-WS-145 with natural gas/propane fired oven SDO-WS-146

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compound Emissions</p>	<p>(a) <u>Latest Available Control Techniques</u>.⁵⁴ The permittee shall operate under an environmental management system (EMS) that addresses VOC emissions from the facility. This environmental management system shall include (but not be limited to):</p> <ul style="list-style-type: none"> (i) evaluation of the facility’s significant environmental impacts; (ii) establishment of objectives and targets for improving environmental performance based on consideration of the significant impacts; and (iii) implementation of a program to meet targets. [s. NR 424.03(2)(c), Wis. Adm. Code] 	<p>(a) The permittee shall maintain the records required by I.B.15.a.(3)(b) and (c) to demonstrate compliance with I.B.15.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall keep a copy of the environmental management system required by I.B.15.a.(1)(a) at the facility and make it available to authorized Department representatives upon request. [ss. NR 439.04(1)(d) and NR 439.05, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of:</p> <ul style="list-style-type: none"> (i) Their evaluation of significant environmental impacts; (ii) Objectives and targets for improving environmental performance as related to volatile organic compound emissions; (iii) Programs implemented to met the objectives and targets related to volatile organic compound emissions; (iv) The progress made in reaching specified objectives and targets related to volatile organic compound emissions. [s. NR 439.04(d), Wis. Adm. Code]
<p>b. Visible Emissions</p>	<p>(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]</p>	<p>(a) The compliance demonstration methods outlined in I.B.15.c.(2) shall also serve as compliance demonstration methods for condition</p>	<p>(a) <u>Reference Test Method for Visible Emissions:</u> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</p> <p>(b) The monitoring and records required by I.B.15.c.(3)(b) and (c) shall also serve as the monitoring and records for the visible emission limitations. [s. NR</p>

⁵⁴ For purposes of determining that 85% control of volatile organic compound emissions is infeasible a maximum emission rate of 38.64 pounds per hour was used. This emission rate is based on maximum material usage rates and maximum VOC contents. If the permittee intends to increase either value which in turn results in an increase in the maximum emission rate, the need for a construction permit modification and a re-evaluation of 85% control infeasibility must be made prior to making the changes.

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
		I.B.15.b.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]	407.09(1)(c)1., Wis. Adm. Code]

15. Process P145, Stack S145, Control Device C145 - One Spray Booth PSB-WS-145 with natural gas/propane fired oven SDO-WS-146 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. Particulate Matter Emissions	<p>(a) Emissions from this process may not exceed the most restrictive of:⁵⁵</p> <p>(i) 0.40 pounds per 1000 pounds gas;</p> <p>(ii) $E = 3.59 P^{0.62}$ where E is the emission limitation in pounds per hour and P is the process weight rate in tons per hour; or</p> <p>(iii) 1.45 pounds per hour. [ss. NR 415.05(1)(o) and NR 415.05(2), Wis. Adm. Code and s. 285.63(1)(b), Wis. Stats.]</p>	<p>(a) The permittee shall operate overspray filters to control particulate matter emissions whenever the process is operating. [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]</p> <p>(b) The permittee shall maintain the pressure drop across the overspray filters at not less than 0.02 inches of water and not greater than 0.35 inches of water or within a different normal operating ranges approved by the Department in writing, whenever the process is operating. [s. NR 407.09(1), Wis. Adm. Code]</p> <p>(c) The permittee shall establish a schedule for and perform periodic inspection, maintenance and replacement of the overspray filters. This schedule shall be submitted to the Department according to I.B.19.c.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Particulate Matter Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 5 and Method 202 shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</p> <p>(b) The permittee shall monitor and record the pressure drop across the paint overspray filters once for every 8 hours of operation or once per day of operation, whichever yields the greater number of measurements. [s. NR 439.055, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of the results of the inspections required by I.B.15.c.(2)(c) which include:</p> <p>(i) the date of the inspection;</p> <p>(ii) the initials of the individual performing the inspection;</p> <p>(iii) a description of the findings of the inspection;</p> <p>(iv) a description of any repairs or maintenance or filter replacements performed. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁵⁵ In this case the process weight rate is the most restrictive based on a maximum raw material throughput of 1.0 tons per hour, a stack gas flow rate of 12,000 ACFM, and an exhaust gas temperature of 80°F. The limitation of 1.45 pounds per hour is necessary to ensure the National Ambient Air Quality Standards for particulate matter are attained and maintained.

16. Process P147, Stack S147, Control Device C147 - Two Screening Machines which use existing ovens associated with P76

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compound Emissions</p>	<p>(a) <u>Latest Available Control Techniques:</u>⁵⁶ The permittee shall operate under an environmental management system (EMS) that addresses VOC emissions from the facility. This environmental management system shall include (but not be limited to): (i) evaluation of the facility’s significant environmental impacts; (ii) establishment of objectives and targets for improving environmental performance based on consideration of the significant impacts; and (iii) implementation of a program to meet targets. [s. NR 424.03(2)(c), Wis. Adm. Code]</p>	<p>(a) The permittee shall maintain the records required by I.B.16.a.(3)(b) and (c) to demonstrate compliance with I.B.16.a.(1)(a). [s. NR 407.09(4), Wis. Adm. Code]</p>	<p>(a) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) The permittee shall keep a copy of the environmental management system required by I.B.16.a.(1)(a) at the facility and make it available to authorized Department representatives upon request. [ss. NR 439.04(1)(d) and NR 439.05, Wis. Adm. Code]</p> <p>(c) The permittee shall keep records of: (i) Their evaluation of significant environmental impacts; (ii) Objectives and targets for improving environmental performance as related to volatile organic compound emissions; (iii) Programs implemented to meet the objectives and targets related to volatile organic compound emissions; (iv) The progress made in reaching specified objectives and targets related to volatile organic compound emissions. [s. NR 439.04(d), Wis. Adm. Code]</p>

⁵⁶ For purposes of determining that 85% control of volatile organic compound emissions is infeasible a maximum emission rate of 18.92 pounds per hour was used. This emission rate is based on maximum material usage rates and maximum VOC contents. If the permittee intends to increase either value which in turn results in an increase in the maximum emission rate, the need for a construction permit modification and a re-evaluation of 85% control infeasibility must be made prior to making the changes.

16. Process P147, Stack S147, Control Device C147 - Two Screening Machines which use existing ovens associated with P76 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
b. Visible Emissions	(a) 20% opacity [s. NR 431.05, Wis. Adm. Code]	(a) The permittee shall only fire natural gas or propane in any non-electric oven associated with process P147. ⁵⁷ [ss. NR 407.09(1)(c)1.b., Wis. Adm. Code and 285.65(3) and 285.63(1)(a), Wis. Stats.]	(a) <u>Reference Test Method for Visible Emissions</u> : Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] (b) The permittee shall retain on site, plans and specifications that indicate the fuel usage design capabilities of any non-electric oven associated with P147. [s. NR 439.04(1)(d), Wis. Adm. Code]

⁵⁷ It is not expected that the visible emission limitation of 20% opacity would be exceeded while firing natural gas or propane. Therefore restricting the type of fuel used is adequate to ensure compliance with the emission limitation.

17. Process P149, Stack S29 - One Roll Coating Machine which uses natural gas/propane oven associated with P29

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compound Emissions</p>	<p>(a) No owner or operator of a miscellaneous metal parts or products coating line using a baked or specially cured coating technology may cause, allow or permit the emissions of any VOCs in excess of:</p> <ul style="list-style-type: none"> (i) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings; (ii) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; (iii) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis Adm. Code] 	<p>(a) The permittee shall comply with the limitations of I.B.17.a.(1)(a) by the application of low solvent content coating technology [s. NR 422.04(2)(a), Wis. Adm. Code]</p>	<p>(a) The permittee shall collect and record:</p> <ul style="list-style-type: none"> (i) A unique name or identification number for each coating, as applied; (ii) The VOC content of each coating, as applied, in units of pounds of VOC per gallon, excluding water. [s. NR 439.04(5)(a), Wis. Adm. Code] <p>(b) The permittee shall use U.S. EPA Method 24, or ink manufacturer's formulation data to determine the VOC content of the of the inks used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(c) <u>Reference Test Method for Volatile Organic Compound Emissions:</u> Whenever compliance emission testing is required, US EPA Methods 18, 25, 25A or 25B shall be used to demonstrate compliance. [ss. NR 439.06(3)(a) and NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(d) <u>Reference Test Method for Volatile Organic Compound Content:</u> Whenever compliance testing is required, U.S. EPA Method 24 shall be used to demonstrate compliance with the VOC content limitations. [s. NR 439.06(3)(b), Wis. Adm. Code]</p>

17. Process P149, Stack S29 - One Roll Coating Machine which uses natural gas/propane oven associated with P29 - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compounds - (Continued)</p>	<p>(b) Monthly VOC emissions from this process line may not exceed 1666 pounds per month.⁵⁸ [s. NR 406.04(1)(g), Wis. Adm. Code]</p>	<p>(b) Each calendar month the permittee shall calculate the total volatile organic compound emissions from process P149 as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{monthly}} = [(U_1 \times W_1 \times C_1) + (U_2 \times W_2 \times C_2) + \dots + (U_n \times W_n \times C_n) +]$ <p>where: E_{monthly} is the monthly VOC emissions (pounds/month); U is the amount of each ink, coating, clean-up solvent, or other VOC containing material used during the month (gallons/month); W is the density of each ink, coating, clean-up solvent, or other VOC containing material used during the month (pounds/gallon); C is the VOC content of each ink, coating, clean-up solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25); n identifies each ink, coating, clean-up solvent or other VOC containing material used during the month.</p> <p>This calculation shall be performed within fifteen calendar days of the end of each calendar month.</p>	<p>(e) The permittee shall keep records of the following:</p> <ul style="list-style-type: none"> (i) A unique name or identification number for each ink, coating, clean-up solvent, or other VOC containing material used on process P149; (ii) The VOC content, expressed as a weight fraction (C_n) of each ink, coating, clean-up solvent, or other VOC containing material used on process P149; (iii) The amount of each ink, coating, clean-up solvent, or other VOC containing material used in gallons per month (U_n); (iv) The density of each ink, coating, clean-up solvent, or other VOC containing material used in pounds per gallon (W_n); and (v) The total monthly VOC emissions from process P149 in pounds per month (E_{monthly}), as calculated in I.B.17.a.(2)(b). <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁵⁸ The permittee elected this restriction to ensure that the process was not subject to construction permit requirements.

18. Facility Wide Synthetic Minor Conditions

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compound Emissions</p>	<p>(a) Volatile organic compound emissions from the entire facility may not exceed 16,300 pounds per month averaged over each 12 consecutive month period. [s. 285.65(7), Wis. Stats.]</p>	<p>(a) Each day the permittee shall calculate the total volatile organic compound emissions from the facility as follows: [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{daily}} = [(U_1 \times W_1 \times C_1) + (U_2 \times W_2 \times C_2) + \dots + (U_n \times W_n \times C_n)]$ <p>where: E_{daily} is the daily VOC emissions (pounds/day); U is the daily usage of each ink, coating, solvent, or other VOC containing material used during the day (gallons/day); W is the density of each ink, coating, solvent, or other VOC containing material used during the day (pounds/gallon); C is the VOC content of each ink, coating, solvent, or other VOC containing material used during the day expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25); and n identifies each ink, coating, solvent or other VOC containing material used during the day.</p>	<p>(a) The permittee shall keep daily records of the following: (i) A unique name or identification number for each ink, coating, solvent, or other VOC containing material used at the facility; (ii) The VOC content, expressed as a weight fraction (C_n) of each ink, coating, solvent, or other VOC containing material used at the facility; (iii) The amount of each ink, coating, solvent, or other VOC containing material used in gallons per day (U_n); (iv) The density of each ink, coating, solvent, or other VOC containing material used in pounds per gallon (W_n); and (v) The total daily VOC emissions from the facility in pounds per day (E_{daily}), as calculated in I.B.18.a.(2)(a). [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(b) The permittee shall keep monthly records of: (i) The monthly sum of the daily VOC emissions as calculated in I.B.18.a.(2).(b), (ΣE_{daily}); (ii) The amount of spent ink, coating, solvent, or other VOC containing material recovered each month and shipped off site in gallons per month (S_m); (iii) The VOC content of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site in pounds per gallon (P_m); (iv) The total monthly VOC emissions from the facility in pounds per month as calculated in I.B.18.a.(2).(b), (E_{monthly}); and (v) The total amount of VOC emitted from the facility averaged over each 12 consecutive month period in pounds per month as calculated in I.B.18.a.(2).(c). [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

18. Facility Wide Synthetic Minor Conditions - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>a. Volatile Organic Compound Emissions - (Continued)</p>		<p>(b) For each calendar month the permittee shall calculate the total monthly VOC emissions as follows. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_{\text{monthly}} = \Sigma E_{\text{daily}} - [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]$ <p>where: E_{monthly} is the monthly VOC emissions (pounds/month) taking into account credit for the waste solvents that are collected and shipped off site for disposal; ΣE_{daily} is the sum of the daily VOC emissions calculated in I.B.18.a.(2).(a) totaled for the calendar month; S is the amount of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site (gallons/month); P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site in pounds per gallon; m identifies each spent ink, coating, solvent or other VOC containing material recovered each month and shipped off site.</p> <p>(3) To demonstrate compliance with condition I.B.18.a.(1).(a), the permittee shall calculate the total tons of volatile organic compound emissions from the facility, averaged over each 12 consecutive month period by dividing the total monthly volatile organic compound emissions as calculated in I.B.18.a.(2)(b) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(c) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content (C_n) and the density (W_n) of the of the inks, coatings, solvents or other VOC containing materials used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) The permittee shall analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content (P) no less than: (i) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (ii) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

18. Facility Wide Synthetic Minor Conditions - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Hazardous Air Pollutants Regulated by the Clean Air Act</p>	<p>(a) The permittee may not emit any single hazardous air pollutant regulated by the Clean Air Act at a rate greater than 1650 pounds per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p> <p>(b) The permittee may not emit a total of all hazardous air pollutants regulated by the Clean Air Act combined at a rate greater than 4150 pounds per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p>	<p>(a) Each day the permittee shall calculate the total facility emissions of <u>each hazardous air pollutant</u> regulated by the Clean Air Act as follows:⁵⁹</p> $E_x = [(U_1 \times W_1 \times H_1) + (U_2 \times W_2 \times H_2) + \dots + (U_n \times W_n \times H_n)]$ <p>where: E_x is the daily emissions of each hazardous air pollutant regulated by the Clean Air Act (pounds/day); x identifies each HAP emitted from the facility U is the daily usage of each ink, coating, solvent, or other HAP containing material used during the day (gallons/day); W is the density of each ink, coating, solvent, or other HAP containing material used during the day (pounds/gallon); H is the HAP content of each ink, coating, solvent, or other HAP containing material used during the day expressed as a weight fraction (i.e. if a material is 25% HAP by weight H would be 0.25); and n identifies each ink, coating, solvent or other HAP containing material used during the day.</p>	<p>(a) The permittee shall keep daily records of the following:</p> <ul style="list-style-type: none"> (i) A unique name or identification number for each ink, coating, solvent, or other HAP containing material used at the facility; (ii) The weight fraction of each HAP contained in the material (H_n) of each ink, coating, solvent, or other HAP containing material used at the facility; (iii) The amount of each ink, coating, solvent, or other HAP containing material used in gallons per day (U_n); (iv) The density of each ink, coating, solvent, or other HAP containing material used in pounds per gallon (W_n); (v) The facility total daily emissions of each HAP in pounds per day (E_x), as calculated in I.b.18.B.(2)(a); and (vi) The total daily HAP emissions from the facility in pounds per day (E_{hap}), as calculated in I.B.18.b.(2)(d). <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

⁵⁹ This calculation shall be performed for each hazardous air pollutant regulated by the Clean Air Act that is emitted from the facility.

18. Facility Wide Synthetic Minor Conditions - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Hazardous Air Pollutants Regulated by the Clean Air Act - (Continued)</p>		<p>(b) For each calendar month the permittee shall calculate the total monthly emissions of <u>each</u> hazardous air pollutant regulated by the Clean Air Act as follows. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> $E_y = (\sum E_x)_i - [(S_1 \times I_1) + (S_2 \times I_2) + \dots + (S_m \times I_m)]$ <p>where: E_y is the monthly emissions of each HAP (pounds/month) taking into account credit for the waste solvents that are collected and shipped off site for disposal; $(\sum E_x)_i$ is the sum of the daily emissions of <u>each</u> HAP (i) calculated in I.B.18.b.(2)(a) totaled for the calendar month; S is the amount of each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site (gallons/month); I is the HAP content of each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site in pounds per gallon; and m identifies each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site.</p>	<p>(b) The permittee shall keep monthly records of:</p> <ul style="list-style-type: none"> (i) The monthly sum of the daily emissions of each HAP regulated by the Clean Air Act as calculated in I.B.18.b.(2)(b), $(\sum E_x)_i$; (ii) The amount of spent ink, coating, solvent, or other HAP containing material recovered each month and shipped off site in gallons per month (S_m); (iii) The amount of each HAP contained in each spent ink, coating, solvent or other HAP containing material recovered each month and shipped off site in pounds per gallon (I_m); (iv) The total monthly emissions of each HAP in pounds per month as calculated in I.B.18.b.(2)(b), (E_y); (v) The total amount of each HAP emitted from the facility averaged over each 12 consecutive month period in pounds per month as calculated in I.B.18.b.(2)(c); (vi) The total monthly emissions of all HAPs combined in pounds per month as calculated in I.B.18.b.(2)(d); and (vii) The total amount of all HAPs combined emitted from the facility averaged over each 12 consecutive month period in pounds per month as calculated in I.B.18.b.(2)(e). [s. NR 439.04(1)(d), Wis. Adm. Code] <p>(c) The permittee shall use coating manufacturer's formulation data to determine the HAP content (H_n) of the of the inks, coatings, solvents or other HAP containing materials used. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

18. Facility Wide Synthetic Minor Conditions - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Hazardous Air Pollutants Regulated by the Clean Air Act - (Continued)</p>		<p>(c) To demonstrate compliance with condition I.B.18.b.(1)(a), the permittee shall calculate the emissions of <u>each</u> hazardous air pollutant regulated by the Clean Air Act, averaged over each 12 consecutive month period by dividing the total monthly emissions of each hazardous air pollutant regulated by the Clean Air Act as calculated in I.B.18.b.(2)(b) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(d) Each day the permittee shall calculate the <u>total</u> emissions of hazardous air pollutants regulated by the Clean Air Act as follows:</p> $E_{\text{hap}} = \sum E_x$ <p>where: E_{hap} is the daily total emissions of all hazardous air pollutants regulated by the Clean Air Act that are emitted by the facility (pounds/day); E_x is the daily emissions of each hazardous air pollutant regulated by the Clean Air Act (pounds/day) as calculated in I.B.18.b.(2)(a); x identifies each HAP emitted from the facility. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(d) The permittee shall analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content (H) no less than: (i) each time there is a substantial change to materials or process operations that may affect the characteristics of the waste stream; or (ii) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p>

18. Facility Wide Synthetic Minor Conditions - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>b. Hazardous Air Pollutants Regulated by the Clean Air Act - (Continued)</p>		<p>(e) For each calendar month the permittee shall total the daily emissions of <u>all</u> hazardous air pollutant regulated by the Clean Air Act combined by totaling the monthly emissions of each HAP (E_y) as calculated in I.B.18.b.(2)(b) to determine the monthly emissions in pounds per month. This calculation shall be performed within fifteen calendar days of the end of each month. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(f) To demonstrate compliance with condition I.B.18.b.(1)(b), the permittee shall calculate the total emissions of <u>all</u> hazardous air pollutants regulated by the Clean Air Act, averaged over each 12 consecutive month period by dividing the total monthly emissions of all hazardous air pollutants regulated by the Clean Air Act as calculated in I.B.18.b.(2)(e) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	

18. Facility Wide Synthetic Minor Conditions - (Continued)

POLLUTANT	(1) LIMITATIONS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
<p>c. * Formaldehyde</p> <p><i>Continued on Next Page...</i></p>	<p>(a) * The permittee may not emit formaldehyde at a rate greater than 20.8 pounds per month averaged over each 12 consecutive month period. [s. 285.65.(7), Wis. Stats.]</p>	<p>(a) * Each month the permittee shall calculate the total facility emissions of formaldehyde as follows:</p> $E_{form} = [(V_1 \times W_1 \times F_1) + (V_2 \times W_2 \times F_2) + \dots + (V_n \times W_n \times F_n)] - [(R_1 \times G_1) + (R_2 \times G_2) + \dots + (R_m \times G_m)]$ <p>where: E_{form} is the monthly emissions of formaldehyde (pounds/month); V is the monthly usage of each ink, coating, solvent, and other material containing formaldehyde used during the month (gallons/month); W is the density of each ink, coating, solvent, or other material containing formaldehyde used during the month (pounds/gallon); F is the formaldehyde content of each ink, coating, solvent, or other material containing formaldehyde used during the month expressed as a weight fraction (i.e. if a material is 25% formaldehyde by weight F would be 0.25); n identifies each ink, coating, solvent or other material containing formaldehyde used during the month; R is the amount of each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site (gallons/month); G is the formaldehyde content of each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site in pounds per gallon; m identifies each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site during. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p> <p>(b) *To demonstrate compliance with condition I.B.18.c.(1)(a), the permittee shall calculate the emissions of formaldehyde, averaged over each 12 consecutive month period by dividing the total monthly emissions of formaldehyde as calculated in I.B.18.c.(2)(a) for each 12 consecutive month period by 12. This calculation shall be performed within fifteen calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]</p>	<p>(a) *The permittee shall keep monthly records of the following:</p> <ul style="list-style-type: none"> (i) A unique name or identification number for each ink, coating, solvent, or other material containing formaldehyde used at the facility; (ii) The weight fraction of formaldehyde (F_n) of each ink, coating, solvent, or other material used at the facility; (iii) The amount of each ink, coating, solvent, or other material containing formaldehyde used in gallons per month (V_n); (iv) The density of each ink, coating, solvent, or other material containing formaldehyde used in pounds per gallon (W_n); (iv) The amount of spent ink, coating, solvent, or other material containing formaldehyde recovered each month and shipped off site in gallons per month (R_m); (v) The amount of each spent ink, coating, solvent or other material containing formaldehyde recovered each month and shipped off site in pounds per gallon (G_m); (vi) The facility total monthly emissions of formaldehyde in pounds per month (E_{form}), as calculated in I.B.18.c.(2)(a); and (vii) The total amount of formaldehyde emitted from the facility averaged over each 12 consecutive month period in tons per month as calculated in I.B.18.c.(2)(b). <p>[s. NR 439.04(1)(d), Wis. Adm. Code]</p>

18. Facility Wide Synthetic Minor Conditions - (Continued)

POLLUTANT	(1) LIMITS	(2) COMPLIANCE DEMONSTRATION METHODS	(3) REFERENCE TEST METHODS, RECORDKEEPING, AND MONITORING REQUIREMENTS
c. * Formaldehyde - (Continued)			<p>(b) *The permittee shall use coating manufacturer's formulation data to determine the formaldehyde (F_n) of the of the inks, coatings, solvents or other materials containing formaldehyde used at the facility. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(c) *The permittee shall analyze the spent ink, coating, solvent and other materials containing formaldehyde recovered and shipped off site to determine the HAP content (G) no less than: (i) each time there is a change to materials or process operations that may affect the waste stream; or (ii) annually, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]</p> <p>(d) <u>Reference Test Method for Formaldehyde Emissions:</u> Whenever compliance emission testing is required, US EPA Method 0011 shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]</p>

19. Conditions Applicable to the Entire Facility

CONDITION TYPE	(1) CONDITIONS
<p>a. Reporting</p>	<p>(a) Submit the results of monitoring or a summary of monitoring results required by this permit to the Department annually. (i) The time period to be addressed by the submittal are: January 1 to December 31. (ii) The report shall be submitted to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period. (iii) All deviations from and violations of applicable requirements shall be clearly identified in the submittal. (iv) Each submittal shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(b), Wis. Adm. Code]</p> <p>(b) Submit a certification of compliance with the requirements of this permit to the Department annually. (i) The time period to be addressed by the report is the January 1 to December 31 period which precedes the report. (ii) The report shall be submitted to the Wisconsin Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, phone (608) 785-9000 within 30 days after the end of each reporting period. (iii) The information included in the report shall comply with the requirements of Part II Section N of this permit. (iv) Each report shall be certified by a responsible official as to the truth, accuracy and completeness of the report. [s. NR 439.03(1)(c), Wis. Adm. Code]</p>
<p>b. Compliance Testing</p>	<p>(a) Whenever compliance emission tests are required by the Department: (i) Any compliance emission tests required by the Department shall be conducted while operating at 100% capacity. If operation at 100% capacity is not feasible, the sources shall operate at a capacity which is approved by the Department in writing. (ii) The reference test methods outlined in this permit shall be used unless an alternate, U.S. EPA approved, test method is approved by the Department in writing. (iii) The Department shall be informed at least 20 working days prior to any tests so a Department representative can witness the testing. (iv) At the time of notification, a compliance test plan shall also be submitted for approval. (v) Two copies of the report on any required tests shall be submitted to the Department for evaluation within 60 days after the tests. [s. NR 439.07, Wis. Adm. Code]</p>

19. Conditions Applicable to the Entire Facility - Continued

CONDITION TYPE	(1) CONDITIONS
<p>c. Compliance Plan and Schedule</p>	<p>(a) The permittee shall take the following actions as outlined below to comply with conditions I.A.3.b.(8), I.A.3.b.(10), I.A.3.b.(12), I.A.3.b.(15), I.A.3.b.(18), I.A.3.b.(21), I.B.11.a.(2)(b), I.B.10.c.(2)(c), I.B.11.a.(2)(c), I.B.12.a.(2)(b), I.B.12.a.(2)(c), I.B.13.c.(2)(c), I.B.14.c.(2)(c), and I.B.15.c.(2)(c):</p> <ul style="list-style-type: none"> (i) Establish normal operating ranges for the pressure drop across each of the overspray filter system controlling P108 no later than 60 days after the date of issuance of this permit; (ii) Establish normal operating ranges for the pressure drop across the overspray filter system controlling P113 no later than 60 days after the date of issuance of this permit; and (iii) Establish schedules for periodic inspection, maintenance, and replacement of the overspray filters controlling P56, P108, P113, P134, P139, and P145 no later than 60 days after the date of issuance of this permit. <p>[s. NR 407.09(4)(b), Wis. Adm. Code and ss. 285.64(1)(a)1. and 285.63(1)(b), Wis. Stats.]</p> <p>(b) The permittee shall submit compliance progress reports to the La Crosse Area Office Air Program, 3550 Mormon Coulee Road, Room 104, La Crosse, WI 54601, every 6 months from the date of issuance of this permit until the permittee completes all the items required by condition I.B.19.c.(1)(a). [ss 285.64(1)(a)2., Wis. Stats. and NR 407.09(4)(b), Wis. Adm. Code]</p> <p>(c) The compliance progress reports required in condition I.B.19.c.(1)(b) above shall contain:</p> <ul style="list-style-type: none"> (i) A description of the actions taken and the actions completed to comply with the specific actions outlined in condition I.B.19.c.(1)(a). (ii) The date specified in condition I.B.19.c.(1)(a) for completing the activities outlined above. (iii) The date when the activities were actually completed. (iv) If an activity was not completed by the date specified in condition I.B.19.c.(1)(a) above: <ul style="list-style-type: none"> a) An explanation of why the date was not met; and b) A description of any preventive or corrective measures adopted. <p>[s. NR 407.09(4)(b), Wis. Adm. Code]</p>

INTRODUCTION

Sources which are not exempt from the operation permit requirements under Section 407.03, Wis. Adm. Code, are required to obtain an air pollution control operation permit. Sources subject to the requirements must submit a permit application to the Department of Natural Resources by the date set forth in Sections 285.62(11)(b)1., Wis. Stats., and NR 407.04, Wis. Adm. Code. The application is then reviewed following the provisions set forth in Sections 285.62, 285.63 and 285.64, Wis. Stats., and Chapter NR 407, Wis. Adm. Code.

Subject sources are to be reviewed for their air pollution control technology and for their impact upon the air quality. This is to insure compliance with all applicable rules and statutory requirements. The review will show why the source(s) operation should be approved, conditionally approved, or disapproved. It will encompass emission calculations and air quality analysis using U.S. EPA models, if applicable. Emissions from volatile organic compound (VOC) sources and small sources whose emissions are known to be insignificant are normally not modeled. As a precautionary note, the emission estimates may be based on U.S. EPA emission factors (AP-42) or theoretical data and can vary from actual stack test data.

This review is based on information contained within the application submitted for an air pollution control operation permit. An operation permit may be issued if the criteria set forth in sections 285.63 and 285.64, Wis. Stats., are met.

A final decision on the operation permit will not be made until the public has had an opportunity to comment on the Department's analysis, preliminary determination and draft permit. The conditions proposed in the draft permit may be revised in any final permit issued based on comments received or further evaluation by the Department.

Owner/Operator: NORTHERN ENGRAVING CORP - WEST SALEM DIV
803 S. BLACK RIVER STREET
SPARTA, WI 54656

Responsible Official: MR. BRUCE CORNING
VICE PRESIDENT, MANAGEMENT SYSTEMS
(608)269-6911-481

Permit Contact Person: MARY GOODMAN
AIR QUALITY MANAGER
(608)269-6911-281

Date of Administratively Complete Application: 01/11/1996

Dates of Submittal: 10/31/1995, 12/21/1995, 6/16/1999, 12/29/1999, 2/12/2000, 10/12/2001, 5/15/2002,
10/7/2002, 2/10/2003,

SOURCE DESCRIPTION

Special Note: The permittee has elected to enter into a Cooperative Agreement with the Department under the Environmental Cooperation Pilot Program authorized by s. 299.80, Wis. Stats. The aim of this pilot program is to evaluate innovative environmental regulatory methods while providing the same level of protection of public health and the environment as provided under current applicable state and federal requirements. A Cooperative Agreement provides an opportunity for greater flexibility and reduced paperwork and administrative tasks and encourages sources to reduce pollution to levels below those required by state and federal requirements. Section 299.80, Wis. Stats. encourages public participation through an interested persons group. The greater flexibility afforded by the Cooperative Agreement allows variances from requirements under chs. 280 to 295, Wis. Stats. and the Administrative Codes promulgated under those chapters provided the variance results in a measurable reduction in overall levels of pollution and contains pollution limits that are verifiable, enforceable, and at least as stringent as pollution limits under chs. 280 to 295, Wis. Stats. and the rules promulgated under those chapters. Additionally the variance must either promote the reduction in overall levels of pollution to below the levels required under chs. 280 to 295, Wis. Stats. or provide for alternative monitoring, testing, record keeping, notification or reporting requirements that reduce the administrative burden on state agencies or the participant and that provide the information needed to ensure compliance with the Cooperative Agreement and the provisions of chs. 280 to 295, Wis. Stats. and rules promulgated under those chapters for which the Cooperative Agreement does not grant a variance. Any Cooperative Agreement entered into by the Department would have a term of five years with the possibility of a renewal for up to five additionally years. The Cooperative Agreement between Northern Engraving Corporation and the Department and supporting background information is contained in separate documents that are available for public review. This preliminary determination to issue Northern Engraving Corporation an operation permit for their West Salem facility highlights the proposed variances from air pollution control provisions of ch. 285, Wis. Stats, ss. NR 400 to 499, Wis. Adm. Code, and requirements contained in air pollution control permits currently held by the company.

SIGNIFICANT EMISSIONS UNITS

1. STACK INFORMATION

Stack Identification Number:	S10
Exhausting Unit(s):	B20 and B21
This stack has an actual exhaust point:	Yes
Discharge height above ground level (ft):	26.0
Inside dimensions at outlet (ft):	Circular - 2.40
Exhaust flow rate (Normal) (ACFM):	20000
Exhaust gas temperature (Normal) (°F):	70
Exhaust gas discharge direction:	Up
Stack equipped with any obstruction:	Yes

A. Emission Unit Information

Boiler/furnace number:	B20
Unit description:	TWO EACH 10.5 mmBTU/HR (21 mmBTU/HR COMBINED) STEAM BOILERS FIRING NATURAL GAS OR LIQUID PETROLEUM
Control technology status:	uncontrolled
Maximum continuous rating (mmBTU/hr):	21.0
Date of construction or last modification:	AUGUST 1977
Construction Permit Requirements:	Covered by elective operation permit EOP-10-KJC-32-082A.

	Primary Fuel	Backup Fuel #1
Fuel Name	Natural Gas	Liquid Petroleum
Higher Heating Value	1000 mmBtu/cf6	94,000 Btu/gal
Maximum Sulfur Content (weight %)	0	0

Maximum Ash Content (weight %)	0	0
Maximum hourly consumption	0.021 cf6	0.22 gal3

B. Emission Unit Information

Boiler/furnace number: B21
 Unit description: TWO EACH 10.5 mmBTU/HR (21 mmBTU/HR COMBINED) STEAM BOILERS FIRING NATURAL GAS OR LIQUID PETROLEUM
 Control technology status: uncontrolled
 Maximum continuous rating (mmBTU/hr): 21.0
 Date of construction or last modification: AUGUST 1977
 Construction Permit Requirements: Covered by elective operation permit EOP-10-KJC-32-082A.

	Primary Fuel	Backup Fuel #1
Fuel Name	Natural Gas	Liquid Petroleum
Higher Heating Value	1000 mmBtu/cf6	94,000 Btu/gal
Maximum Sulfur Content (weight %)	0	0
Maximum Ash Content (weight %)	0	0
Maximum hourly consumption	0.021 cf6	0.22 gal3

2. STACK INFORMATION

Stack Identification Number: S15
 Exhausting Unit(s): P70
 This stack has an actual exhaust point: No

A. Emission Unit Information

Process number: P70
 Unit description: SIXTEEN PAD PRINTERS, IDENTIFIED AS PPP-WS-44 THROUGH PPP-WS-47, PPP-WS-69 THROUGH PPP-WS-71, PPP-WS-98 THROUGH 102, PPP-WS-118, PPP-WS-119, PPP-WS-120, AND PPP-WS-121
 Control technology status: uncontrolled
 Operation type: PAD PRINTING
 Date of construction or last modification: 1989-1994
 Construction Permit Requirements: Printers PPP-WS-44 through PPP-WS-47 are covered by construction permit 89-IRS-041 and alteration 89-IRS-041A. Printers PPP-WS-69 through PPP-WS-71 are covered by construction permit 91-DCF-099. Printers PPP-WS-98 through PPP-WS-102 are covered by construction permit 92-IRS-110. Printers PPP-WS-118 through PPP-WS-121 are covered by construction permit 93-POY-092 and alteration 93-POY-092A.
 Oven curing: No

3. STACK INFORMATION

Stack Identification Number: S16
 Exhausting Unit(s): P76
 This stack has an actual exhaust point: Yes
 Discharge height above ground level (ft): 26
 Inside dimensions at outlet (ft): Circular - 2.00
 Exhaust flow rate (Normal) (ACFM): 8000
 Exhaust gas temperature (Normal) (°F): 160
 Exhaust gas discharge direction: Up
 Stack equipped with any obstruction: No

A. Emission Unit Information			Unit description:
Process number:		P76	
Control technology status:		uncontrolled	
Application technique:		ROLL COATING	
Transfer efficiency (%)		100.00	
Date of construction or last modification:		1998	
Construction Permit Requirements:		Covered by construction permit 98-JCH-176	
Oven curing:		one natural gas/propane oven rated at 2.25 mmBtu/hr	

4. STACK INFORMATION

Stack Identification Number:	S17
Exhausting Unit(s):	P77
This stack has an actual exhaust point:	No

A. Emission Unit Information

Process number:	P77
Unit description:	FUGITIVE SOLVENT CLEAN-UP OPERATIONS
Control technology status:	uncontrolled
Date of construction or last modification:	ONGOING
Construction Permit Requirements:	Clean-up operations are covered by the construction permits issued for the various process with which it is associated.

5. STACK INFORMATION

Stack Identification Number:	S18
Exhausting Unit(s):	P18
This stack has an actual exhaust point:	Yes
Discharge height above ground level (ft):	23
Inside dimensions at outlet (ft):	3.2
Exhaust flow rate (Normal) (ACFM):	10,000
Exhaust gas temperature (Normal) (°F):	180
Exhaust gas discharge direction:	up
Stack equipped with any obstruction:	no

A. Emission Unit Information

Process number:	P18
Unit description:	Five lithographic presses with five UV curing ovens, identified as PLO-WS-18, PLO-WS-19, PLO-WS-20, PLO-WS-21, and PLO-WS-22
Control technology status:	uncontrolled
Application technique:	lithographic printing
Transfer efficiency (%)	100
Date of construction or last modification:	2 in 1990, 2 in 1996, and 1 in 1997
Construction Permit Requirements:	Because the maximum theoretical VOC emissions from each press are less than 5.7 pounds per hour, each press would have been exempt from construction permit requirements pursuant to s. NR 406.04(2), Wis. Adm. Code.
Oven curing:	Each press has an associated UV curing oven which is powered with electricity.

6. STACK INFORMATION

Stack Identification Number:	S28
Exhausting Unit(s):	P28
This stack has an actual exhaust point:	Yes
Discharge height above ground level (ft):	26
Inside dimensions at outlet (ft):	1.5
Exhaust flow rate (Normal) (ACFM):	6000
Exhaust gas temperature (Normal) (°F):	70
Exhaust gas discharge direction:	up

Stack equipped with any obstruction: no

A. Emission Unit Information

Process number: P28
Unit description: Two screening machines with a natural gas/LP fired drying oven
Control technology status: uncontrolled
Application technique: screen printing
Transfer efficiency (%): 100%
Date of construction or last modification: 1997
Construction Permit Requirements: Covered by construction permit 97-MWH-113
Oven curing: one natural gas/propane drying oven rated at 3.5 mmBtu/hr

7. STACK INFORMATION

Stack Identification Number: S29
Exhausting Unit(s): P29 and P149
This stack has an actual exhaust point: Yes
Discharge height above ground level (ft): 28
Inside dimensions at outlet (ft): 3.0
Exhaust flow rate (Normal) (ACFM): 9600
Exhaust gas temperature (Normal) (°F): 70
Exhaust gas discharge direction: up
Stack equipped with any obstruction: yes

A. Emission Unit Information

Process number: P29
Unit description: Two roll coaters with a natural gas or LP fired drying oven.
Control technology status: Controlled
Application technique: roll coating
Transfer efficiency (%): 100%
Date of construction or last modification: 1997
Construction Permit Requirements: Covered by construction permit 97-MWH-013
Oven curing: Natural Gas/Propane Oven Rated at 4.75 mmBtu/hr

Control device associated with this emissions unit
Emission unit controlled: P29
Control device number: C29
Date of installation: 1995
Description of device: Thermal Incinerator

Pollutant(s) controlled	Efficiency (%)
Volatile Organic Compounds	86%

B. Emission Unit Information

Process number: P149
Unit description: One roll coater with one existing oven (associated with P29) installed under construction permit exemption NR 406(1)(g).
Control technology status: uncontrolled
Application technique: roll coating
Transfer efficiency (%): 100%
Date of construction or last modification: 2002
Construction Permit Requirements: Exempt from construction permit requirements pursuant to s. NR 406.04(1)(g), Wis. Adm. Code.
Oven curing: This process uses the same natural gas/propane oven rated at 4.75 mmBtu/hr as used by P29.

8. STACK INFORMATION

Stack Identification Number: S37
 Exhausting Unit(s): P37
 This stack has an actual exhaust point: Yes
 Discharge height above ground level (ft): 26
 Inside dimensions at outlet (ft): 1.4
 Exhaust flow rate (Normal) (ACFM): 7500
 Exhaust gas temperature (Normal) (°F): 70
 Exhaust gas discharge direction: up
 Stack equipped with any obstruction: no

A. Emission Unit Information

Process number: P37
 Unit description: Two roll coaters with a natural gas or LP fired drying oven.
 Control technology status: Controlled
 Application technique: Roll Coating
 Transfer efficiency (%): 100%
 Date of construction or last modification: 1998
 Construction Permit Requirements: Covered by construction permit 98-RV-011
 Oven curing: One natural gas/propane oven rated at 4.5 mmBtu/hr

Control device associated with this emissions unit
 Emission unit controlled: P37
 Control device number: C37
 Date of installation: 1998
 Description of device: Thermal Incinerator

Pollutant(s) controlled	Efficiency (%)
Volatile Organic Compounds	80.1

9. STACK INFORMATION

Stack Identification Number: S38
 Exhausting Unit(s): P38
 This stack has an actual exhaust point: Yes
 Discharge height above ground level (ft): 25
 Inside dimensions at outlet (ft): 2.6
 Exhaust flow rate (Normal) (ACFM): 4500
 Exhaust gas temperature (Normal) (°F): 160
 Exhaust gas discharge direction: up
 Stack equipped with any obstruction: no

A. Emission Unit Information

Process number: P38
 Unit description: Two screening machines (using the drying oven associated with P28)
 Control technology status: uncontrolled
 Application technique: screen printing
 Transfer efficiency (%): 100%
 Date of construction or last modification: 1998
 Construction Permit Requirements: Covered by construction permit 98-JCH-176
 Oven curing: uses the drying oven associated with P28

10. STACK INFORMATION

Stack Identification Number: S56
 Exhausting Unit(s): P56
 This stack has an actual exhaust point: Yes
 Discharge height above ground level (ft): 22
 Inside dimensions at outlet (ft): circular - 2.2
 Exhaust flow rate (Normal) (ACFM): 10,500
 Exhaust gas temperature (Normal) (°F): 80
 Exhaust gas discharge direction: up
 Stack equipped with any obstruction: no

A. Emission Unit Information

Process number: P56
 Unit description: Two spraybooths identified as PSB-WS-56 and PSB-WS-58 with a natural gas or LP fired drying oven identified as SDO-WS-50 (formerly referred to as S48, P48)
 Control technology status: Controlled
 Application technique: Air atomization
 Transfer efficiency (%): 50%
 Date of construction or last modification: 2002
 Construction Permit Requirements: Covered by construction permit 02-MEC-617 issued on July 15, 2002.
 Oven curing: yes

Control device associated with this emissions unit
 Emission unit controlled: P56
 Control device number: C56
 Date of installation:
 Description of device: SPRAY BOOTH REPLACEABLE PARTICULATE OVERSPRAY FILTERS

Pollutant(s) controlled	Efficiency (%)
Particulate matter emissions	95.0

11. STACK INFORMATION

Stack Identification Number: S108
 Exhausting Unit(s): P108
 This stack has an actual exhaust point: Yes
 Discharge height above ground level (ft): 26.0
 Inside dimensions at outlet (ft): Circular - 4.30
 Exhaust flow rate (Normal) (ACFM): 34000
 Exhaust gas temperature (Normal) (°F): 75
 Exhaust gas discharge direction: Up
 Stack equipped with any obstruction: No

A. Emission Unit Information

Process number: P108
 Unit description: FOUR SPRAY BOOTHS, IDENTIFIED AS PSB-WS-108, PSB-WS-109, PSB-WS-110, and PSB-WS-111, USING NATURAL GAS/PROPANE DRYING OVEN SDO-WS-112 AND ELECTRIC DRYING OVEN SDO-WS-117
 Control technology status: Controlled
 Application technique: AIR ATOMIZATION
 Transfer efficiency (%): 50.00
 Date of construction or last modification: 1994
 Construction Permit Requirements: This process is covered by construction permit 93-POY-092 issued on December 3, 1993 and construction permit alteration 93-POY-092A issued February 8, 1996.

Oven curing: yes - one electric oven and one natural gas/propane oven rated at 1.2 mmBtu per hour

Control device associated with this emissions unit

Emission unit controlled: P108
Control device number: C108
Date of installation: 1994
Description of device: SPRAY BOOTH REPLACEABLE PARTICULATE OVERSPRAY FILTERS

Pollutant(s) controlled	Efficiency (%)
Particulate matter emissions	95.0

12. STACK INFORMATION

Stack Identification Number: S113
Exhausting Unit(s): P113
This stack has an actual exhaust point: Yes
Discharge height above ground level (ft): 26.0
Inside dimensions at outlet (ft): Circular - 4.30
Exhaust flow rate (Normal) (ACFM): 34000
Exhaust gas temperature (Normal) (°F): 75
Exhaust gas discharge direction: Up
Stack equipped with any obstruction: No

A. Emission Unit Information

Process number: P113
Unit description: FOUR SPRAY BOOTHS, IDENTIFIED AS PSB-WS-113, PSB-WS-114, PSB-WS-115, and PSB-WS-116, USING DRYING OVEN SDO-WS-117
Control technology status: Controlled
Application technique: AIR ATOMIZATION
Transfer efficiency (%): 50.00
Date of construction or last modification: 1/1/94
Construction Permit Requirements: This process is covered by construction permit 93-POY-092 issued on December 3, 1993 and construction permit alteration 93-POY-092A issued February 8, 1996.
Oven curing: yes - one natural gas/propane oven rated at 1.2 mmBtu per hour

Control device associated with this emissions unit

Emission unit controlled: P113
Control device number: C113
Date of installation: 1/1/94
Description of device: SPRAY BOOTH REPLACEABLE PARTICULATE OVERSPRAY FILTERS

Pollutant(s) controlled	Efficiency (%)
Particulate matter emissions	95.0

13. STACK INFORMATION

Stack Identification Number: S134
Exhausting Unit(s): P134
This stack has an actual exhaust point: Yes
Discharge height above ground level (ft): 26
Inside dimensions at outlet (ft): circular - 3.0
Exhaust flow rate (Normal) (ACFM): 9000
Exhaust gas temperature (Normal) (°F): 80

Exhaust gas discharge direction: up
 Stack equipped with any obstruction: no

A. Emission Unit Information

Process number: P134
 Unit description: Four spraybooths: PSB-WS-134, PSB-WS-135, PSB-WS-136, and PSB-WS-137 with drying oven SDO-WS-138 (electric)
 Control technology status: Controlled
 Application technique: Air atomization
 Transfer efficiency (%): 50%
 Date of construction or last modification: 2002
 Construction Permit Requirements: Covered by construction permit 02-MEC-617 issued on July 15, 2002.
 Oven curing: yes

Control device associated with this emissions unit
 Emission unit controlled: P134
 Control device number: C134
 Date of installation:
 Description of device: SPRAY BOOTH REPLACEABLE PARTICULATE OVERSPRAY FILTERS

Pollutant(s) controlled	Efficiency (%)
Particulate matter emissions	95.0

14. STACK INFORMATION

Stack Identification Number: S139
 Exhausting Unit(s): P139
 This stack has an actual exhaust point: Yes
 Discharge height above ground level (ft): 26
 Inside dimensions at outlet (ft): circular - 3.1
 Exhaust flow rate (Normal) (ACFM): 10,000
 Exhaust gas temperature (Normal) (°F): 80
 Exhaust gas discharge direction: up
 Stack equipped with any obstruction: no

A. Emission Unit Information

Process number: P139
 Unit description: Four spraybooths: PSB-WS-139, PSB-WS-140, PSB-WS-141, and PSB-WS-142 with two drying ovens: SDO-WS-143 and SDO-WS-144 (electric)
 Control technology status: Controlled
 Application technique: Air atomization
 Transfer efficiency (%): 50%
 Date of construction or last modification: 2002
 Construction Permit Requirements: Covered by construction permit 02-MEC-617 issued on July 15, 2002.
 Oven curing: yes

Control device associated with this emissions unit
 Emission unit controlled: P139
 Control device number: C139
 Date of installation:
 Description of device: SPRAY BOOTH REPLACEABLE PARTICULATE OVERSPRAY FILTERS

Pollutant(s) controlled	Efficiency (%)

Particulate matter emissions	95.0
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15. STACK INFORMATION

Stack Identification Number: S145
 Exhausting Unit(s): P145
 This stack has an actual exhaust point: Yes
 Discharge height above ground level (ft): 26
 Inside dimensions at outlet (ft): circular - 2.7
 Exhaust flow rate (Normal) (ACFM): 12,000
 Exhaust gas temperature (Normal) (°F): 80
 Exhaust gas discharge direction: up
 Stack equipped with any obstruction: no

A. Emission Unit Information

Process number: P145
 Unit description: One spraybooth PSB-WS-145 with one natural gas/propane drying oven SDO-WS-146
 Control technology status: Controlled
 Application technique: Air atomization
 Transfer efficiency (%): 50%
 Date of construction or last modification: 2002
 Construction Permit Requirements: Covered by construction permit 02-MEC-617 issued on July 15, 2002.
 Oven curing: yes

Control device associated with this emissions unit
 Emission unit controlled: P145
 Control device number: C145
 Date of installation:
 Description of device: SPRAY BOOTH REPLACEABLE PARTICULATE OVERSPRAY FILTERS

Pollutant(s) controlled	Efficiency (%)
Particulate matter emissions	95.0

16. STACK INFORMATION

Stack Identification Number: S147
 Exhausting Unit(s): P147
 This stack has an actual exhaust point: Yes
 Discharge height above ground level (ft): 26
 Inside dimensions at outlet (ft): circular - 2.0
 Exhaust flow rate (Normal) (ACFM): 6500
 Exhaust gas temperature (Normal) (°F): 140
 Exhaust gas discharge direction: up
 Stack equipped with any obstruction: no

A. Emission Unit Information

Process number: P147
 Unit description: Two screening machines with one existing oven (associated with P76) and one natural gas/propane final cure oven SDO-WS-148.
 Control technology status: uncontrolled
 Application technique: Screen printing
 Transfer efficiency (%): 100%
 Date of construction or last modification: 2002
 Construction Permit Requirements: Covered by construction permit 02-MEC-617 issued on 7/15/2002.
 Oven curing: yes

INSIGNIFICANT EMISSIONS UNITS

Maintenance of Grounds, Equipment, and Bldgs
Demin and Oxy Scavenging of Water for Boilers
Boiler, Turbine, and HVAC System Maintenance
Pollution Control Equipment Maintenance
Int Comb Eng Used for Warehouse and Mat Trans
Fire Control Equipment
Janitorial Services
Office Activities
Convenience Water Heating
Convenience Space Heating (< 5 mil BTU/hr)
Sanitary sewer and plumbing venting
Bead Blaster
Finishing Operation (Stamping/punching, gluing, and assembly processes)
UV Cured Coating Operations
Vacuum Foroming Process
Paint Laboratory
Plastic Molding Processes
Plastic Extrusion Process
Plastic Recycling Process
Plastic Treatment Process
Water Chilling Process
Metal Treatment Process
Tungsten Metalizing Processes
Laser Etching of Plastic Parts
Coating mixing operation
Water waste evaporator unit

REVISION APPLICABILITY Any operation permit issued by the Department would revise air pollution control permits 98-JCH-176, 98-RV-011, 97-MWH-013, 97-RV-149, 91-DCF-099, 92-IRS-110, 93-POY-092, 93-POY-092A, 89-IRS-041, 89-IRS-041A, and EOP-10-KJC-83-32-082. This revision would remove emissions units which are no longer in operation and make record keeping requirements uniform for those that are still in operation. The revision would change facility wide usage limitations and record keeping requirements making them more restrictive so that the facility would be considered a synthetic minor, non-Part 70 source. Because these changes would not result in an increase in emissions or emission of an air contaminant not previously emitted, they are not considered a modification as defined in s. 285.01(26), Wis. Stats.

SOURCE SPECIFIC EMISSION LIMIT CALCULATIONS AND APPLICABLE REQUIREMENTS

For specific calculations please refer to the hand calculation sheets and referenced construction permits.

Natural Gas/Propane Boilers B20 and B21: Maximum theoretical emissions were calculated using emission factors from AP-42, 5th edition. Because each boiler was installed and last modified after April 1, 1972, each boiler is subject to s. NR 415.06(2)(a), Wis. Adm. Code, which limits particulate matter emissions to not more than 0.15 pounds per mmBtu heat input from any stack. _Because each boiler was installed and last modified after April 1, 1972, each boiler is subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not greater than 20% opacity.

Each boiler is subject to the general limitations for sulfur dioxide, volatile organic compounds, carbon monoxide and nitrogen oxides contained in ss. NR 417.03, NR 419.03, NR 426.03 and NR 428.03, Wis. Adm. Code, respectively. These general limitations would be included in Part II of any permit issued by the Department.

The boilers are not subject to the new source performance standards for fossil fuel steam generators of s. NR 440.19, Wis. Adm. Code because each boiler has a heat input rating less than 250 mmBtu per hour. The boilers are not subject to the new source performance standards for industrial-commercial-institutional steam generating unit of s. NR 440.205, Wis. Adm. Code, because each boiler has a heat input rating less than 100 mmBtu per hour and was installed prior to June 19, 1984. The boilers are not subject to the new source performance standards for small industrial-commercial-institutional steam generating units of s. NR 440.207, Wis. Adm. Code because each boiler was installed prior to June 9, 1989.

Sixteen Pad Printers P70: This process is covered by construction permits 89-IRS-041, 89-IRS-041A, 91-DCF-099, 92-IRS-110, 93-POY-092, and 93-POY-093A. Please refer to the Preliminary Determination for these permits for more details. Maximum theoretical emissions were calculated using worst case material usage rates, volatile organic compound contents and hazardous pollutant contents. The pad printers are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. Eighty five percent control of volatile organic compound emissions was determined to be technologically infeasible as part of construction permits listed above. The Department determined that LACT is the use of inks/coatings which contain no more than 6.5 pounds VOC/gallon, as applied.

One Roll Coater with a natural gas/propane fired drying oven P76: Maximum theoretical emissions were calculated using worst case material usage rates, volatile organic compound contents and hazardous pollutant contents. Because the roll coater was installed after April 1, 1972 and particulate matter emissions are created from fuel combustion in the oven, the coater is subject to s. NR 415.06(2)(a), Wis. Adm. Code which limits particulate matter emissions to not more than 0.15 pounds per mmBtu of heat input. Because the coater was constructed after April 1, 1972 it is subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

The roll coater was originally permitted to only coat plastic parts but as part of this operation permit the original construction permit will be revised to allow for the coating of metal parts as well. Because this change does not cause an increase in emissions it is not a modification. When coating plastic parts the roll coater is subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. Eighty five percent control of volatile organic compound emissions was determined to be technologically infeasible as part of construction permit 98-JCH-176. The Department determined that LACT is the use of the roll coating application technique and the use of inks/coatings which contain no more than 6.8 pounds VOC/gallon, as applied. A coating limitation of 1333 gallons per month based on a twelve month rolling average was used in the 85 percent control infeasibility determination and would be included in any operation permit issued by the department. When coating metal parts the coater is subject to s. NR 422.15(2)(a), (b) and (c), Wis. Adm. Code which limits the volatile organic compound contents to not more than 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings, 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings, and 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator of all other coatings. The permittee shall comply with the volatile organic compound content limitation by the application of low solvent content coating technology.

The coater is subject to the general limitations for sulfur dioxide, carbon monoxide and nitrogen oxides contained in ss. NR 417.03, NR 426.03 and NR 428.03, Wis. Adm. Code, respectively. These general limitations would be included in Part II of any permit issued by the Department.

Five Lithographic Presses each with an UV Ovens P18: Maximum theoretical emissions were calculated using worst case material usage rates, solid contents, volatile organic compound contents and hazardous pollutant contents. Because the facility is not located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county the requirements of s. NR 422.142, Wis. Adm. Code do not apply, pursuant to s. NR 422.142(1), Wis. Adm. Code. Because the maximum theoretical volatile organic compound emissions from each litho press are greater than 15 pounds per day, the presses are not be exempt from the requirements of s. NR 424.03(2), Wis. Adm. Code, pursuant to s. NR 424.03(1)(a)4., Wis. Adm. Code. Therefore the presses are subject to s. NR 424.03(2)(b), Wis. Adm. Code which requires control of volatile organic compound emissions by at least 85 percent. The permittee has submitted information to demonstrate that 85 percent control of volatile organic

compounds is technologically infeasible, therefore the presses are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. The Department has determined that LACT for this process would be to require the use of UV curable inks which are lower in VOCs than solvent based litho inks. This restriction would be included in any operation permit issued by the Department. Note: Chapter NR 466, Wis. Adm. Code which establishes National Emission Standards for Hazardous Air Pollutants for the Printing and Publishing Industry does not apply to P18 because this process is not a rotogravure or wide-web flexographic printing presses. Additionally, the potential facility wide emissions of each HAP regulated by the Clean Air Act are less than 10 tons per year and the potential facility wide emissions of all HAPs regulated by the Clean Air Act combined are less than 25 tons per year

Miscellaneous Facility Wide Cleanup P77: Maximum theoretical emissions were calculated using worst case material usage rates, solid contents, volatile organic compound contents and hazardous pollutant contents. Because cleanup is performed using a wipe cleaning operation and the facility is located outside of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha counties, it is exempt from the requirements of s. NR 423.03, Wis. Adm. Code, pursuant to s. NR 423.03(2)(g)1., Wis. Adm. Code. The cleanup solvent use is subject to general emission limitations for volatile organic compounds outline in ss. NR 419.03 and NR 419.04, Wis. Adm. Code which would be included in Part II of any operation permit issued by the Department.

Two Screening Machines with natural gas/propane drying oven P28: This process is covered by construction permit 97-MWH-113. Please refer to the Preliminary Determination for this permit for more details. Maximum theoretical emissions were calculated using worst case material usage rates, volatile organic compound contents and hazardous pollutant contents. Because the facility is not located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, or Waukesha counties the screening machines are not subject to the requirements of s. NR 422.145, Wis. Adm. Code for screen printing, pursuant to s. NR 422.03(4m), Wis. Adm. Code. The screening machines are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. Eighty five percent control of volatile organic compound emissions was determined to be technologically infeasible as part of construction permit 97-MWH-113. The Department determined that LACT is the use of inks/coatings which contain no more than 6.9 pounds VOC/gallon, as applied. A coating limitation of 1241 gallons per month based on a twelve month rolling average was used in the 85 percent control infeasibility determination and would be included in any operation permit issued by the department.

Because the printing lines were installed after April 1, 1972 and particulate matter emissions are created from fuel combustion in the ovens, they are subject to s. NR 415.06(2)(a), Wis. Adm. Code which limits particulate matter emissions to not more than 0.15 pounds per mmBtu of heat input. Because the lines were constructed after April 1, 1972 they are subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

Two Roll Coaters with a natural gas or LP fired drying oven P29: Maximum theoretical emissions were calculated using worst case material usage rates, volatile organic compound contents and hazardous pollutant contents. Because the roll coaters were installed after April 1, 1972 and particulate matter emissions are created from fuel combustion in the oven, the coaters are subject to s. NR 415.06(2)(a), Wis. Adm. Code which limits particulate matter emissions to not more than 0.15 pounds per mmBtu of heat input. Because the coaters were constructed after April 1, 1972 they are subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

Because the coaters are equipped with a natural gas/propane curing oven, the coaters are subject to s. NR 422.15(2)(a), (b) and (c), Wis. Adm. Code which limits the volatile organic compound contents to not more than 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings, 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings, and 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator of all other coatings. The permittee shall comply with the volatile organic compound content limitation by the application of low solvent content coating technology, thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidation are oxidized to non-organic compounds, or by using in-line averaging. Please see the draft permit for details on how to calculate daily volume-weighted average

VOC content. Where the RACT requirements are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code, pursuant to s. NR 425.04(4), Wis. Adm. Code.

Each coater is subject to the general limitations for sulfur dioxide, carbon monoxide and nitrogen oxides contained in ss. NR 417.03, NR 426.03 and NR 428.03, Wis. Adm. Code, respectively. These general limitations would be included in Part II of any permit issued by the Department.

Two Roll Coaters with a natural gas/propane fired drying oven P37: Maximum theoretical emissions were calculated using worst case material usage rates, volatile organic compound contents and hazardous pollutant contents. Because the roll coaters were installed after April 1, 1972 and particulate matter emissions are created from fuel combustion in the oven, the coaters are subject to s. NR 415.06(2)(a), Wis. Adm. Code which limits particulate matter emissions to not more than 0.15 pounds per mmBtu of heat input. Because the coaters were constructed after April 1, 1972 they are subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

Because the coaters are equipped with a natural gas/propane curing oven, the coaters are subject to s. NR 422.15(2)(a), (b) and (c), Wis. Adm. Code which limits the volatile organic compound contents to not more than 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings, 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings, and 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator of all other coatings. The permittee shall comply with the volatile organic compound content limitation by the application of low solvent content coating technology, thermal oxidation, provided that 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidation are oxidized to non-organic compounds, or by using in-line averaging. Please see the draft permit for details on how to calculate daily volume-weighted average VOC content. Where the RACT requirements are met by means of a natural gas fired incinerator, use of the incinerator shall be required only during the ozone season, provided that operation of the incinerator is not required for purposes of occupational health or safety or for the control of toxic or hazardous substances, malodors, or other pollutants regulated by other sections of chs. 400 to 499, Wis. Adm. Code, pursuant to s. NR 425.04(4), Wis. Adm. Code. Note: Construction permit 98-RV-011 which covers P37 limited VOC emissions from the process to not more than 4000 pounds per month. This limitation was elected by the permit to avoid the need for an Environmental Assessment. Because any operation permit issued by the Department will limit VOCs from the entire facility to less than 100 tons per year, this process specific limitation is no longer needed and would not be included in any operation permit issued by the Department.

Each coater is subject to the general limitations for sulfur dioxide, carbon monoxide and nitrogen oxides contained in ss. NR 417.03, NR 426.03 and NR 428.03, Wis. Adm. Code, respectively. These general limitations would be included in Part II of any permit issued by the Department.

Two Screening Machines which use the drying oven associated with P28, P38: This process is covered by construction permit 98-JCH-176. Please refer to the Preliminary Determination for this permit for more details. Maximum theoretical emissions were calculated using worst case material usage rates, volatile organic compound contents and hazardous pollutant contents. Because the facility is not located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, or Waukesha counties the screening machines are not subject to the requirements of s. NR 422.145, Wis. Adm. Code for screen printing, pursuant to s. NR 422.03(4m), Wis. Adm. Code. The screening machines are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. Eighty five percent control of volatile organic compound emissions was determined to be technologically infeasible as part of construction permit 98-JCH-176. The Department determined that LACT is the use of inks/coatings which contain no more than 6.9 pounds VOC/gallon, as applied and the screen printing machines coating usage may not exceed a combined total of 1,000 gallons per month based on a twelve month rolling average.

Two Modified Plastic Parts Spray Booths with One Natural Gas Drying Oven, P56: This process is covered by construction permit 02-MEC-617. Please refer to the Preliminary Determination for this permit for more details.

Maximum theoretical emissions were calculated using worst case material usage rates, solid contents, volatile organic compound contents and hazardous pollutant contents. Because the spray booths were constructed after April 1, 1972 they are subject to the most restrictive of s. NR 415.05(2), Wis. Adm. Code which limits particulate matter emissions to not more than the rate calculated using the process weight rate equation or s. NR 415.05(1)(o), Wis. Adm. Code which limits particulate matter emissions to not more than 0.40 pounds per 1000 pounds gas. In this case the emission rate calculated using the process weight rate equation is most restrictive. Because the spray booths were constructed after April 1, 1972 they are subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

Because the facility is not located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha counties the spray booths are not subject to s. NR 422.083, Wis. Adm. Code for plastic parts coating, pursuant to s. NR 422.083(1), Wis. Adm. Code. The spray booths are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. The permittee has submitted information indicating that 85 percent control of volatile organic compound emissions is technologically infeasible (see hand calculations). The permittee has proposed the implementation of an environmental management system (EMS) which looks at the facility's significant environmental aspects, considers those aspects in establishing objectives and targets for improving environmental performance, and implementation of a program to achieve the targets to be LACT for process P56. The Department has determined that LACT shall be the implementation of an EMS which addresses volatile organic compounds from the facility.

The booths are subject to the general limitations for sulfur dioxide, carbon monoxide and nitrogen oxides contained in ss. NR 417.03, NR 426.03 and NR 428.03, Wis. Adm. Code, respectively. These general limitations would be included in Part II of any permit issued by the Department.

Four Plastic Parts Spray Booths with One Electric and One Natural Gas/Propane Drying Oven, P108: This process is covered by construction permit 93-POY-092. Maximum theoretical emissions were calculated using worst case material usage rates, solid contents, volatile organic compound contents and hazardous pollutant contents. Because the spray booths were constructed after April 1, 1972 they are subject to the most restrictive of s. NR 415.05(2), Wis. Adm. Code which limits particulate matter emissions to not more than the rate calculated using the process weight rate equation or s. NR 415.05(1)(o), Wis. Adm. Code which limits particulate matter emissions to not more than 0.40 pounds per 1000 pounds gas. As part of construction permit 93-POY-092 an emission limitation of 0.22 pounds per hour was determined. This limitation is necessary to ensure national ambient air quality standards for particulate matter emissions are attained and maintained. This more restrictive emission limitation would be included in any operation permit issued by the Department. Because the spray booths were constructed after April 1, 1972 they are subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

The spray paint booths are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. As part of the review for permit 93-POY-092, the Department determined 85 percent control of volatile organic compound emissions to be technologically infeasible and determined LACT to be the use of high volume low pressure (HVLP) spraying techniques on parts with the narrowest portion of the surface greater than 1.75 inches and the shallow recesses with depths of less than 0.25 inches. Air atomization techniques may be used on parts with the narrowest portion of the surface less than or equal to 1.75 inches, or the shallow recesses with depths of greater than or equal to 0.25 inches, or in cases where the permittee can show that customer finish requirements cannot be achieved with HVLP. The operating pressure of the HVLP spray gun may not exceed 10 pounds per square inch (gauge). Additionally LACT was determined to be the use of coatings with a maximum VOC content of 6.2 pounds per gallon as applied.

Four Plastic Parts Spray Booths with One Natural Gas/Propane Drying Oven, P113: This process is covered by construction permit 93-POY-092. Maximum theoretical emissions were calculated using worst case material usage rates, solid contents, volatile organic compound contents and hazardous pollutant contents. Because the spray booths were constructed after April 1, 1972 they are subject to the most restrictive of s. NR 415.05(2), Wis. Adm. Code which limits particulate matter emissions to not more than the rate calculated using the process weight rate equation or s. NR 415.05(1)(o), Wis. Adm. Code which limits particulate matter emissions to not more than 0.40 pounds per 1000 pounds gas. As part of construction permit 93-POY-092 an emission limitation of 0.33 pounds per

hour was determined. This limitation is necessary to ensure national ambient air quality standards for particulate matter emissions are attained and maintained. This more restrictive emission limitation would be included in any operation permit issued by the Department. Because the spray booths were constructed after April 1, 1972 they are subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

The spray paint booths are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. As part of the review for permit 93-POY-092, the Department determined 85 percent control of volatile organic compound emissions to be technologically infeasible and determined LACT to be the use of high volume low pressure (HVLP) spraying techniques on parts with the narrowest portion of the surface greater than 1.75 inches and the shallow recesses with depths of less than 0.25 inches. Air atomization techniques may be used on parts with the narrowest portion of the surface less than or equal to 1.75 inches, or the shallow recesses with depths of greater than or equal to 0.25 inches, or in cases where the permittee can show that customer finish requirements cannot be achieved with HVLP. The operating pressure of the HVLP spray gun may not exceed 10 pounds per square inch (guage). Additionally LACT was determined to be the use of coatings with a maximum VOC content of 6.2 pounds per gallon as applied.

Four Plastic Parts Spray Booths with One Electric Drying Oven, P134: This process is covered by construction permit 02-MEC-617. Please refer to the Preliminary Determination for this permit for more details. Maximum theoretical emissions were calculated using worst case material usage rates, solid contents, volatile organic compound contents and hazardous pollutant contents. Because the spray booths were constructed after April 1, 1972 they are subject to the most restrictive of s. NR 415.05(2), Wis. Adm. Code which limits particulate matter emissions to not more than the rate calculated using the process weight rate equation or s. NR 415.05(1)(o), Wis. Adm. Code which limits particulate matter emissions to not more than 0.40 pounds per 1000 pounds gas. In this case the emission rate calculated using the process weight rate equation is most restrictive. Because the spray booths were constructed after April 1, 1972 they are subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

Because the facility is not located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha counties the spray booths are not subject to s. NR 422.083, Wis. Adm. Code for plastic parts coating, pursuant to s. NR 422.083(1), Wis. Adm. Code. The spray booths are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. The permittee has submitted information indicating that 85 percent control of volatile organic compound emissions is technologically infeasible (see hand calculations). The permittee has proposed the implementation of an environmental management system (EMS) which looks at the facility's significant environmental aspects, considers those aspects in establishing objectives and targets for improving environmental performance, and implementation of a program to achieve the targets to be LACT for process P134. The Department has determined that LACT shall be the implementation of an EMS which addresses volatile organic compounds from the facility.

Four Plastic Parts Spray Booths with Two Electric Drying Ovens, P139: This process is covered by construction permit 02-MEC-617. Please refer to the Preliminary Determination for this permit for more details. Maximum theoretical emissions were calculated using worst case material usage rates, solid contents, volatile organic compound contents and hazardous pollutant contents. Because the spray booths were constructed after April 1, 1972 they are subject to the most restrictive of s. NR 415.05(2), Wis. Adm. Code which limits particulate matter emissions to not more than the rate calculated using the process weight rate equation or s. NR 415.05(1)(o), Wis. Adm. Code which limits particulate matter emissions to not more than 0.40 pounds per 1000 pounds gas. In this case the emission rate calculated using the process weight rate equation is most restrictive. Because the spray booths were constructed after April 1, 1972 they are subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

Because the facility is not located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha counties the spray booths are not subject to s. NR 422.083, Wis. Adm. Code for plastic parts coating, pursuant to s. NR 422.083(1), Wis. Adm. Code. The spray booths are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. The permittee has submitted information indicating that 85 percent control of volatile organic compound emissions is technologically infeasible (see hand calculations). The

permittee has proposed the implementation of an environmental management system (EMS) which looks at the facility's significant environmental aspects, considers those aspects in establishing objectives and targets for improving environmental performance, and implementation of a program to achieve the targets to be LACT for process P139. The Department has determined that LACT shall be the implementation of an EMS which addresses volatile organic compounds from the facility.

One Plastic Parts Spray Booths with One Natural Gas/Propane Drying Oven, P145: This process is covered by construction permit 02-MEC-617. Please refer to the Preliminary Determination for this permit for more details. Maximum theoretical emissions were calculated using worst case material usage rates, solid contents, volatile organic compound contents and hazardous pollutant contents. Because the spray booth was constructed after April 1, 1972 it is subject to the most restrictive of s. NR 415.05(2), Wis. Adm. Code which limits particulate matter emissions to not more than the rate calculated using the process weight rate equation or s. NR 415.05(1)(o), Wis. Adm. Code which limits particulate matter emissions to not more than 0.40 pounds per 1000 pounds gas. In this case the emission rate calculated using the process weight rate equation is most restrictive. Because the spray booth was constructed after April 1, 1972 it is subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

Because the facility is not located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha counties the spray booths are not subject to s. NR 422.083, Wis. Adm. Code for plastic parts coating, pursuant to s. NR 422.083(1), Wis. Adm. Code. The spray booth is subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. The permittee has submitted information indicating that 85 percent control of volatile organic compound emissions is technologically infeasible (see hand calculations). The permittee has proposed the implementation of an environmental management system (EMS) which looks at the facility's significant environmental aspects, considers those aspects in establishing objectives and targets for improving environmental performance, and implementation of a program to achieve the targets to be LACT for process P145. The Department has determined that LACT shall be the implementation of an EMS which addresses volatile organic compounds from the facility.

The booth is subject to the general limitations for sulfur dioxide, carbon monoxide and nitrogen oxides contained in ss. NR 417.03, NR 426.03 and NR 428.03, Wis. Adm. Code, respectively. These general limitations would be included in Part II of any permit issued by the Department.

Two Screening Machines which use an existing drying oven and a new natural gas/propane oven, P147: This process is covered by construction permit 02-MEC-617. Please refer to the Preliminary Determination for this permit for more details. Maximum theoretical emissions were calculated using worst case material usage rates, solid contents, volatile organic compound contents and hazardous pollutant contents. Because the facility is not located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington, or Waukesha counties the screening machines are not subject to the requirements of s. NR 422.145, Wis. Adm. Code for screen printing, pursuant to s. NR 422.03(4m), Wis. Adm. Code. The screening machines are subject to s. NR 424.03(2)(c), Wis. Adm. Code which requires the use of the latest available control techniques and operating practices demonstrating best current technology (LACT) to control volatile organic compound emissions. The permittee has submitted information indicating that 85 percent control of volatile organic compound emissions is technologically infeasible (see hand calculations). The permittee has proposed the implementation of an environmental management system (EMS) which looks at the facility's significant environmental aspects, considers those aspects in establishing objectives and targets for improving environmental performance, and implementation of a program to achieve the targets to be LACT for process P147. The Department has determined that LACT shall be the implementation of an EMS which addresses volatile organic compounds from the facility. Because the natural gas drying oven has a heat input rating of less than 1 mmBtu per hour, it is exempt from the particulate matter emission limitations of s. NR 415.06, Wis. Adm. Code. Because the oven will be constructed after April 1, 1972 it is subject to s. NR 431.05, Wis. Adm. Code which limits visible emissions to not more than 20 percent opacity.

One Roll Coating Machine which uses an existing drying oven included under P29, P149: This process is exempt from construction permit requirements pursuant to s. NR 406.04(1)(g), Wis. Adm. Code because VOC emissions are less than 1666 pounds per month. Any operation permit issued by the Department would require the permittee to keep records to document that emissions are below this level. Maximum theoretical emissions were calculated using worst case material usage rates, volatile organic compound contents and hazardous pollutant contents. Because the

coater uses a curing oven, it is subject to s. NR 422.15(2)(a), (b) and (c), Wis. Adm. Code which limits the volatile organic compound contents to not more than 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings, 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings, and 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator of all other coatings. The permittee shall comply with the volatile organic compound content limitation by the application of low solvent content coating technology. This roll coating machine shares use of the the natural gas/propane drying oven under process P29. The requirements for the drying oven will be included with that process.

Entire Facility:

Hazardous Air Contaminant Review - ch. NR 445, Wis. Adm. Code Requirements: Emissions from firing natural gas and propane, which are group I virgin fossil fuels, in boilers B20 and B21, and in the ovens associated with P28, P29, P37, P56, P76, P108, P113, P145, P147 are exempt from ch. NR 445, Wis. Adm. Code requirements, pursuant to ss. NR 445.04(1)(c)1., (3)(c)1, (4)(c)1., and (4r)(b)1. and ss. NR 445.05(1)(c)1., (3)(c)1, (4)(c)1., and (4r)(b)1., Wis. Adm. Code. Emissions of all other hazardous pollutants regulated by ch. NR 445, Wis. Adm. Code are below the corresponding Table Values with the exception of 2-butoxyethanol, n-butyl alcohol, cyclohexanone, diisobutyl ketone, isophorone, toluene, and formaldehyde. A modeling analysis of 2-butoxyethanol, n-butyl alcohol, cyclohexanone, diisobutyl ketone, isophorone, and toluene shows that the impact from the facility are less than their respective acceptable ambient concentration. See the Air Quality Review section below for details. The permittee has elected to limit formaldehyde emissions to less than the Table 3B level of 250 pounds per hour. This more restrictive limitation would be included in any operation permit issued by the Department.

Hazardous Air Pollutant Review - Hazardous Air Pollutants Regulated by the Clean Air Act: The permittee elected limitations to restrict the potential emissions of each hazardous air pollutant regulated by the Clean Air Act to less than 10 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined to less than 25 tons per year. Therefore, the facility is considered a synthetic minor source of hazardous air pollutants. See the emission summary table below. Note: As part of the Environmental Cooperative Agreement the permittee has selected even more restrictive limitations. They have elected to limit the potential emissions of each hazardous air pollutant regulated by the Clean Air Act to less than 8 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined to less than 20 tons per year.

Variations Granted Under the Cooperative Agreement between Northern Engraving and the Department:

Part I.A. of the attached Draft Operation Permit includes the requirements the permittee would be required to meet while operating under an approved Cooperative Agreement. Part I.B. includes the permittee's applicable requirements under ch. 285, Wis. Stats. and ss. NR 400 to 499, Wis. Adm. Code as described above. Part I.B. of the draft permit would become effective if the proposed Cooperative Agreement expires or is revoked for any reason. The proposed variations under Part I.A. of the Draft Operation Permit and the proposed Cooperative Agreement are as follows:

1. Item: Waiver from the requirement to obtain a construction permit prior to commencing construction and initial operation of new process equipment, commencing modification and initial operation of existing equipment, or relocating existing process equipment between Northern Engravings Holmen, Sparta, Galesville, and West Salem facilities.

Previous Requirements to be Superseded by the Cooperative Agreement [source of the requirement]:

Requirement to obtain a construction permit prior to construction, reconstruction, replacement, relocation or modification of a minor stationary source that is not otherwise exempt under s. NR 406.04, Wis. Adm. Code [s. NR 406.03, Wis. Adm. Code]

Proposed Requirement Under Cooperative Agreement:

a. New Equipment Construction and Modification: The permittee may commence construction or modification (but not operation) of new process equipment prior to obtaining a construction permit, provided the following conditions are met. The following conditions do not apply if a proposed project is

exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

- (1) The permittee shall submit the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department:
 - (a) Two copies of a complete construction and operation permit application describing the proposed equipment;
 - (b) An application fee of \$1350 or other amount as required by s. NR 410.03(1)(d), Wis. Adm. Code; and
 - (c) Information describing how the interested persons group was notified of the proposed project. [ss. 299.80(10) and (11)(b), Wis. Stats.]
- (2) The Department shall process the permit application in accordance with ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code, however, the permittee need not wait for permit issuance to commence construction. The Department shall process the permit application as both a construction permit and a significant revision to this operation permit and issue both permits simultaneously to reduce the administrative burden of issuing a construction permit that expires 18 months after issuance followed by an operation permit. The Department shall send an invoice outlining the fees required for processing the construction permit for the proposed project, including the fees for an expedited permit review authorized by s. NR 410.03(o), Wis. Adm. Code, less the \$1350 permit application fee. [ss. 299.80(2)(h), (4)(b), (10) and (11)(b), Wis. Stats.]
- (3) The permittee shall pay the total amount of the fee invoice within 30 days of receipt.¹ [s. 299.80(10), Wis. Stats.]
- (4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.² [s. 299.80(2)(h) and (4)(b), Wis. Stats.]
- (5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the

¹ Pursuant to s. 299.80(10), Wis. Stats., a participant in a cooperative agreement shall pay the same fees required under chs. 280 to 295, Wis. Stats. that it would be required to pay if it had not entered into a cooperative agreement. Therefore, while the requirement to obtain a construction permit prior to installation is waived, the permittee is still required to pay the fees that would have been assessed had a construction permit been issued under ch. NR 406, wis. Adm. Code.

² By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air pollutant emissions. Requirement I.A.5.a.(1)(g) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction of the equipment in question immediately.

b. New Equipment Operation: The permittee may operate new process equipment, provided one of the following alternate scenarios are met. The following conditions do not apply if a proposed project is exempt from the requirement to obtain a construction permit, pursuant to s. NR 406.04, Wis. Adm. Code. [s. 299.80(2)(h) and (4)(b), Wis. Stats.]

- (1) *Alternate Scenario #1:* The permittee may operate new process equipment provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.5.a. and the Department issues a construction permit pursuant to ss. 285.60 through 285.69, Wis. Stats and ss. NR 406 and NR 407, Wis. Adm. Code. The permittee shall operate the new process equipment in compliance with the conditions contained in any construction permit issued by the Department. [s. NR 406.03, Wis. Adm. Code]
- (2) *Alternate Scenario #2:* The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.5.a. and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]
 - (a) The permittee shall submit two copies of the following information to the Department of Natural Resources, La Crosse Area Office, 3550 Mormon Coulee Road, Room 104, La Crosse, WI, 54601 **OR** other location specified by the Department, 14 calendar days prior to the date of initial operation:
 - (i) Information identifying all applicable requirements from the Wisconsin Statutes, Wisconsin Administrative Code, and federal Clean Air Act for the proposed equipment;
 - (ii) A quantification the air pollution emissions that would result from the proposed project;
 - (iii) A computer dispersion modeling analysis showing the National Ambient Air Quality Standards will be protected if the proposed project results in an increase in potential particulate matter, sulfur dioxide, nitrogen oxide, and/or carbon monoxide emissions.
 - (iv) A computer dispersion modeling analysis showing the Acceptable Ambient Concentrations will be protected if the proposed project results in an increase in emissions of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code so that the resulting facility total emissions of the hazardous air pollutant are above the corresponding Table Value(s) **OR** results in the emission of any hazardous air pollutant listed in ch. NR 445, Wis. Adm. Code that was not previously emitted, at a rate greater than its corresponding Table Value(s); and
 - (v) An analysis showing the proposed project will not cause the total facility wide potential emissions of particulate matter, sulfur dioxide, nitrogen oxides or carbon monoxide to exceed 100 tons per year. Any proposed new or relocated source that will result in the facility wide potential emissions of any one of these pollutants exceeding 100 tons per year is not eligible for this waiver. If the facility wide potential emissions of any one of the pollutants would be greater than 100 tons per year as the result of a proposed project, the permittee shall comply with the construction permit requirements outlined in ch. NR 406, Wis. Adm. Code and the significant operation permit revision requirements of s. NR 407.13, Wis. Adm. Code.³ [ss. 299.80(10) and (11)(b), Wis. Stats.]
 - (b) The Department has 14 calendar days from the date that all the information outlined in (a) is received to request additional information or object to the proposed project. If the Department requests additional information during the original 14 calendar day period the Department shall have an additional 7 calendar days from the date of receipt of the information to request additional

³ This requirement is necessary because if the potential emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeds 100 tons the facility would be considered a major source for Part 70 purposes and would be required to obtain either a Part 70 source permit or a synthetic minor, non-Part 70 source permit containing conditions that limit the potential emissions of all criteria pollutants to less than 100 tons per year.

information or object to the proposed project. Under no scenario shall the Department have less than 14 days to review original submittal. If the Department does not respond within 14 calendar days from the date that all the information outlined in (a) is submitted, or within 7 days from the date that any additional information requested by the Department is submitted, whichever is later, the permittee may commence initial operation of the proposed equipment. The Department may provide written approval to commence initial operation of the proposed equipment prior to the end of the 14 calendar day period. If this is the case the permittee may commence initial operation upon receipt of this written approval. [ss. 299.80(2)(h) and (11)(b), Wis. Stats.]

- (3) *Alternate Scenario #3:* The permittee may initially operate new process equipment prior to obtaining a construction permit provided the permittee submits a complete construction and operation permit application as required by the conditions of I.A.5.a. and the following conditions are met: [s. 299.80(2)(h) and (4)(b), Wis. Stats.]
- (a) The Department provides written approval to commence initial operation of the proposed equipment. This written approval shall only be provided after the Department completes an air quality dispersion modeling analysis to ensure that the national ambient air quality standards and acceptable ambient concentrations will be protected while the proposed equipment is operating; [s. NR 406.09, Wis. Adm. Code]
- (b) The permittee shall comply with any specific conditions included in the Department's written approval to commence initial operation;
- (4) The permittee shall continue to comply with all the requirements of Part I.A. of this permit so long as the cooperative agreement is in affect.⁴ [s. 299.80(2)(h) and (4)(b), Wis. Stats.]
- (5) Nothing in this section or in any Cooperative Agreement between the Department and the permittee shall be construed as a guarantee that the Department will issue an air pollution control construction and operation permit for a proposed project. The decision on whether to approve a permit application will be made according to the requirements of chapters NR 400 through NR 499, Wis. Adm. Code and s. 285.60 through 285.69, Wis. Stats. If the Department denies a permit application pursuant to ss 285.61 through 285.64, Wis. Stats. all costs and risks associated with installing and operating the proposed equipment shall be incurred solely by the permittee. In the event that the construction and operation permit application for the proposed project is denied, the permittee shall cease construction and/or operation of the equipment in question immediately.

2. Item: Waiver from individual process line LACT (latest available control technique) requirements for controlling volatile organic compound emissions.

Previous Requirements to be Superseded by the Cooperative Agreement [source of the requirement]:
Requirement to control volatile organic compound emissions from process lines on which construction or

⁴ By continuing to comply with the facility wide emission limitations outlined in Part I.A. the net emissions increase from any new sources or relocation of any existing sources from other facilities, will not exceed the major stationary source levels of s. NR 405.02(22)(a), Wis. Adm. Code triggering Prevention of Significant Deterioration (PSD) Requirements. The existing facility potential emissions of all criteria pollutants is less than 250 tons per year and the facility is not included in the source categories listed in s. NR 405.07(4), Wis. Adm. Code, therefore the existing facility is a synthetic minor source for PSD purposes. Note: This facility is not located in an area designated nonattainment. Also, by continuing to comply with the facility wide emissions limitations, the potential emissions increase from any new sources or relocated existing sources will not exceed 100 tons per year after controls for any criteria pollutant. Therefore none of the changes will be considered a Type II action requiring an environmental assessment. Finally, by continuing to comply with the facility wide emission limitations, the facility would not become a major source for Part 70 purposes for either volatile organic compound or hazardous air pollutant emissions. Requirement I.A.5.a.(1)(g) of this permit requires that any changes that result in potential facility wide emissions of particulate matter, sulfur dioxide, nitrogen oxide or carbon monoxide emissions exceeding 100 tons per year follow permit issuance requirements of chs. NR 406 and NR 407, Wis. Adm. Code.

modification commenced on or after August 1, 1979, and which are not subject to emission limitations listed elsewhere in chs. NR 419 to 423, Wis. Adm. Code by at least 85 percent OR where 85 percent control has been demonstrated to be technologically infeasible, to control volatile organic compounds using the latest available control techniques and operating practices demonstration best current technology, as approved by the Department. [s. NR 424.03(2)(b) and (c), Wis. Adm. Code]

West Salem - LACT Permit Requirements:

- Process P18: s. NR 424.03(2)(b) and (c), Wis. Adm. Code
- Process P28: Permit 97-MWH-013 Condition I.I.A.1.
- Process P38: Permit 98-JCH-176 Conditions I.I. Applicable Limitation for VOCs
Conditions I.I.A.2.
- Process P56: Permit 02-MEC-617 Conditions I.A.1.
- Process P70: Permit 89-IRS-041 Condition I.A.8.
Permit 91-DCF-099 Condition I.H.1. Applicable Limitation for VOCs
Condition I.I.1. Applicable Limitation for VOCs
Condition I.J.1. Applicable Limitation for VOCs
Permit 92-IRS-110 Condition I.A.1. Applicable Limitation for VOCs
Permit 93-POY-092 Condition I.D. Applicable Limitation for VOCs
- Process P76: Permit 98-JCH-176 Condition I.II. Applicable Limitation for VOCs
Condition I.II.2.a.
- Process P108: Permit 93-POY-092 Condition I.B. Applicable Limitation for VOCs
- Process P113: Permit 93-POY-092 Condition I.C. Applicable Limitation for VOCs
- Process P134: Permit 02-MEC-617 Condition I.B.1.
- Process P139: Permit 02-MEC-617 Condition I.C.1.
- Process P145: Permit 02-MEC-617 Condition I.D.1.
- Process P147: Permit 02-MEC-617 Condition I.E.1.

Proposed Requirement Under Cooperative Agreement: Total volatile organic compound emissions from the West Salem facility may not exceed 85 tons per year averaged over each 12 consecutive month period.

- 3. Item: Monthly rather than daily record keeping requirements.

Previous Requirements to be Superseded by the Cooperative Agreement [source of requirement]: The following permit conditions require Northern Engraving to keep daily records:

West Salem – Daily Recordkeeping Requirements

- Section NR 439.04(3), Wis. Adm. Code
- Permit 89-IRS-041 Condition I.B.5.*
- Permit 91-DCF-099 Condition I.K.6.*
- Permit 92-IRS-110 Condition I.E.6.*
- Permit 93-POY-092 Facility Wide Permit Condition 6.*
- Permit 98-JCH-176 Entire Facility Condition 2.*
- Permit 97-MWH-013 Total Facility Limit 3.a.*
- Permit 98-RV-011 Total Facility Conditions 3.a. and 3.e.*
- Permit 02-MEC-617 Conditions I.F.1.b.(1), I.F.1.c.(1), I.F.2.b.(1), I.F.2.c.(1), and I.F.2.b.(4)*

Proposed Requirement Under Cooperative Agreement: To demonstrate compliance status with the facility wide emission limitations for volatile organic compound and hazardous air pollutants, Northern Engraving would be required to keep monthly records of VOC emissions as follows:

a. Compliance Demonstration Methods for VOCs:

- (1) Each month the permittee shall calculate the total volatile organic compound emissions from the facility as follows:

$$E = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times C_1) + (U_2 \times W_2 \times C_2) + \dots + (U_n \times W_n \times C_n)]\}$$

$$- [(S_1 \times P_1) + (S_2 \times P_2) + \dots + (S_m \times P_m)]$$

where:

E is the monthly VOC emissions (tons/month);

U is the monthly usage of each ink, coating, solvent, or other VOC containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other VOC containing material used during the month (pounds/gallon)

C is the VOC content of each ink, coating, solvent, or other VOC containing material used during the month expressed as a weight fraction (i.e. if a material is 25% VOC by weight C would be 0.25);

n identifies each ink, coating, solvent or other VOC containing material used during the month;

S is the amount of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month (lbs/month);

P is the VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site each month expressed as a weight fraction (i.e. if a spent material is 25% VOC by weight P would be 0.25);

m identifies each spent ink, coating, solvent or other VOC containing material recovered and shipped off site during the month.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

- (2) To demonstrate compliance with the facility wide volatile organic compound emission limitation of 85 tons per year, the permittee shall calculate the total volatile organic compound emissions from the facility, averaged over each 12 consecutive month period by summing the monthly volatile organic compound emissions as calculated in a.(1) above for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]
- (3) The permittee shall use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content (C_n) and the density (W_n) of the of the inks, coatings, solvents or other VOC containing materials used. In case of an inconsistency between the Method 24 results and the formulation data, the Method 24 results will govern. [s. NR 439.04(1)(d), Wis. Adm. Code]
- (4) The permittee shall analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content (P) no less than: (a) each time there is a change to materials or process operations that may affect the waste stream; or (b) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

b. Record Keeping and Monitoring Requirements for VOCs:

- (1) The permittee shall keep records of the following for each ink, coating, solvent, or other VOC containing material used at the facility:
 - (a) A unique name or identification number; and
 - (b) The VOC content, expressed as a weight fraction (C_n).
 [s. NR 439.04(1)(d), Wis. Adm. Code]
- (2) The permittee shall keep monthly records of:
 - (a) The amount of each ink, coating, solvent, or other VOC containing material used in gallons per month (U_n);
 - (b) The density of each ink, coating, solvent, or other VOC containing material used in pounds per gallon (W_n);
 - (c) The amount of spent ink, coating, solvent, or other VOC containing material recovered and shipped off site in pounds per month (S_m);
 - (d) The VOC content of each spent ink, coating, solvent or other VOC containing material recovered and shipped off site, expressed as a weight fraction (P_m).
 - (e) The total monthly VOC emissions from the facility in tons per month (E), as calculated in a.(1); and

(f) The total VOC emissions from the facility in tons per year as calculated in a.(2).
[s. NR 439.04(1)(d), Wis. Adm. Code]

c. Compliance Demonstration Methods for HAPs:

- (1) Each month the permittee shall calculate the total emissions of each hazardous air pollutant from the facility regulated by the Clean Air Act as follows:⁵

$$E_x = (1 \text{ ton}/2000 \text{ lbs}) \times \{[(U_1 \times W_1 \times H_1) + (U_2 \times W_2 \times H_2) + \dots + (U_n \times W_n \times H_n)] \\ - [(S_1 \times I_1) + (S_2 \times I_2) + \dots + (S_m \times I_m)]\}$$

where:

E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month);

x identifies each HAP emitted from the facility

U is the monthly usage of each ink, coating, solvent, or other HAP containing material used during the month (gallons/month);

W is the density of each ink, coating, solvent, or other HAP containing material used during the month (pounds/gallon)

H is the HAP content of each ink, coating, solvent, or other HAP containing material used during the month expressed as a weight fraction (i.e. if a material is 25% HAP by weight H would be 0.25);

n identifies each ink, coating, solvent or other HAP containing material used during the month;

S is the amount of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month (lbs/month);

I is the HAP content of each spent ink, coating, solvent or other HAP containing material recovered and shipped off site each month expressed as a weight fraction (i.e. if a spent material is 25% HAP by weight I would be 0.25);

m identifies each spent ink, coating, solvent or other HAP containing material recovered and shipped off site during the month.

[s. NR 407.09(4)(a)1., Wis. Adm. Code]

- (2) To demonstrate compliance with the facility wide limitation on each hazardous air pollutant emissions of 8 tons per year, the permittee shall calculate the emissions of each hazardous air pollutant regulated by the Clean Air Act, averaged over each 12 consecutive month period by summing the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act as calculated in c.(1) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]

- (3) Each month the permittee shall calculate the total emissions of hazardous air pollutants regulated by the Clean Air Act as follows:

$$E_{\text{hap}} = \sum E_x$$

where:

E_{hap} is the monthly total emissions of all hazardous air pollutants regulated by the Clean Air Act that are emitted by the facility (tons/month);

E_x is the monthly emissions of each hazardous air pollutant regulated by the Clean Air Act (tons/month) as calculated in c.(1);

⁵ This calculation shall be performed for each hazardous air pollutant regulated by the Clean Air Act that is emitted from the facility.

x identifies each HAP emitted from the facility.
[s. NR 407.09(4)(a)1., Wis. Adm. Code]

- (4) To demonstrate compliance with the facility wide limitation on the total hazardous air pollutants emitted from the facility of 20 tons per year, the permittee shall calculate the total emissions of all hazardous air pollutants regulated by the Clean Air Act, averaged over each 12 consecutive month period by summing the monthly emissions of all hazardous air pollutants regulated by the Clean Air Act as calculated in c.(3) for each consecutive 12 month period. This calculation shall be performed within twenty calendar days of the end of each month for the previous 12 consecutive month period. [s. NR 407.09(4)(a)1., Wis. Adm. Code]
- (5) The permittee shall use coating manufacturer's formulation data to determine the HAP content (H_n) of the of the inks, coatings, solvents or other HAP containing materials used. [s. NR 439.04(1)(d), Wis. Adm. Code]
- (6) The permittee shall analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content (H) no less than: (a) each time there is a change to materials or process operations that may affect the waste stream; or (b) quarterly, which ever is most frequent. [s. NR 439.04(1)(d), Wis. Adm. Code]

d. Record Keeping and Monitoring Requirements for HAPs:

- (1) The permittee shall keep records of the following for each ink, coating, solvent, or other HAP containing material used at the facility:
 - (a) A unique name or identification number; and
 - (b) The weight fraction of each HAP contained in the material (H_n).[s. NR 439.04(1)(d), Wis. Adm. Code]
- (2) The permittee shall keep monthly records of:
 - (a) The amount of each ink, coating, solvent, or other HAP containing material used in gallons per month (U_n);
 - (b) The density of each ink, coating, solvent, or other HAP containing material used in pounds per gallon (W_n);
 - (c) The amount of spent ink, coating, solvent, or other HAP containing material recovered and shipped off site in pounds per month (S_m);
 - (d) The weight fraction of each HAP contained in each spent ink, coating, solvent or other HAP containing material recovered and shipped off site, expressed as a weight fraction (I_m);
 - (e) The facility total monthly emissions of each HAP in tons per month (E_x), as calculated in c.(1);
 - (f) The total monthly HAP emissions from the facility in tons per month (E_{hap}), as calculated in c.(3);
 - (g) The facility total emissions of each HAP in tons per year as calculated in c.(2).
 - (h) The total HAP emissions from the facility in tons per year as calculated in c.(4).[s. NR 439.04(1)(d), Wis. Adm. Code]

e. Reporting Requirements: Report actual facility wide volatile organic compound and hazardous air pollutant emissions as follows:

- (a) The permittee shall submit a report summarizing the actual, facility wide volatile organic compound and hazardous air pollutant emissions for each consecutive 12 month period as calculated in conditions I.A.1.b.(2) and I.A.2.b.(2) and (4), every 6 months.
- (b) The period addressed by the report shall be the 6 month period starting on the date the Cooperative Agreement is signed or other date agreed upon and approved by DNR, U.S. EPA and the permittee, and each subsequent 6 month period thereafter.
- (c) A copy of the report shall be submitted to the DNR (Marty Sellers, Air Management Engineer, Department of Natural Resources, 3550 Mormon Coulee Road, La Crosse, WI 54601) and the U.S. EPA

(Steve Rothblatt, Branch Chief, Air Program Branch, U.S. EPA, 77 W. Jackson Blvd., Mailcode: AR-18J, Chicago, IL 60604) within twenty days following the end of the reporting period.

(d) If the report shows the actual facility wide volatile organic compound or hazardous air pollutant emissions have exceeded 50 percent of the allowable limitations outlined in conditions I.A.1.a and I.A.2.a.(1) and (2), the permittee shall provide an explanation why emissions reached the levels that they did and how they intend to ensure emissions will not exceed the allowable limitations outlined in conditions I.A.1.a. and I.A.2.a.(1) and (2). [s. NR 439.03(1)(a), Wis. Adm. Code]

4. Item: Waiver from the requirements for Processes P29, P37, P76, and P149 at the West Salem Facility to comply with the reasonable available control technology (RACT) requirements for controlling volatile organic compound emissions.

Previous Requirements to be Superseded by the Cooperative Agreement [source of requirement]:

1. 2 Roll Coating Machines P29: Requirement to limit volatile organic compound emissions from a miscellaneous metal parts or products coating line using baked or specially cured coating technology to not more than: (a) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings; (b) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; (c) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis. Adm. Code, and conditions I.II.A.1.a., I.II.A.2., and I.II.A.3. of Air Pollution Control Permit 97-MWH-013]
- B. 2 Roll Coating Machines P37: Requirement to limit volatile organic compound emissions from a miscellaneous metal parts or products coating line using baked or specially cured coating technology to not more than: (a) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings; (b) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; (c) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis. Adm. Code and conditions I.A.1.a., I.A.2. and I.A.3. of Air Pollution Control Permit 98-RV-011.]
- C. Roll Coating Line P76: Requirement to limit volatile organic compound emissions from a miscellaneous metal parts or products coating line using baked or specially cured coating technology to not more than: (a) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings; (b) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; (c) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis. Adm.Code.]
- D. Roll Coating Machine P149: Requirement to limit volatile organic compound emissions from a miscellaneous metal parts or products coating line using baked or specially cured coating technology to not more than: (a) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings; (b) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; (c) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings. [s. NR 422.15(2), Wis. Adm.Code.]

New Requirement: Volatile organic compound emissions from the West Salem facility may not exceed 85 tons per year averaged over each 12 consecutive month period.

The proposed agreement would allow a variance from the requirement to obtain a construction permit prior to constructing, modifying, relocating and initially operating process equipment provided the permittee meets the conditions listed under item 1. above. The permittee would be required to submit a complete construction and

operation permit application, an explanation of how they have informed their interested persons group, and the application fee prior to commencing construction. The permittee would assume the risk of constructing without a permit. In order to operate any new equipment the permittee would be required to comply with one of three alternate scenarios. Under the first scenario the permittee would not be allowed to operate the new equipment until the Department issues a construction permit. Under the second scenario the permittee would be required to submit a detailed review of the proposed project including a detailed modeling analysis, complete permit application and determination that the proposed equipment will meet applicable limitations. The Department would then have 14 calendar days from the date of the permittee's submittal to object to the proposal or request additional information. Under the third scenario the permittee would be allowed to initially operate only after receiving a written approval from the Department. The Department would only issue this approval after the air quality dispersion modeling analysis is completed and conditions are developed to ensure the national ambient air quality standards and the acceptable ambient concentrations are protected. Prior approval to construct or initially operate would not constitute final Department approval of any permit application. The Department will review the application and make a determination to approve or disapprove the permit application following the procedures of ch. 285, Wis. Stats and chs. NR 400 through 499, Wis. Adm. Code. If the Department does not approve the application, the permittee would be required to discontinue construction and initial operation at their own expense.

This variance from the requirement to obtain a construction permit prior to commencing construction and initial operation gives the permittee greater flexibility than otherwise allowed under chs. 280 to 295, Wis. Stats. and the rules promulgated under those chapters, pursuant to s. 299.80(2)(h), Wis. Stats. Due to the nature of the permittee's business they need to be responsive to their customer's demands in a shorter time frame than allowed by the current construction permit process. To be able to operate without a permit the permittee would either wait for the Department to issue a construction permit, complete an air quality dispersion modeling analysis and provide written approval, or take on additional responsibilities. The additional responsibility would include systematically assessing the pollution that the proposed project would cause and ensuring that they would comply with all applicable air pollution requirements. Because the permittee would be required to comply with a facility wide emissions cap even with the addition of any new equipment there would be no resulting increase in their potential facility emissions. The added flexibility provided by this variance would reduce the time and money spent not only by the permittee but also by the Department on administrative tasks that do not result in benefits to the environment, pursuant to s. 299.80(2)(i), Wis. Stats. Because of the fluctuating nature of their business the permittee currently submits a number of construction permit application each year in attempt to predict their customers' needs. The Department processes these applications and issues construction permits. The majority of the time, the permittee finds that the equipment they've permitted is not the equipment necessary to meet customer demands and they do not install it. The flexibility to construct and initially operate equipment in a shorter time frame would eliminate processing unnecessary permits saving both the permittee and the Department time and money and allowing both parties to focus on processing the permits that are required.

The proposed agreement would allow a variance from the LACT requirements for processes P18, P28, P38, P56, P70, P76, P108, P113, P134, P139, P145 and P147. These LACT requirements were previously determined by the Department as part of the review of the air pollution control permits listed above and are:

Process P18: the use of UV curable inks.

Process P28: the use of coatings or inks with a maximum VOC content of 6.9 pounds per gallon as applied and no more than 1241 gallons of ink per 12 consecutive month period.

Process P38: the use of coatings or inks with a maximum VOC content of 6.9 pounds per gallon as applied and no more than 1000 gallons of ink per 12 consecutive month period.

Process P56: operate under an environmental management system that addresses VOC emissions from the facility.

Process P70: the use of coatings or inks with a maximum VOC content of 6.5 pounds per gallon as applied

Process P76: the use of coatings or inks with a maximum VOC content of 6.8 pounds per gallon as applied and no more than 1333 gallons of ink per 12 consecutive month period.

Process P108: the use of coatings or inks with a maximum VOC content of 6.2 pounds per gallon as applied and the use of HVLP spraying techniques.

Process P113: the use of coatings or inks with a maximum VOC content of 6.2 pounds per gallon as applied and the use of HVLP spraying techniques.

Process P134: operate under an environmental management system that addresses VOC emissions from the facility.

Process P139: operate under an environmental management system that addresses VOC emissions from the facility.

Process P145: operate under an environmental management system that addresses VOC emissions from the facility.

Process P147: operate under an environmental management system that addresses VOC emissions from the facility.

The proposed agreement would also allow a variance from the RACT requirements for processes P29, P37, P76 and P149. The RACT requirements for these process lines would be the use of coatings with a maximum VOC content of not more than (a) 4.3 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies clear coatings; (b) 3.5 pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings; (c) 3.0 pounds per gallon of coating, excluding water, delivered to a coating applicator for all other coatings.

As shown in the Facility Emissions section, the potential volatile organic compound emissions that could result if LACT and RACT were the only restriction applied to the facility is 2108.85 tons per year. The permittee has elected to take additional restrictions as part of their operation permit so the facility would be considered a synthetic minor, non-Part 70 source. Under this restriction the potential volatile organic compound emissions would be 99 tons per year. Under the Cooperative Agreement the permittee has proposed to further limit their potential volatile organic emissions to not more than 85 tons per year. This reduction in the overall level of volatile organic compound emissions satisfies the requirements that any variance granted under a Cooperative Agreement promote the reduction in overall levels of pollution to below the levels required under chs. 280 to 295, Wis. Stats., pursuant to s. 299.80(4)(b), Wis. Stats.

While the applicable LACT and RACT requirements are in terms of the pounds of volatile organic compounds in a gallon of material, the proposed variance does not limit the VOC content of the materials used at the plant, but limits the overall VOC emissions as shown above. Air pollution limitations are intended to protect National Ambient Air Quality Standards (NAAQSs) established by the U.S. Environmental Protection Agency. Currently there are no NAAQSs for VOC. Volatile organic compound emissions are regulated because they react with nitrogen oxides in the atmosphere on hot sunny days to form ozone, more commonly known as smog. If present at high enough concentrations, surface level ozone can potentially impact public health and the environment. The U.S. EPA has established NAAQSs for ozone. Because of the way that ozone is formed, it is generally a regional problem where many sources of VOC and nitrogen oxide emissions contribute to its formation. Some large urban areas including southeastern Wisconsin are classified as ozone nonattainment areas. None of the counties in the western part of Wisconsin including La Crosse, Trempealeau, and Monroe Counties are classified as nonattainment areas for ozone.

As the RACT requirements of ch. NR 422, Wis. Adm. Code are currently written, facilities which are located outside of Brown, Calumet, Dane, Dodge, Door, Fond du Lac, Jefferson, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha and Winnebago counties and which have total emissions of VOC, with all control equipment inoperative, of less than 100 tons per year are exempt from the RACT requirements pursuant to s. NR 422.03(3), Wis. Adm. Code. The Northern Engraving - West Salem facility would meet both of these criteria under this proposed draft operation permit. It is not located in any of the above counties and has reduced its actual VOC emissions to less than 100 tons per year. (Note: In the past Northern Engraving's West Salem facility had actual emissions greater than 100 tons per year.) Pursuant to the exemption applicability outlined in s. NR 422.03, Wis. Adm. Code, once a facility exceeds the exemption level of 100 tons of VOC per year it is subject to RACT regardless of what their future VOC emissions are. The Northern Engraving - West Salem facility has been able to reduce their VOC emissions from greater than 100 tons per year to less than 100 tons per year and any operation permit issued to the facility would limit the facility's potential VOC emissions to less than 100 tons per year. Therefore granting Northern Engraving a variance from RACT would be no less stringent than the limitations that apply to an air pollution source of a similar size in the western part of Wisconsin.

To demonstrate that their VOC emissions remain below 85 tons per year, the permittee has proposed an alternate record keeping method to reduce their administrative burden. The permittee has proposed to keep monthly records of the VOC containing materials used at their facility to determine their overall facility emissions. These types of records should demonstrate compliance status with the alternate limitation of 85 tons of VOC per year as required by

s. 299.80(4)(b), Wis. Stats.

In addition to a more restrictive limitation on VOCs, the permittee has elected a more restrictive limitation on hazardous air pollutant emissions. To be a minor source of hazardous air pollutants, a facility's potential emissions of each hazardous air pollutant regulated by the Clean Air Act must be less than 10 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined must be less than 25 tons per year. The permittee has elected to take further restrictions and proposes to limit the potential emissions of each hazardous air pollutant regulated by the Clean Air Act to less than 8 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined to less than 20 tons per year.

Please refer to the Cooperative Agreement and its supporting documentation for more information regarding the variances granted under that pilot program.

EARLY HAZARDOUS POLLUTANT EMISSION REDUCTION OPTION

not applicable

AIR QUALITY REVIEW

The facility is located in an area designated as attainment/unclassified for all criteria pollutants. An air dispersion analysis of the stack emissions was performed by Jeff Simms of the Bureau of Air Management. The results of this analysis are summarized in a memo dated April 16, 2003. The following table summarizes the results of this analysis. These results indicate that national ambient air quality standards (NAAQSs) are expected to be attained and maintained assuming the emission rates, stack parameters and the background pollutant concentrations provided in Sims's memo.

NAAQS Analysis Results (All Concentrations in $\mu\text{g}/\text{m}^3$)					
Pollutant	Facility Impact	Background	Total Concentration	NAAQS or AAC	% NAAQS or % AAC
TSP - 24 hr	75.3	41.8	117.1	150.0	78.1
PM ₁₀ - 24 hr	75.3	29.8	105.1	150.0	70.1
PM ₁₀ - Annual	20.5	9.8	30.3	50.0	60.6
SO ₂ - 3 hr	0.91	137.1	138.0	1300.0	10.6
SO ₂ - 24 hr	0.36	35.2	35.6	365.0	9.7
SO ₂ - Annual	0.078	7.9	7.97	80.0	9.9
CO - 1 hr	239.3	3188.0	3427.3	40,000	8.6
CO - 8 hr	73.2	890.4	963.6	10,000	9.6
NO _x - Annual	11.5	4.7	16.2	100.0	16.2
2-butoxyethanol 24-hr	935.5	--	935.5	2880	32.5
n-butanol 1-hr	3144	--	3144	15000	20.9
cyclohexanone 24-hr	125.6	--	125.6	2400	5.2
diisobutyl-ketone	226.0	--	226.0	6000	3.7

24-hr					
isophorone 1-hr	17.5	--	17.5	2500	0.7
toluene 24-hr	227.2	--	227.2	9000	2.5

FACILITY EMISSIONS

Actual emissions are the total emissions generated by the emission sources identified below over the specified time period taking into account any reductions made by a control device or technique. Maximum theoretical emissions are the quantity of air contaminants that theoretically could be emitted by the emissions sources identified below, without considering emission control devices, based on the design capacity of the source. Potential to emit is the maximum capacity of the emission sources identified below to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air contaminant shall be treated as part of its design if the limitation is Federally enforceable.

A. STACK EMISSIONS

1. B20, Stack S10 - Natural Gas/Propane Boiler Rated at 10.5 mmBtu/hr - Installed 1977

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.08	0.35	0.08	0.35	1.58	6.90
Sulfur Dioxide	0.006	0.026	0.006	0.026	0.006	0.026
Nitrogen oxides	2.17	9.50	2.17	9.50	2.17	9.50
Carbon Monoxide	0.88	3.86	0.88	3.86	0.88	3.86
VOCs	0.06	0.25	0.06	0.25	0.06	0.25

2. B21, Stack S10 - Natural Gas/Propane Boiler Rated at 10.5 mmBtu/hr - Installed 1977

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate matter emissions	0.08	0.35	0.08	0.35	1.58	6.90
Sulfur Dioxide	0.006	0.026	0.006	0.026	0.006	0.026
Nitrogen oxides	2.17	9.50	2.17	9.50	2.17	9.50
Carbon Monoxide	0.88	3.86	0.88	3.86	0.88	3.86
VOCs	0.06	0.25	0.06	0.25	0.06	0.25

3. P77, Stack S17 - Miscellaneous Facility Wide Cleanup

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Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	110.6	198.0	110.6	#	110.6	198.0

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P77

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
2-butoxyethanol *	1.49	6.53	1.49	6.53
cyclohexanone *	0.37	1.62	0.37	1.62
DIBK *	1.15	5.04	1.15	5.04
Glycol ethers	1.57	6.88	1.57	6.88
isophorone	0.68	2.98	0.68	2.98
methanol	0.25	1.10	0.25	1.10
MIBK	0.03	0.13	0.03	0.13
Mineral spirits *	6.48	28.38	6.48	28.38
toluene	6.48	28.38	6.48	##
xylene	0.13	0.57	0.13	0.57

4. P18, Stack S18 - Five lithographic presses each with an associated UV curing oven (PLO-WS-18, PLO-WS-19, PLO-WS-20, PLO-WS-21, and PLO-WS-22) - 2 installed in 1990, 2 installed in 1996 and 1 installed in 1997

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	7.58	33.20	7.58	33.20	7.58	33.20

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P18

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
Glycol ethers	1.75	7.67	1.75	7.67

5. P108, Stack S108 - Four Spraybooths (PSB-WS-108, PSB-WS-109, PSB-WS-110, and PSB-WS-111) with one natural gas/propane drying oven SDO-WS-112 rated at 1.2 mmBtu per hour and one electric drying oven

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate Matter Emissions	16.89	73.97	0.23	1.01	0.23	1.01
Sulfur Dioxide	0.0005	0.0022	0.0005	0.0022	0.0005	0.0022

Nitrogen Oxides	0.25	1.09	0.25	1.09	0.25	1.09
Carbon Monoxide	0.1	0.44	0.1	0.44	0.1	0.44
VOCs	49.60	217.25	49.60	#	49.60	217.25

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P108

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	8.88	38.89	8.88	38.89
2-butoxyethanol *	7.60	33.29	7.60	33.29
carbon black *	4.0	17.52	0.2	17.52
diacetone alcohol *	4.56	19.97	4.56	19.97
DIBK *	14.00	61.32	14.00	61.32
ethyl benzene	3.28	14.37	3.28	##
formaldehyde	0.08	0.35	0.08	##
glycol ethers	7.60	33.29	7.60	##
isobutyl alcohol *	1.60	7.01	1.60	7.01
methanol	3.92	17.17	3.92	##
MEK	14.72	64.47	14.72	##
MIBK	8.48	37.14	8.48	##
methyl n-amyl ketone *	5.12	22.43	5.12	22.43
mineral spirits *	2.80	12.26	2.80	12.26
toluene	16.00	70.08	16.00	##
triethylamine	3.60	15.77	3.60	##
xylene	13.84	60.62	13.84	##

6. P113, Stack S113 - Four Spraybooths (PSB-WS-113, PSB-WS-114, PSB-WS-115, and PSB-WS-116) with one natural gas/propane drying oven SDO-WS-117 rated at 1.2 mmBtu per hour

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate Matter Emissions	25.33	110.94	0.36	1.49	0.36	1.49
Sulfur Dioxide	0.0007	0.0032	0.0007	0.0032	0.0007	0.0032
Nitrogen Oxides	0.25	1.09	0.25	1.09	0.25	1.09

Carbon Monoxide	0.10	0.44	0.10	0.44	0.10	0.44
VOCs	74.40	325.87	74.40	#	74.40	325.87

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P113

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	13.32	58.34	13.32	58.34
2-butoxyethanol *	11.40	49.93	11.40	49.93
carbon black *	6.00	26.28	0.30	26.28
diacetone alcohol *	6.84	29.96	6.84	29.96
DIBK *	21.00	91.98	21.00	91.98
ethyl benzene	4.92	21.55	4.92	##
formaldehyde	0.12	0.53	0.12	##
glycol ethers	11.40	49.93	11.40	##
isobutyl alcohol *	2.40	10.51	2.40	10.51
methanol	5.88	25.75	5.88	##
MEK	22.08	96.71	22.08	##
MIBK	12.72	55.71	12.72	##
methyl n-amyl ketone *	7.68	33.64	7.68	33.64
mineral spirits *	4.20	18.40	4.20	18.40
toluene	24.00	105.12	24.00	##
triethylamine	5.40	23.65	5.40	##
xylene	20.76	90.93	20.76	##

7. P38, Stack S38 - Two Screening Machines using the drying oven associated with P28 - Installed 1998

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	36.85	161.39	36.85	#	36.85	161.39

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P38

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	1.56	6.83	1.56	6.83
2-butoxyethanol *	9.80	42.92	9.80	42.92
cyclohexanone *	8.12	35.57	8.12	35.57
diacetone alcohol *	2.48	10.86	2.48	10.86
ethyl benzene	0.83	3.64	0.83	3.64
Glycol ethers	12.65	55.41	12.65	##
mineral spirits *	1.56	6.83	1.56	6.83
naphthalene	0.62	2.72	0.62	2.72
trimethyl benzene *	1.20	5.26	1.20	5.26
xylene	3.29	14.41	3.29	##

8. P28, Stack S28 - Two Screening Machines with a natural gas/propane fired drying oven rated at 3.5 mmBtu/hr - Installed 1997

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate Matter Emissions	0.03	0.12	0.03	0.12	0.53	2.30
Sulfur Dioxide	0.002	0.009	0.002	0.009	0.002	0.009
Nitrogen Oxides	0.72	3.17	0.72	3.17	0.72	3.17
Carbon Monoxide	0.29	1.29	0.29	1.29	0.29	1.29
VOCs	24.17	105.86	24.17	51.86	24.17	105.86

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P28

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	2.38	10.42	2.38	10.42
2-butoxyethanol *	14.91	65.31	14.91	65.31
cyclohexanone *	10.92	47.83	10.92	47.83
diacetone alcohol *	3.08	13.49	3.08	13.49
ethyl benzene	1.26	5.52	1.26	5.52
Glycol ethers	19.25	84.32	19.25	##

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
mineral spirits *	0.91	3.99	0.91	3.99
naphthalene	0.95	4.16	0.95	4.16
xylene	5.01	21.94	5.01	##

10. P29, Stack S29 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.75 mmBtu/hr - Installed 1995

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate Matter Emissions	0.04	0.18	0.04	0.18	0.79	3.45
Sulfur Dioxide	0.003	0.014	0.003	0.014	0.003	0.014
Nitrogen Oxides	1.08	4.75	1.08	4.75	1.08	4.75
Carbon Monoxide	0.44	1.93	0.44	1.93	0.44	1.93
VOCs	34.43	150.73	34.43	#	34.43	150.73

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P29

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	0.93	4.07	0.93	4.07
2-butoxyethanol *	6.20	27.16	6.20	27.16
cyclohexanone *	11.28	49.41	11.28	49.41
diacetone alcohol *	3.30	14.45	3.30	14.45
DIBK *	2.56	11.21	2.56	11.21
ethyl benzene	6.72	29.43	6.72	##
glycol ethers	10.00	43.8	10.00	##
isophorone	4.92	21.55	4.92	##
Isophorone diisocyanate	0.001	0.0044	0.001	0.004
methylene bis (4-cyclohexylisocyanate) *	0.005	0.022	0.005	0.022
MEK	26.16	114.58	26.16	##
MIBK	2.00	8.76	2.00	##

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
naphthalene	0.36	1.58	0.36	1.58
toluene	9.39	41.13	9.39	##
trimethyl benzene *	3.44	15.07	3.44	15.07
xylene	22.16	97.06	22.16	##

11. P37, Stack S37 - Two Roll Coaters with a natural gas/propane fired drying oven rated at 4.5 mmBtu/hr - Installed 1995

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate Matter Emissions	0.34	0.15	0.34	0.15	0.68	2.96
Sulfur Dioxide	0.003	0.012	0.003	0.012	0.003	0.012
Nitrogen Oxides	0.93	4.07	0.93	4.07	0.93	4.07
Carbon Monoxide	0.38	1.66	0.38	1.66	0.38	1.66
VOCs	34.43	150.71	34.43	#	34.43	150.71

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P37

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	0.93	4.07	0.93	4.07
2 butoxyethanol *	6.20	27.16	6.20	27.16
cyclohexanone *	11.28	49.41	11.28	49.41
diacetone alcohol *	3.30	14.45	3.30	14.45
DIBK *	2.56	11.21	2.56	11.21
ethyl benzene	6.72	29.43	6.72	##
glycol ethers	10.00	43.8	10.00	##
isophorone	4.92	21.55	4.92	##
isophorone diisocyanate	0.001	0.004	0.001	0.004
methylene bis-(4 cyclohexylisocyanate) *	0.005	0.022	0.005	0.022
MEK	26.16	114.58	26.16	##

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
MIBK	2.00	8.76	2.00	##
naphthalene	0.36	1.58	0.36	1.58
toluene	9.39	41.13	9.39	##
trimethyl benzene *	3.44	15.06	3.44	15.06
xylene	22.16	97.06	22.16	##

12. P76, Stack S16 - One Roll Coater with a natural gas/propane fired drying oven rated at 2.25 mmBtu/hr - Installed 1998

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
Particulate Matter Emissions	0.046	0.20	0.046	0.20	0.90	3.94
Sulfur Dioxide	0.004	0.016	0.004	0.016	0.004	0.016
Nitrogen Oxides	1.24	5.43	1.24	5.43	1.24	5.43
Carbon Monoxide	0.50	2.21	0.50	2.21	0.50	2.21
VOCs	54.43	238.42	54.43	54.54	54.43	238.42

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P76

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
n-butanol *	4.56	19.97	4.56	19.97
cyclohexanone *	3.36	14.72	3.36	14.72
diacetone alcohol *	2.28	9.99	2.28	9.99
DIBK *	1.92	8.41	1.92	8.41
ethyl benzene	6.32	27.68	6.32	##
glycol ethers	44.64	195.52	44.64	##
MEK	27.52	120.54	27.52	##
MIBK	9.44	41.35	9.44	##
toluene	12.56	55.01	12.56	##
xylene	18.80	82.34	18.80	##

13. P70, Stack S15 - Sixteen Pad Printers (PPP-WS-44 through PPP-WS-47, PPP-WS-69 through PPP-WS-71, PPP-WS-98 through PPP-WS-102, and PPP-WS-118 through PPP-WS-121) - Installed 1989-1994

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	10.4	45.55	10.4	45.55	10.4	45.55

HAZARDOUS AIR POLLUTANT EMISSIONS FROM P70

Pollutant	Maximum Theoretical		Potential to Emit	
	lbs/hr	TPY	lbs/hr	TPY
cyclohexanone *	4.86	21.29	4.86	21.29
diacetone alcohol *	2.35	10.29	2.35	10.29
Glycol ethers	4.30	18.83	4.30	##
xylene	0.70	3.07	0.70	3.07

14. Process P149, Stack S29 - One Roll Coating Machines which uses natural gas/propane oven associated with P29

Pollutant	Maximum Theoretical		Potential to Emit		Maximum Allowables	
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
VOCs	21.50	94.17	21.50	#	21.50	94.17

I. Process P56, Stack S56, Control Device C56 - Two Spray Booths PSB-WS-56 and PSB-WS-58 with natural gas fired oven SDO-WS-50

Pollutant	Maximum Theoretical Emissions		Potential to Emit		Maximum Allowable Emissions	
	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)
Particulate matter	5.95	26.06	0.45	1.97	1.70	7.45
Nitrogen oxides	0.04	0.18	0.04	0.18	0.04	0.18
Carbon monoxide	0.03	0.15	0.03	0.15	0.03	0.15
VOCs	13.60	59.57	13.60	#	13.60	59.57
n-butanol	2.76	12.08	2.76	9.9	2.76	9.9
2-butoxyethanol	1.75	7.65	1.75	7.65	1.75	7.65
carbon black	0.23	1.02	0.011	0.05	0.011	0.05
diacetone alcohol	2.67	11.68	2.67	9.9	2.67	9.9
diisobutyl ketone	2.18	9.55	2.18	9.55	2.18	9.55
ethyl benzene	2.80	12.27	2.80	9.9	2.80	9.9

formaldehyde	0.02	0.08	0.02	0.08	0.02	0.08
glycol ethers	3.29	14.41	3.29	9.9	3.29	9.9
MEK	3.85	16.86	3.85	9.9	3.85	9.9
methanol	1.69	7.42	1.69	7.42	1.69	7.42
MIBK	2.33	10.22	2.33	9.9	2.33	9.9
stoddard solvent	1.39	6.07	1.39	6.07	1.39	6.07
toluene	3.36	14.72	3.36	9.9	3.36	9.9
triethylamine	0.37	1.60	0.37	1.60	0.37	1.60
xylene	11.05	48.39	11.05	9.9	11.05	9.9

II. Process P134, Stack S134, Control Device C134 - Four Spray Booths PSB-WS-134, PSB-WS-135, PSB-WS-136, and PSB-WS-137 with electric oven SDO-WS-138

Pollutant	Maximum Theoretical Emissions		Potential to Emit		Maximum Allowable Emissions	
	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)
Particulate matter	6.02	26.35	0.45	1.97	1.70	7.45
VOCs	7.50	32.85	7.50	#	7.50	32.85
2-butoxyethanol	2.23	9.79	2.23	9.79	2.23	9.79
glycol ethers	2.51	11.01	2.51	9.9	2.51	9.9

III. Process P139, Stack S139, Control Device C139 - Four Spray Booths PSB-WS-139, PSB-WS-140, PSB-WS-141 and PSB-WS-142 with two electric ovens SDO-WS-143 and SDO-WS-144

Pollutant	Maximum Theoretical Emissions		Potential to Emit		Maximum Allowable Emissions	
	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)
Particulate matter	6.36	27.86	0.45	1.97	1.32	5.80
VOCs	20.4	89.35	20.4	#	20.4	89.35
n-butanol	4.14	18.12	4.14	9.9	4.14	9.9
2-butoxyethanol	2.62	11.48	2.62	9.9	2.62	9.9
carbon black	0.35	1.54	0.018	0.08	0.018	0.08
diacetone alcohol	4.0	17.51	4.0	9.9	4.0	9.9
diisobutyl ketone	3.27	14.33	3.27	9.9	3.27	9.9
ethyl benzene	4.20	18.40	4.20	9.9	4.20	9.9
glycol ethers	1.32	5.76	1.32	5.76	1.32	5.76
MEK	3.98	17.42	3.98	9.9	3.98	9.9
methanol	0.53	2.32	0.53	2.32	0.53	2.32
MIBK	3.50	15.32	3.50	9.9	3.50	9.9
stoddard solvent	1.33	5.81	1.33	5.81	1.33	5.81

toluene	5.04	22.08	5.04	9.9	5.04	9.9
xylene	16.57	72.58	16.57	9.9	16.57	9.9

IV. Process P145, Stack S145, Control Device C145 - One Spray Booth PSB-WS-145 with natural gas/propane fired oven SDO-WS-146

Pollutant	Maximum Theoretical Emissions		Potential to Emit		Maximum Allowable Emissions	
	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)
Particulate matter	20.05	87.82	1.45	6.35	3.59	15.72
Nitrogen oxides	0.17	0.72	0.17	0.72	0.17	0.72
Carbon monoxide	0.07	0.29	0.07	0.29	0.07	0.29
VOCs	31.0	135.78	31.0	#	31.0	135.78
carbon black	1.14	4.98	0.057	0.25	0.057	0.25
diisobutyl ketone	1.55	6.80	1.55	6.80	1.55	6.80
glycol ethers	2.33	10.18	2.33	9.9	2.33	9.9
MEK	8.38	63.71	8.38	9.9	8.38	9.9
toluene	6.73	29.48	6.73	9.9	6.73	9.9
xylene	0.40	1.73	0.40	1.73	0.40	1.73

V. Process P147, Stack S147, Control Device C147 - Two Screening Machines which use existing ovens associated with P76

Pollutant	Maximum Theoretical Emissions		Potential to Emit		Maximum Allowable Emissions	
	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)	(lbs/hr)	(TPY)
VOCs	15.87	69.51	15.87	#	15.87	69.51
Nitrogen oxides	0.08	0.36	0.08	0.36	0.08	0.36
Carbon monoxide	0.034	0.15	0.034	0.15	0.034	0.15
n-butanol	1.56	6.82	1.56	6.82	1.56	6.82
2-butoxyethanol	9.79	42.87	9.79	9.9	9.79	9.9
cyclohexanone	8.11	35.52	8.11	9.9	8.11	9.9
diacetone alcohol	2.47	10.83	2.47	9.9	2.47	9.9
dibutyl phthalate	0.82	3.58	0.82	3.58	0.82	3.58
ethyl benzene	0.82	3.59	0.82	3.59	0.82	3.59
glycol ethers	12.58	55.12	12.58	9.9	12.58	9.9
methylene bis4-cyclohexylisocyanate	0.00041	0.0018	0.0004	0.0018	0.00041	0.0018
naphthalene	0.61	2.69	0.61	2.69	0.61	2.69
stoddard solvent	1.56	6.85	1.56	6.85	1.56	6.85

trimethyl benzene	1.2	5.26	1.2	5.26	1.2	5.26
xylene	3.28	14.38	3.28	9.9	3.28	9.9

B. FACILITY EMISSIONS

Pollutant	Maximum Theoretical Emissions	Potential to Emit Under Title V Operation Permit	Maximum Allowable Emissions	Potential to Emit Under the Cooperative Agreement
	TPY	TPY	TPY	TPY
Particulate Matter Emissions	354.35	16.11	65.37	16.11
Sulfur Dioxide	0.11	0.11	0.11	0.11
Nitrogen Oxides	39.86	39.86	39.86	39.86
Carbon Monoxide	16.28	16.28	16.28	16.28
VOCs	2108.85	99.0	2108.85	85.0
Total CAA HAPs		24.9		20.0

Total HAPs Emitted from Stacks Taller Than or Equal to 25 Feet
(Excludes Stacks S15, S17, S18, S56)

Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Threshold Value (stacks ≥25 ft)	Units	PTE greater than Table Value?
	(lbs/hr)	(tpy)			
2-butoxyethanol*	68.52	##	41.95200	lbs/hr	yes
n-butyl alcohol*	38.26	##	29.47200	lbs/hr	yes
carbon black*	0.59	##	1.200000	lbs/hr	no
cyclohexanone*	53.07	##	34.96800	lbs/hr	yes
diacetone alcohol*	32.31	##	83.928000	lbs/hr	no
diisobutyl ketone*	46.86	##	30.429000	lbs/hr	yes
ethyl benzene	35.07	##	152.136000	lbs/hr	no
		153.61	456.320000	tpy	no
formaldehyde	0.2	0.124	0.1250	tpy	no
glycol ethers	134.28	##	na		
isobutyl alcohol*	4.0	##	52.46400	lbs/hr	no

Total HAPs Emitted from Stacks Taller Than or Equal to 25 Feet
(Excludes Stacks S15, S17, S18, S56)

Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Threshold Value (stacks ≥25 ft)		PTE greater than Table Value?
	(lbs/hr)	(tpy)		Units	
isophorone	9.84	##	4.89600	lbs/hr	yes
isophorone diisocyanate*	0.002	##	0.03120	lbs/hr	no
methylene bis4-cyclohexylisocyanate*	0.0104	##	0.01846	lbs/hr	no
MEK	129.0	##	na		
methanol	10.33	##	na		
MIBK	38.14	##	71.6880	lbs/hr	no
methyl n-amyl ketone*	12.8	##	82.200000	lbs/hr	no
naphthalene	2.9	##	17.472000	lbs/hr	no
stoddard solvent*	12.36	##	183.6240	lbs/hr	no
toluene	83.11	##	131.1600	lbs/hr	no
		364.02	182.5300	tpy	yes
triethylamine	9.0	##	na		
trimethyl benzene*	9.28	##	43.70400	lbs/hr	no
xylene	126.27	##	152.13600	lbs/hr	no
Total HAPS regulated by the CAA		##			

Total HAPs Emitted from Stacks Shorter Than 25 Feet (S18, S56)

Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Threshold Value (stacks <25 ft)		PTE greater than Table Value?
	(lbs/hr)	(tpy)		Units	
2-butoxyethanol*	1.75	##	9.99360	lbs/hr	no
n-butyl alcohol*	2.76	##	7.59600	lbs/hr	no
carbon black*	0.23	##	0.29040	lbs/hr	no
diacetone alcohol*	2.67	##	19.987200	lbs/hr	no
diisobutyl ketone*	2.18	##	7.245000	lbs/hr	no
ethyl benzene	2.80	##	36.228000	lbs/hr	no
		12.26	105.200000	tpy	no

Total HAPs Emitted from Stacks Shorter Than 25 Feet (S18, S56)

Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Threshold Value (stacks <25 ft)	Units	PTE greater than Table Value?
	(lbs/hr)	(tpy)			
formaldehyde	0.02	0.088	0.1250	tpy	no
glycol ethers	5.04	##	na		
MEK	3.85	##	na		
methanol	1.69	##	na		
MIBK	2.33	##	17.0736	lbs/hr	no
stoddard solvent*	1.39	##	43.7232	lbs/hr	no
toluene	3.36	##	31.2312	lbs/hr	no
		14.72	42.1000	tpy	no
trimethyl benzene*	0.37	##	10.41120	lbs/hr	no
xylene	11.05	##	36.22800	lbs/hr	no
Total HAPS regulated by the CAA		##			

Total HAPs Emitted from Indoor Fugitive Emission Sources (S15, S17)

Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Threshold Value (stacks <25 ft)	Units	PTE greater than Table Value?
	(lbs/hr)	(tpy)			
2-butoxyethanol*	1.49	##	na		
cyclohexanone*	5.23	##	na		
diacetone alcohol*	2.35	##	na		
diisobutyl ketone*	1.15	##	na		
glycol ethers	5.87	##	na		
isophorone	0.68	##	na		
methanol	0.25	##	na		
MIBK	0.03	##	na		
mineral spirits*	6.48	##	na		
toluene	6.48	##	na		
xylene	0.83	##	na		

Total HAPs Emitted from Indoor Fugitive Emission Sources (S15, S17)					
Hazardous Air Pollutant	Potential to Emit		NR 445, Wis. Adm. Code Threshold Value (stacks <25 ft)	Units	PTE greater than Table Value?
	(lbs/hr)	(tpy)			
Total HAPS regulated by the CAA		##			

HAP = hazardous air pollutant

CAA = Clean Air Act

na = not applicable

* denotes state-only HAPs

The permittee has elected restrictions to limit the potential VOC emissions from the facility to not more than 85 tons per year while operating under the Cooperative Agreement and to less than 100 tons per year otherwise. See total facility emissions summarized above. These more restrictive limitations would be included in any Operation Permit issued by the Department. Note: VOC emissions from use of materials containing VOCs will be limited to 85 tons per year. The additional 2.8 tons of VOCs per year are from combustion of natural gas and propane at the facility

The permittee has elected restrictions to limit the potential emissions of all HAPs regulated by the Clean Air Act to less than 20 tons per year while operating under the Cooperative Agreement and to less than 25 tons per year otherwise. The permittee has elected restrictions to limit the potential emissions of each HAP regulated by the Clean Air Act to less than 8 tons per year while operating under the Cooperative Agreement and to less than 10 tons per year otherwise. These more restrictive limitations would be included in any Operation Permit issued by the Department.

FACILITY STATUS UNDER PART 70

The facility is located in an area designated as attainment/unclassified for all criteria pollutants. The facility would be considered a synthetic minor, non-part 70 source because the permittee elected limitations to restrict the potential emissions of volatile organic compounds to less than the major source threshold of 100 tons per year. The potential emissions of each other criteria pollutant are less than the major source threshold level of 100 tons per year.

Additionally, the permittee elected limitations to restrict the potential emissions of each hazardous air pollutant regulated by the Clean Air Act to less than 10 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined to less than 25 tons per year.

Note: The permittee has elected to restrict the potential emissions of volatile organic compounds to not more than 85 tons per year while operating under a Cooperative Agreement with the Department. Additionally, the permittee elected to restrict the potential emissions of each hazardous air pollutant regulated by the Clean Air Act to not more than 8 tons per year and the potential emissions of all hazardous air pollutants regulated by the Clean Air Act combined to not more than 20 tons per year, while operating under a Cooperative Agreement with the Department.

COMPLIANCE DEMONSTRATION MONITORING METHODS

For details on specific compliance demonstration methods, please refer to the Draft Operation Permit.

Natural Gas/Propane Boilers B20 and B21: To demonstrate compliance with particulate matter and visible emission limitations the permittee would be required to retain plans and specifications of each boiler that indicate they are designed to only burn natural gas and propane. This is an adequate compliance demonstration method because the more restrictive emission limitation is equivalent to the maximum theoretical emissions while firing these fuels. Additionally, it is not expected that visible emission limitations would be exceeded while firing natural gas and propane. Please see the Draft Permit for specific compliance demonstration methods.

Sixteen Pad Printers P70: To demonstrate compliance with the LACT VOC content limitations the permittee would be required to keep records of each ink and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. Please see the Draft Permit for specific compliance demonstration methods.

One Roll Coater with a natural gas/propane fired drying oven P76: To demonstrate compliance with particulate matter and visible emission limitations the permittee would be required to retain plans and specifications of each curing oven

that indicate they are designed to only burn natural gas and propane. This is an adequate compliance demonstration method because the emission limitation is equal to the maximum theoretical emissions while firing these fuels. Additionally, because natural gas and propane are clean burning fuels it is not expected that the visible emission limitations would be exceeded while firing them.

To demonstrate compliance with the LACT VOC content limitations the permittee would be required to keep records of each ink and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. To demonstrate compliance with the LACT monthly VOC emission limitation the permittee would be required to calculate and record the total monthly volatile organic compound emissions from process P76 within 15 calendar days of the end of the month.

To demonstrate compliance with the RACT VOC content limitations the permittee would be required to use low VOC content coatings and keep records of each coating and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. Please see the Draft Permit for specific compliance demonstration methods.

Five Lithographic Presses each with an UV Ovens P18: To demonstrate compliance with the LACT requirement to use only UV curable inks the permittee would be required to maintain the line speed through the oven at a minimum of 40 feet per minute and monitor and record the line speed once per shift. Note: In order to use heat set inks on this line the line speed through the oven would need to be considerably slower. Please see the Draft Permit for specific compliance demonstration methods.

Two Screening Machines with natural gas/propane drying oven P28: To demonstrate compliance with particulate matter and visible emission limitations the permittee would be required to retain plans and specifications of each curing oven that indicate they are designed to only burn natural gas and propane. This is an adequate compliance demonstration method because the emission limitation is equal to the maximum theoretical emissions while firing these fuels. Additionally, because natural gas and propane are clean burning fuels it is not expected that the visible emission limitations would be exceeded while firing them.

To demonstrate compliance with the LACT VOC content limitations the permittee would be required to keep records of each ink and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. To demonstrate compliance with the LACT monthly VOC emission limitation the permittee would be required to calculate and record the total monthly volatile organic compound emissions from process P28 within 15 calendar days of the end of the month. Please see the Draft Permit for specific compliance demonstration methods.

Two Roll Coaters with a natural gas or LP fired drying oven P29: To demonstrate compliance with particulate matter and visible emission limitations the permittee would be required to retain plans and specifications of each curing oven that indicate they are designed to only burn natural gas and propane. This is an adequate compliance demonstration method because the emission limitation is equal to the maximum theoretical emissions while firing these fuels. Additionally, because natural gas and propane are clean burning fuels it is not expected that the visible emission limitations would be exceeded while firing them.

To demonstrate compliance with the RACT VOC content limitations the permittee shall use one or more of the following: (1) Use low VOC content coatings and keep records of each coating and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. (2) Operate a thermal oxidizer that destroys at least 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidizer. The permittee would be required to operate the oxidizer at a temperature which was shown to demonstrate compliance during the last stack test and would be required to monitor and record the temperature continuously. They would be required to calculate and record the allowable and actual emissions daily. (3) Use in-line averaging to achieve compliance through a daily volume-weighted average of all coatings applied. The permittee would be required to calculate and record the daily volume-weighted average VOC content. Please see the Draft Permit for specific compliance demonstration methods.

Two Roll Coaters with a natural gas/propane fired drying oven P37: To demonstrate compliance with particulate matter and visible emission limitations the permittee would be required to retain plans and specifications of each curing oven that indicate they are designed to only burn natural gas and propane. This is an adequate compliance demonstration method because the emission limitation is equal to the maximum theoretical emissions while firing these fuels. Additionally, because natural gas and propane are clean burning fuels it is not expected that the visible emission limitations would be exceeded while firing them.

To demonstrate compliance with the RACT VOC content limitations the permittee would shall use one or more of the following: (1) Use low VOC content coatings and keep records of each coating and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. (2) Operate a thermal oxidizer that destroys at least 90% of the nonmethane VOCs (VOC measured as total combustible carbon) which enter the oxidizer. The permittee would be required to operate the oxidizer at a temperature which was shown to demonstrate compliance during the last stack test and would be required to monitor and record the temperature continuously. They would be required to calculate and record the allowable and actual emissions daily. (3) Use in-line averaging to achieve compliance through a daily volume-weighted average of all coatings applied. The permittee would be required to calculate and record the daily volume-weighted average VOC content. Please see the Draft Permit for specific compliance demonstration methods.

Two Screening Machines which use the drying oven associated with P28, P38: To demonstrate compliance with the LACT VOC content limitations the permittee would be required to keep records of each ink and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. To demonstrate compliance with the LACT monthly VOC emission limitation the permittee would be required to calculate and record the total monthly volatile organic compound emissions from process P38 within 15 calendar days of the end of the month. Please see the Draft Permit for specific compliance demonstration methods.

Four Plastic Parts Spray Booths with One Electric and One Natural Gas/Propane Drying Oven, P108: To demonstrate compliance with particulate matter and visible emission limitations the permittee would be required to operate a paint over spray filter system on the spray booth and maintain the pressure drop across the over spray filter system within normal operating ranges whenever the process is in operation. The permittee would be required to monitor and record the pressure drop across each over spray filter system once every 8 hours of operation or once per day, whichever yields the greater number of measurements.

To demonstrate compliance with the LACT VOC content limitations the permittee would be required to keep records of each ink and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. To demonstrate compliance with the LACT requirement to use HVLP spray techniques for parts that warrant such use the permittee would be required to monitor and record the pressure drop of the HVLP equipment whenever it is in use and keep an inventory of the parts sprayed and the technique used to spray them. Please see the Draft Permit for specific compliance demonstration methods.

Four Plastic Parts Spray Booths with One Natural Gas/Propane Drying Oven, P113: To demonstrate compliance with particulate matter and visible emission limitations the permittee would be required to operate a paint over spray filter system on the spray booth and maintain the pressure drop across the over spray filter system within normal operating ranges whenever the process is in operation. The permittee would be required to monitor and record the pressure drop across each over spray filter system once every 8 hours of operation or once per day, whichever yields the greater number of measurements.

To demonstrate compliance with the LACT VOC content limitations the permittee would be required to keep records of each ink and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. To demonstrate compliance with the LACT requirement to use HVLP spray techniques for parts that warrant such use the permittee would be required to monitor and record the pressure drop of the HVLP equipment whenever it is in use and keep an inventory of the parts sprayed and the technique used to spray them. Please see the Draft Permit for specific compliance demonstration methods.

Two Modified Plastic Parts Spray Booths with One Natural Gas Drying Oven, P56; Four Plastic Parts Spray Booths with One Electric Drying Oven, P134; Four Plastic Parts Spray Booths with Two Electric Drying Ovens, P139; One Plastic Parts Spray Booths with One Natural Gas/Propane Drying Oven, P145: To demonstrate compliance with the latest available control techniques and operating practices for volatile organic compound emissions the permittee would be required to keep a copy of the required environmental management system at the facility and make it available to authorized Department representatives upon request. The permittee would also be required to keep records of their evaluation of significant environmental impacts, objectives and targets for improving environmental performance as related to volatile organic compound emissions, programs implemented to meet the objectives and targets related to volatile organic compound emissions, and the progress made in reaching specified objectives and targets related to volatile organic compound emissions. To demonstrate compliance with visible and particulate matter emissions limitations the permittee would be required to operate an overspray filter and maintain the pressure drop across the filters within the normal operating range whenever each of the spray booths is in operation. The permittee would be required to record the pressure drop across the overspray filter once per day or once every eight hours of operation whichever provides the most readings.

Two Screening Machines which use existing drying ovens, P147: To demonstrate compliance with the latest available control techniques and operating practices for volatile organic compound emissions the permittee would be required to keep a copy of the required environmental management system at the facility and make it available to authorized Department representatives upon request. The permittee would also be required to keep records of their evaluation of significant environmental impacts, objectives and targets for improving environmental performance as related to volatile organic compound emissions, programs implemented to meet the objectives and targets related to volatile organic compound emissions, and the progress made in reaching specified objectives and targets related to volatile organic compound emissions. To demonstrate compliance with visible emission limitations the permittee would be required to power the drying oven with only electricity, natural gas, or propane. Because natural gas and propane are clean burning fuels, limiting the type of fuel used should be adequate to ensure the visible emission limitation is met.

One Roll Coating Machine which uses an existing drying oven included under P29, P149: To demonstrate compliance with the RACT VOC content limitations the permittee would be required to use low VOC content coatings and keep records of each coating and other VOC containing material used and the VOC content as applied. The permittee would be required to use U.S. EPA Method 24, or coating manufacturer's formulation data to determine the VOC content of the materials used. Please see the Draft Permit for specific compliance demonstration methods.

Synthetic Minor Restrictions: To demonstrate compliance with the monthly limitation on VOC emissions from the entire facility the permittee would be required to calculate and record the daily VOC emissions from the facility and calculate and record the monthly VOC emissions from the facility averaged over each 12 consecutive month period. To demonstrate compliance with the monthly limitation on each Clean Air Act HAP emitted from the entire facility the permittee would be required to calculate and record the daily facility wide emissions of each Clean Air Act HAP and calculate and record the monthly facility wide emissions of each Clean Air Act HAP averaged over each 12 consecutive month period. To demonstrate compliance with the monthly limitation on total Clean Air Act HAPs emitted from the entire facility the permittee would be required to calculate and record the total daily facility wide emissions of Clean Air Act HAPs and calculate and record the total monthly facility wide emissions of Clean Air Act HAPs averaged over each 12 consecutive month period. To demonstrate compliance with the monthly limitation on formaldehyde emissions from the entire facility the permittee would be required to calculate and record the daily formaldehyde emissions from the facility and calculate and record the monthly formaldehyde emissions from the facility averaged over each 12 consecutive month period. Please see the Draft Permit for specific compliance demonstration methods.

Facility Requirements: The facility would be required to submit annual compliance monitoring and annual compliance certification reports to the Department. These reports would summarize the compliance monitoring data required by any permit issued by the Department and certify the compliance status of the facility throughout the calendar year. The compliance monitoring and compliance certification reports would be required within 30 days of the end of the reporting period.

Compliance Demonstration Under Cooperative Agreement: For specific compliance demonstration requirements, please refer to the Draft Operation Permit. To demonstrate compliance with the facility wide limitation on VOC emissions, the permittee would be required to calculate and record the total VOC emissions from the facility each

month and calculate and record the monthly VOC emissions averaged over each 12 consecutive month period. The permittee would be required to use U.S. EPA Method 24, or manufacturer's formulation data to determine the VOC content and density of the materials used. The permittee would be required to analyze the spent ink, coating, solvent and other VOC containing material recovered and shipped off site to determine the VOC content no less than each time there is a change to materials or process operations that may affect the waste stream or quarterly, which ever is most frequent. To demonstrate compliance with the facility wide limitation on emissions of each Clean Air Act HAP, the permittee would be required to calculate and record the facility total emissions of each Clean Air Act HAP each month and calculate and record the monthly emissions of each Clean Air Act HAP averaged over each 12 consecutive month period. To demonstrate compliance with the facility wide limitation on total emissions of all Clean Air Act HAPs, the permittee would be required to calculate and record the facility total emissions of all Clean Air Act HAPs each month and calculate and record the monthly emissions of all Clean Air Act HAPs averaged over each 12 consecutive month period. The permittee would be required to use manufacturer's formulation data to determine the HAP content and density of the materials used. The permittee would be required to analyze the spent ink, coating, solvent and other HAP containing material recovered and shipped off site to determine the HAP content no less than each time there is a change to materials or process operations that may affect the waste stream or quarterly, which ever is most frequent. Compliance demonstration methods for particulate matter, nitrogen oxide, formaldehyde and visible emissions would be the same as those listed in the portion of the permit that would apply if the Cooperative Agreement was not in effect.

FACILITY COMPLIANCE STATUS

The Department finds that:

1. The source will meet applicable emission limits and other requirements.
2. The source will not cause nor exacerbate a violation of an ambient air quality standard or ambient air increment.

PRELIMINARY DETERMINATION

The Wisconsin Department of Natural Resources has reviewed the permit application and other materials submitted by Northern Engraving Corporation - West Salem Division and hereby makes a preliminary determination that an operation permit may be issued with the following Draft Applicable Limits and Draft Permit Conditions.

Appendix B:

Justification for Discontinuing the use of the Incinerator at Northern Engraving - Sparta

NEC is basing this request on the following logic:

1. P32 coating and P33 metal spray are the only processes controlled by the incinerator. The following chart shows the comparison between the VOC emissions and the VOCs destroyed by the incinerator.

<u>Year</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>
VOCs destroyed	4.23 tons	3.94 tons	3.51 tons
Total facility VOC emissions	33.4 tons	32.0 tons	30.0 tons

2. The natural gas usage for 1999 and 2000, as estimated for the annual report to WDNR is 7200 mcf and 6800 mcf respectively. According to the WDNR's emissions factors the emissions from the burning of this volume of natural gas is 0.34 - 0.36 tons of NOx and 0.29 - 0.30 tons of CO. At current prices the cost of natural gas would be greater than \$40,000.
3. The daily records required by for calculating compliance with RACT daily recordkeeping requirements requires between 0.8 and 1.0 full-time employee equivalents.
4. NEC estimates that, barring the need for major maintenance, the other costs associated with operating the incinerator is approximately \$1,000 per year for upkeep and minor maintenance and the amortization of a capital expenditure in excess of \$100,000. Stack testing is required every two years, at a cost of \$10,000 per test. This unit has historically required a major overhaul every 4-5 years. The year 2001 is the 4th year since the last overhaul, thus a major expense will occur in the near future.
5. NEC's operations are such that most of the VOC emissions (over 60%) is generated from clean up activities. These emissions are generally fugitive in nature and not easily captured for a control device. Thus NEC is utilizing a significant amount of resources; people, money and natural gas, to control a relatively small percent of its VOC emissions.
6. The last six years NEC has had VOC emissions below the 100 ton threshold required for mandating RACT compliance. Based on these reduced emissions, NEC has applied for synthetic minor source limits to its air permits. A synthetic minor source is not required to show RACT compliance, yet NEC cannot discontinue the use of the incinerator because of WDNR's "once in always in" policy. This policy eliminates a strong incentive for NEC and other companies to find other, more cost-effective measures to reduce VOC emissions.
7. NEC has shown a constant reduction in VOC emissions and has committed to

maintaining registered ISO 14001 EMS. In order to continue ISO 14001 registration environmental objectives and targets **must** be set. NEC has committed significant resources in both time and money to setting and achieving these environmental targets and objectives. NEC feels that the resources that continued use of the incinerator currently demands would be better spent in achieving the ISO 14001 targets. NEC has shown the commitment to accomplishing its environmental goals and has a track record of success in this area.



Appendix C.

Justification for discontinuing the use of the Incinerator at Northern Engraving Corporation – West Salem

Northern Engraving Corporation (NEC) is basing this request on the following logic:

1. Two coating on metal lines are the processes controlled by incineration. A comparison of VOCs destroyed by incineration follows:

Year	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
VOCs destroyed (tons)	5.6	4.6	2.7	1.8
Total facility VOC emissions (tons)	85.1	61.3	43.1	31.3

2. The natural gas usage for incineration for 2000, 2001 and 2002 is estimated as follows. Using AP-42 emission factors NO_x and CO from fuel burning are calculated as follows. At current prices the annual cost of natural gas would be approximately \$17,000.

Year	<u>2000</u>	<u>2001</u>	<u>2002</u>
Natural gas used (mcf)	2700	1700	1600
NO _x emissions (tons)	0.09	0.14	0.13
CO emissions (tons)	0.07	0.11	0.10

3. The daily records required by for calculating compliance with RACT daily recordkeeping requirements requires between 2-3 hours per day.
4. NEC estimates that, barring the need for major maintenance, the other costs associated with operating the incinerator is approximately \$500 - \$1,000 per year for upkeep and minor maintenance and the amortization of a capital expenditure in excess of \$100,000. Stack testing is required every two years, at a cost of \$10,000 per test. This unit has historically required a major overhaul every 4-5 years.
5. NEC's operations are such that most of the VOC emissions (40 - 50%) is generated from clean up activities. These emissions are generally fugitive in nature and not easily captured for a control device. Thus NEC is utilizing a significant amount of resources; people, money and natural gas, to control a relatively small percent of its VOC emissions.
6. Since calendar year 1999 Northern Engraving - West Salem has had VOC emissions below the 100-ton threshold required for mandating RACT compliance. Based on these reduced emissions, NEC has applied for synthetic minor source limits to its air permits. A synthetic minor source is not required to show RACT compliance, yet

NEC cannot discontinue the use of the incinerator because of WDNR's "once in always in" policy. This policy eliminates a strong incentive for NEC and other companies to find other, more cost-effective measures to reduce VOC emissions.

7. NEC has shown a constant reduction in VOC emissions and has committed to maintaining registered ISO 14001 EMS. In order to continue ISO 14001 registration environmental objectives and targets **must** be set. NEC has committed significant resources in both time and money to setting and achieving these environmental targets and objectives. NEC feels that the resources that continued use of the incinerator currently demands would be better spent in achieving the ISO 14001 targets. NEC has shown the commitment to accomplishing its environmental goals and has a track record of success in this area.



Appendix D.

Environmental Policy Statement

We are a medium-sized, privately held, family-owned manufacturing company. We are a job shop whose work is usually dictated by our customer's specifications. Our customers vary widely in size and they conduct business both in the USA and internationally. We purchase our raw materials mostly from large corporations.

We are a significant employer in the towns where our employees and their families live, and we believe in being the best corporate citizen we can be over the long term. We have settled on a corporate environmental policy that will help ensure that the next generation of employees and their families will be proud of the progress we have made toward that goal.

Our Company is committed to reducing or eliminating waste streams through an ongoing process, which includes the use of practical innovative source management. Manufacturing facilities will conduct their activities in a lawful manner and our management will provide continuous training of employees in environmental awareness.

Our ultimate goal is TO DO NO HARM to the environment and yet remain a thriving and vital employer in the upper Midwest of the United States.

To ensure our environmental legacy, we will be dedicated to these guiding principles:

We will train our employees for their self-sufficiency in helping us maintain a safe work environment and in improving our effectiveness in running a progressive manufacturing company.

We will tell our employees, suppliers, customers, families, and community the story of our struggle to be an environmentally progressive company and share with them our results.

We will set a positive example for our customers and suppliers in the use of an environmental management system and thus lead them to a similar business conclusion that such a management program can be successful.

We will constantly work on new manufacturing methods to find state-of-the-art processes, which also reduce waste.

We will regularly review our progress and set new objectives for improvement.

P. M. Gelatt

Philip M. Gelatt, President

July 17, 2000

Date

Date posted: 3/21/02

Content Last Changed: 3/21/02



Fact Sheet on Amending the June 7, 2007 Extension of the Environmental Cooperative Agreement between Northern Engraving Corporation and Wisconsin Department of Natural Resources

Following a public comment period, the Wisconsin Department of Natural Resources (DNR) will determine whether or not to amend the 2007 Extended Environmental Cooperative Agreement with Northern Engraving Corporation (NEC) and its Sparta, West Salem and Holmen facilities. The original 2002 and 2003 Agreements as well as the 2007 extension and proposed amendment were developed under Wisconsin's Environmental Cooperation Pilot Program pursuant to Section 299.80, Wis. Statutes. Information on where to get more information and how to comment on the amended agreement is found at the end of this fact sheet.

I. Background

A. The Facility

Northern Engraving Corporation is an active and dedicated steward of the environment. Internally, an environmental policy commits the company to reducing waste, continually improving processes, and doing no harm to the environment. All facilities are registered to the international environmental standard, ISO 14001, and receive annual audits from one of the company's third-party registrars. The environmental management system gives the plants the tools needed to analyze environmental impacts, set objectives and targets, develop supporting programs, review results and redirect efforts. By using these tools and developing employee involvement, each facility has experienced remarkable success.

B. The Original Agreement

The initial Environmental Cooperative Agreement between NEC and DNR that was signed in June 2002, and the subsequent amendment in June 2003, focused on the utilization of a robust Environmental Management System in achieving on-going environmental improvement. DNR and NEC had agreed to include an innovative air pollution control permit that allowed more flexibility, removed time and record keeping constraints, and established facility-wide caps on volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). The permit also incorporated preconditions to construct and operate in order to reduce the amount of unnecessary permit writing, and a commitment to a shortened turn around time on issuing the permits, all saving valuable time and money for both parties. As a safety measure both parties agreed that NEC would notify DNR immediately if the company approached within 85% of the established caps in order to address any concerns or conditions that may be occurring at the facility. In concurrence with the United States Environmental Protection Agency (USEPA) the company provided a 6 month report on 12 month rolling averages of emissions occurring at the facilities. The Agreement also included the establishment of an interested persons group to encourage oversight and information sharing about the results of NEC's annual reports and on-going practices. This group consisted of individuals from the geographic areas surrounding the participating facilities.

C. Results from the Original Agreement

NEC and DNR agree that the company has successfully met all conditions established under the initial June 10, 2002 and June 23, 2003 Agreement that included, among other things, specific conditions and flexibilities written into the Air Pollution Construction and Operations Permits found in Part A. 1 of the Specific Permit Conditions for each facility.

During the five years of the initial Agreement, NEC achieved significant success in reducing the amount of VOC, HAPs, solid and hazardous waste, water usage, and energy. In addition to providing information on numerical reductions, NEC met the requirements of the Cooperative Environmental Agreements by providing the following:

- Baseline Reports for 2002 and 2003 Agreements.
- Annual Reports on the companies EMS system approach, progress toward the economic, social and environmental impacts of their operations.
Each report included at a minimum:
 - Results of the objectives and targets established in the previous year and any objectives identified for the next report.
 - Information on meetings with Interested Persons Group and participation.
 - Results of internal audits.
 - Violations discovered during the audits.
 - Time saved in reporting.
 - Environmental achievements related to air, water, energy, and waste and an explanation of any shortfalls.
 - Overall assessment of the program.
 - Met annually with DNR staff to evaluate progress.
 - Implemented EMS for all facilities and obtained ISO 14001 certification.
 - Conducted annual audits by an accredited third party auditor.
 - 6-month rolling average reports to both DNR and EPA on air emissions occurring at the facilities.
 - Annual reports were put on DNR website for public viewing.

1). Excerpt from Northern Engraving Annual Report (Collective Summary of 2006)

Data from calendar year 1996 (Baseline) through calendar year 2006 show that plant emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAP) from the three Cooperative Agreement facilities decreased 63% (192 tons) and 94% (109 tons), respectively. In comparing the three facilities' 2006 emissions to 2005, VOCs and HAPs were reduced 7% (8.1 tons) and 31% (3.3 tons), respectively.

In 2006, these facilities used 74% less water than in 1996. This yearly reduction of 88,591,000 gallons also represents a 229% improvement in the sales to water used efficiency ratio.

During the 1996-2006 period, the three Cooperative Agreement facilities' generation of hazardous and solid wastes decreased 69% (40,860 gallons) and 78% (1,409 tons), respectively. Reformulation of sprays from a solvent base to water base significantly reduced hazardous waste generation while increasing the quantity of wastewater treated as non-hazardous. Similarly, oil absorbents were removed from the solid waste stream, managed as non-hazardous waste and recycled.

2). Some of NEC's activities which lead to results during the 5 year Agreement

- Conversion from a traditional flow-through, non-contact, cooling system to a chilled water closed-loop system to save water.

- Recycling and reuse of oil absorbents.
- Centrifuging and recapture of solvent rags.
- Reformulation of sprays from a solvent base to water base.
- Reduction in water pressures, reconfiguration and replacement of nozzles and reuse of water in washers.
- Increased plastic recycling.
- Conversion from VOC containing primers to a new UV primer that is free of VOCs.
- Distillation and reuse of waste solvent.
- Improved ink management.
- In 2005, instituted an energy management program with assistance from Focus on Energy.
- In 2006 the installation of variable frequency drives on air make-up units has the potential of reducing more than 2,830 MMBTUs of natural gas and 188,588 KWH of electricity per year.

II. Amendment to the June 2007 Extended Agreement

On June 7, 2007 after providing an opportunity to the Joint Committee on Finance to hold a hearing for review, DNR Secretary Scott Hassett signed a 5 year extension to the original Agreement.

NEC and DNR are now proposing to amend this Agreement to include the necessary changes and renewal of the air pollution control permits as allowed in the enabling legislation. DNR and NEC will incorporate into the Air Pollution Control Permits (Part I A.), for each participating facility, the requirements necessary for NEC to construct and operate under the flexibilities afforded the company. NEC will continue to provide the information outlined in I. (C) of this Fact Sheet, to the DNR and abide by all requirements established in Part A I. of the Specific Permit Conditions for each participating facility under the Agreement. The company will continue to engage and build on their interested persons group in the communities where they operate.

A. Changes to the June 2007 Extended Agreement

There are two main changes. First, in concurrence with USEPA, Northern Engraving will no longer be required to provide a 6 month report on actual emissions to EPA. USEPA has concurred with DNR that the requirement to report actual VOC and HAP emissions every 6 months could be removed from the Agreement and associated Air Pollution Control Operation Permits, as the permits issued under the Amended Agreement meet USEPA's requirements for the "Formula Based Approach" by specifying how Northern Engraving is required to calculate their actual VOC and HAP emissions.

Second, on a case-by-case basis NEC will be allowed an additional period of time to commence construction and/or modification of proposed projects requiring a permit under ch. NR 406, Wis. Adm. Code.

In reviewing DNR's procedures on this matter it was found that the Department does allow longer periods of time to commence construction and/or modification in the case of large, phased projects. Because longer periods of time are allowed in other cases, the Department will allow Northern Engraving to request periods for commencing construction and/or modification that are longer than 18 months on a case-by-case basis when they submit construction permit applications. Extended timeframes may help to reduce unnecessary permit writing by both parties and might give the company the flexibility and timeframe to construct and operate in a manner conducive to better environmental performance and economic stability.

B. Ongoing Requirements under the Amended Agreement -- Key Efforts Will Continue as Before

NEC and DNR will continue to meet annually to discuss the annual report and/or in cases where the company informs the DNR that they have reached 85% of the limits established under the Agreement. NEC commits to continued efforts to reduce the impact of their facilities on the environment. West Salem will operate under the conditions of the June 7, 2007 Extended Agreement (Part I. A. Specific Permit Conditions for West Salem) until such time that they submit an Air Pollution Control Permit application, the permit has been public noticed for 30 days, and approval has been granted by the DNR. (Note: NEC's West Salem Air Pollution Control Permit under the current Agreement expires on June 10 2008.)

Important environmental protection safeguards and community involvement efforts will continue as before under the amended agreement. NEC will provide Annual Reports to the DNR on their progress.

III. For More Information

To get a copy of the proposed Amended Agreement:

▶ Visit DNR's website:

<http://dnr.wi.gov/org/caer/cea/ecpp/index.htm>

Click on "Agreements", and then click on the link for Northern Engraving Corporation.

▶ Go to the local library in Sparta, Holmen or West Salem.

▶ Contact Mark Harings, DNR, 715-831-3263, Mark.Harings@wisconsin.gov

▶ Contact Mary Oleson, DNR, 608-789-5544, mary.oleson@wisconsin.gov

▶ Contact Bruce Corning, NEC, 608-269-6911, ext 385, Bcorning@norcorp.com.

Public Hearing

Tuesday, July 17, 2007

10:30 a.m. – 12:30 p.m.

Monroe County Courthouse

112 S. Court Street, Sparta, WI 54656

DNR and NEC will provide information, answer questions and take comments on the proposed amendment to the Agreement.

IV. Opportunity for public to comment

There is a 30-day public comment period for the public to provide written comments to the DNR about the proposed Amendment and the Air Pollution Control Permits included as part of the extension to the Environmental Cooperative Agreement. This comment period ends July 25, 2007. Please submit comments regarding the Agreement to Mark Harings, DNR, 1300 W. Clairemont Ave, P.O Box 4001, Eau Claire, WI 54702-4001 or email mark.harings@wisconsin.gov or fax 715-839 - 6076. Please submit additional comments on the Air Pollution Control Permits included in the Agreement to Mary Oleson, DNR, 3550 Mormon Coulee Road, La Crosse WI 54601 or e-mail mary.oleson@wisconsin.gov .