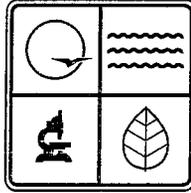


STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI AIR CONSERVATION COMMISSION



**PERMIT BOOK**

**PERMIT TO CONSTRUCT**

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **102006-014** Project Number: **2006-07-060**

Owner: **HPI Products**

Owner's Address: **222 Sylvania, P.O. Box 997, St. Joseph, MO 64502**

Installation Name: **HPI Products**

Installation Address: **222 Sylvania, P.O. Box 997, St. Joseph, MO 64502**

Location Information: **Buchanan County, S8, T57N, R35W**

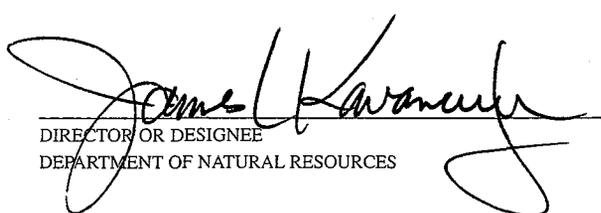
Application for Authority to Construct was made for:

**Installation-wide minor modifications and additions. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, Construction Permits Required.**

- 
- Standard Conditions (on reverse) are applicable to this permit.
- Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

OCT 23 2006

EFFECTIVE DATE

  
DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

**You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review.** Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

2006-07-060

HPI Products

222 Sylvania, P.O. Box 997, St. Joseph, MO 64502

HPI Products

222 Sylvania, P.O. Box 997, St. Joseph, MO 64502

Buchanan County, S8, T57N, R35W

Installation-wide minor modifications and additions. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Page No.	2
Permit No.	
Project No.	2006-07-060

**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."*

**HPI Products**

**Buchanan County, S8, T57N, R35W**

**1. Superseding Condition**

The conditions of this permit supersede all special conditions found in the previously issued construction permits (Permit Number 042004-004 and 0696-002) from the Air Pollution Control Program.

**2. Emission Limitation**

- A. HPI Products, Inc. shall emit less than 40 tons of Volatile Organic Compounds (VOCs) from the entire installation in any consecutive 12-month period.
- B. HPI Products shall emit any individual Hazardous Air Pollutant (HAP) in amounts less than their respective threshold levels from the entire installation in any consecutive 12-month period. In addition, HPI Products shall emit less than twenty-five (25) tons combined HAPs from the entire installation in any consecutive 12-month period. These HAPs include but are not limited to those listed in Appendix A.
- C. HPI Products shall emit less than 15 tons of particulate matter less than ten (10) microns in diameter (PM<sub>10</sub>) in any consecutive 12 month period from the entire installation.
- D. Attachment A, Attachment B, Attachment C and Attachment D or equivalent forms approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 2(A), 2(B) and 2(C). HPI Products shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets for all materials used at this installation.
- E. HPI Products shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2(D) indicate that the source exceeds the limitation of Special Conditions Number 2(A), 2(B) & 2(C).

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Permit No.	
Project No.	2006-07-060

**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

**3. Baghouse Requirements**

- A. HPI Products shall control emissions from the equipment listed below using baghouses as specified in the permit application. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications to achieve overall control efficiency (OCE) as indicated in the application. The baghouse shall be equipped with a gauge or meter which indicates the pressure drop across the control device. These gauges or meters shall be located such that the DNR employees may easily observe them. Replacement filters for the baghouses and drum filters shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

**Table 1. Emission Units and associated Baghouses**

Line	Control Device		Emission Unit (EU)	Description of EU
	Identification	% OCE		
Granular Blend	CD24 (A, C & D)	90	EU65A, C & D	Storage Bin (4)
		90	EU31	Covered Blue Blender
	EU5B		Bagger 2	
	EU5C		Bagger 3	
	EU5F		Bagger 4	
	CD2**	90	EU5A	Bagger 1
		EU66	New Blender	
Airmill	CD6, CD13, CD14 (in series)	99.9	EU8	Dump Station
			EU32	Covered Blender #1
			EU9	Hammermill
			EU33	Covered Blender #2
	CD8, CD13, CD14 (in series)	99.9	EU34	Cyclone
			EU35	Covered Blender #3
	CD9, CD13, CD14 (in series)	99.9	EU36 (A & B)	Interim Storage
	CD10	90	EU14	Screener
CD11	90	EU12	Natural Gas Fluid Bed Dryer	
CD26**	90	EU63	Pan Granulator	
Acephate	CD17**	90	EU44	Hopper/Hammermill
	CD19**	90	EU54 (A & B)	Packaging
Old Double Blender	CD20**, CD31* (in series)	90	EU57	Ribbon Blender
Dust Room	CD29**	90	EU79 (A, B & C)	Baggers
ACT Line	CD30**	90	EU81	Bagger
Sand	CD15 or CD16**	90	EU38A	Blender
		90	EU39	Hand Charged Leg/Hopper
	CD 16**			EU40
Lime Sulfur	CD21	90	EU59	Lime/Sulfur (bagged dry powder)
BIT 1	CD22**	90	EU60	Blend Tank BT1
BIT2	CD23**	90	EU61	Blend Tank BT2

\* CD31 is a water spray bar. Its efficiency of 90% is not used to calculate PTE \*\*do not vent to ambient air

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Permit No.	
Project No.	2006-07-060

**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

- B. HPI Products shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
- C. HPI Products shall maintain an operating and maintenance log for the baghouses which shall include the following:
  - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
  - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
- 4. **Operational Requirements**  
HPI Products shall keep the solvents and cleaning solutions in sealed containers whenever the materials are not in use. HPI Products shall provide and maintain suitable, easily read, permanent markings on all inks, solvent and cleaning solution containers used with this equipment.
- 5. **Nuisance Odor and Corrective Action**  
If a continuing situation of demonstrated nuisance odors exists in violation of 10 CSR 10-2.070, *Restriction of Emission of Odors*, the Director may require the HPI Products to submit a corrective action plan within 30 days, adequate to timely and significantly mitigate the odors. HPI Products shall implement any such plan immediately upon its approval by the Director. Failure to either submit or implement such a plan shall be a violation of the permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2004-01-003  
Installation ID Number: 021-0089  
Permit Number:

HPI Products  
222 Sylvania  
P.O. Box 997  
St. Joseph, MO 64502

Complete: 08/02/2006  
Reviewed: 09/06/2006

Parent Company:  
HPI Products  
222 Sylvania  
P.O. Box 997  
St. Joseph, MO 64502

Buchanan County, S8, T57N, R35W

REVIEW SUMMARY

- HPI Products has applied for authority to make minor modifications and additions to equipment throughout the installation.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process, as provided in the application, are listed in Appendix A. HAP's, other than those listed in Appendix A are expected as raw materials are subject to change depending on client request and consumer demand.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment. Specifically, Subpart Kb-*Standards of Performance for Volatile Organic Liquid Storage Vessels* does not apply to these processes because the storage vessel capacity is less than 40 cubic meters.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- Baghouses are being used to control the PM<sub>10</sub> emissions from the specified equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub>, VOC and HAPs are conditioned to de minimis levels.
- This installation is located in Buchanan County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

- Ambient air quality modeling was not performed since potential emissions of the application are conditioned to de minimis levels.
- Emissions testing is not required for the source.
- No Operating Permit is required for this installation.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

HPI Products, Inc. is a contract blending and packaging facility in St. Joseph, Missouri. Raw materials vary depending on client request and consumer demand. Operations require the receipt of bulk materials to be blended and repackaged for end use. An active ingredient is blended with an inert carrier to produce lawn and garden products and pest control products for pets. This installation is considered a de minimis source under construction permits.

No operating permit has been issued to HPI Products, Inc. and upon issuance of this permit, no operating permit will be required. The following construction permits have been issued to HPI Products, Inc. from the Air Pollution Control Program.

**Table 2. Construction Permits Issued to HPI Products**

Permit Number	Description
0696-002	Construction of a formulation, blending and repackaging plant
042004-004	Relocation of production lines offsite

A Notice of Violation (NOV 1527) was issued to HPI Products, Inc. for violation of 10 CSR 10-2.070 *Restriction of Emission of Odor*. Therefore, a special condition was set forth to address nuisance odors from the installation.

A Notice of Violation (NOV A2384KC) was issued to HPI Products, Inc. for operating equipment designated as “wet glue blend line” and “dry blend” in violation of Special Condition 6 of Construction Permit #042004-004. The conditions of this permit supersede all special conditions found in #042004-004.

### PROJECT DESCRIPTION

HPI Products, Inc. has applied for installation-wide authority to construct for purposes of resolving Notice Of Violation (NOV A2384KC) and to make minor modifications and additions.

NOV A2384KC was issued to HPI Products, Inc. for violating special condition 6 in permit # 042004-004. Special Condition 6 states: “*HPI Products shall remove or make inoperable any equipment associated with the Dry Blend Production Line and the Wet Glue Blend Line.*”

HPI Products, Inc. states in their application cover letter that they never intended for the “wet glue blend line” and “dry blend line” to be decommissioned and the mandate of such in Permit #042004-004 was overlooked in reviewing the operating conditions.

Several modifications or additions have been made to the installation. Table 3 to Table 19 below summarize these changes. “Previous Application” in the tables refers to HPI Products Inc. Application for Authority to Construct, dated December 31, 2003 that resulted

in the issuance of Permit #042004-004. Emission Units listed in the previous application but not in the current application are considered either removed or modified and do not contribute to PTE of the installation. Emission units listed in both applications and those listed only in the current application are considered as existing or new and were used to determine the PTE of the installation.

Construction Permits #0696-002 and #042004-004 established various requirements that are either no longer necessary or are being replaced in this permit. At HPI Products, Inc. request, the existing special conditions are being removed and replaced with those in this permit.

**Table 3. Summary of Production Line MHDR.**

Production Line	MHDR (tons per hour)	
	Previous Application	Current Application
Granular Line	20	35
Airmill Line	0.6	0.6
Liquid Blend Line	2.0	2.0
Acephate Line	0.5	0.5
Old Double Blender Line	0.1	0.1
Tanning Line	N/A	30
Dust Room Line	N/A	20
ACT Line	N/A	1
Nauta Blend Lines (1 & 2)	N/A	1.5
Sand Line	2.5	2.5
Lime Sulfur Line	0.15	0.15
BIT Line 1	0.3	0.3
BIT Line 2	0.05	0.05
PVA Line	N/A	0.15

\*N/A = Not applicable

**Table 4. Granular Line**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU1	Grain Receiving hopper truck	Yes	No	Modified/Removed
EU2	Elevator leg	Yes	No	Modified/Removed
EU3	Elevator leg	Yes	No	Modified/Removed
EU28	Covered Overhead Conveying	Yes	No	Modified/Removed
EU29	Storage Bins	Yes	No	Modified/Removed
EU30	Covered Bottom Auger	Yes	No	Modified/Removed
EU31	Covered Bins	Yes	Yes	Existing
EU5A	Bagging	Yes	Yes	Existing
EU 64	Granular Unloading Pit	No	Yes	Modified/New
EU65	Storage Bin (4)	No	Yes	Modified/New
EU77	Tote Filling	No	Yes	Modified/New
EU31 & EU66	Covered Blue Blender & New Blender	No	Yes	Modified/New

MHDR for the Granular Line increased from 20 tons/hr to 35 tons/hr.

**Table 5. Airmill Line**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU8	Dump Station	Yes	Yes	Existing
EU9	Hammermill	Yes	Yes	Existing
EU12	NG Fluid Bed Dryer	Yes	Yes	Existing
EU13	Belt Conveyor	Yes	Yes	Existing
EU14	Screener	Yes	Yes	Existing
EU15	Bagging	Yes	Yes	Existing
EU32	Covered Blender #1	Yes	Yes	Existing
EU33	Covered Blender #2	Yes	Yes	Existing
EU34	Cyclone	Yes	Yes	Existing
EU35	Covered Blender #3	Yes	Yes	Existing
EU36	Interim Storage	Yes	Yes	Existing
EU37	Lawson Weigh Feeder	Yes	Yes	Existing
EU62	Interim Storage	Yes	No	Modified/Removed
EU63	Pan Granulator	Yes	Yes	Existing
EU73	Bulk Filling	No	Yes	Modified/New
EU74	Belt Conveyor	No	Yes	Modified/New
EU75	Filling Machine	No	Yes	Modified/New
EU84A	Open Dump Station	No	Yes	Modified/New
EU84B	Open Dump Station	No	Yes	Modified/New
EU85	Blender	No	Yes	Modified/New
EU86	Open Belt Conveyor	No	Yes	Modified/New
EU87	Open Hopper	No	Yes	Modified/New
EU88	Open Belt Conveyor	No	Yes	Modified/New

**Table 6. Liquid Line**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU16	Raw Material Receiving	Yes	Yes	Existing
EU17	Bottling	Yes	No	Modified/Removed
EU27	Jet Coding	Yes	Yes	Existing

**Table 7. Acephate Line**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU44	Hopper/Hammermill	Yes	Yes	Existing
EU45	Auger	Yes	No	Modified/Removed
EU46	Hammermill	Yes	No	Modified/Removed
EU47	Elevator Leg	Yes	No	Modified/Removed
EU48	Hammermill	Yes	No	Modified/Removed
EU49	Ribbon Blender	Yes	No	Modified/Removed
EU50	Elevator Leg	Yes	No	Modified/Removed
EU51	Holding Hopper	Yes	No	Modified/Removed
EU52	Elevator Leg	Yes	No	Modified/Removed
EU53	Fill Hopper	Yes	No	Modified/Removed
EU54	Packaging	Yes	Yes	Existing
EU71	Oversized Material	No	Yes	Modified/New
EU72	Drum	No	Yes	Modified/New

**Table 8. Double Blender**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU55	Hammermill	Yes	Yes	Existing
EU56	Feed Screw	Yes	No	Modified/Removed
EU57	Ribbon Blender	Yes	Yes	Existing
EU58	Bagging	Yes	Yes	Existing
EU76	Discharge	No	Yes	Modified/New

**Table 9. Tanning**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU82	Storage Tank (3)	No	Yes	Modified/New
EU69	Hand Fed Dump Pit	No	Yes	Modified/New
EU70	Bagging	No	Yes	Modified/New

**Table 10. Dust Room**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU78	Lime/Sulfur	No	Yes	Modified/New
EU79	Baggers	No	Yes	Modified/New

**Table 11. ACT Line**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU80	Open Receiving Hopper	No	Yes	Modified/New
EU81	Bagger	No	Yes	Modified/New

**Table 12. Nauta Blend Line**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU67	Blenders	No	Yes	Modified/New
EU68				
EU5F	Bagging	No	Yes	Modified/New
EU67A				
EU68A				

**Table 13. Sand**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU38	Blender	Yes	Yes	Existing
EU39	Hand Charged Leg/Hopper	Yes	Yes	Existing
EU40	Screener	Yes	Yes	Existing
EU41	Conveyor	Yes	Yes	Existing
EU42	Holding Tanks	Yes	No	Modified/Removed
EU43	Bagging	Yes	Yes	Existing

**Table 14. Lime/Sulfur Line**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU59	Lime/Sulfur	Yes	Yes	Existing

**Table 15. BIT Line 1**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU60	Blend Tank BT1 and BT2	Yes	Yes	Existing
EU83	Bulk Loading/Packaging (totes, drums, pails)	No	Yes	Modified/New

**Table 16. BIT Line 2**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU61	Blend Tank BT1 and BT2	Yes	Yes	Existing
EU89	Packaging (totes, drums, pails)	No	Yes	Modified/New

**Table 17. PVA Line**

Unit ID	Description of Unit(s)	Listed in		Status
		Previous Application	Current Application	
EU90	Open Receiving Hopper	No	Yes	Modified/New

**Table 18. DMA Tank**

Unit ID	Description of Unit(s)	Status
EU91A	Dimethylamine Tank	Existing
EU91B	Dimethylamine Tank (Working Loss)	Existing

**Table 19. Dipropylene Glycol**

Unit ID	Description of Unit(s)	Status
EU92A	Dipropylene Glycol Storage Tank	Existing
EU92B	Dipropylene Glycol Storage Tank	Existing

### EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 11.17 *Lime Manufacturing (2/98)*, Section 11.12 *Concrete Batching (10/01)*, Section 9.9.1 *Grain Elevators and Processes (5/98)*, Section 8.3 *Ammonium Nitrate (7/93)* and Factor Information Retrieval (FIRE) version 6.25.

Chapter 8: Methods for Estimating Air Emissions from Paint, Ink, and Other Coating Manufacturing Facilities (02/05) from Volume II of Emission Inventory Improvement Program (EIIP) was used to calculate VOC emissions from EU31, EU36 and EU84.

For emission points that are vented to a baghouse using negative pressure, the control efficiencies listed in Table 1 were used in the determination of PM<sub>10</sub> emissions. CD6, CD13 and CD14 each have a control efficiency of 90% but are arranged in series giving them an overall control efficiency of 99.9%. A similar arrangement and control efficiencies exist for CD8, CD13 and CD14 and also for CD9, CD13 and CD14.

The VOC emission factors for EU16 and EU60 were established through mass balance calculations conducted over several runs by the installation.

A mass balance approach was also used in determining emissions from the jet coding operations (EU27) based on the Material Safety Data Sheets of the materials used.

For the purpose of calculating potential emissions from this application, it is assumed that all VOC and HAP contained in the material is emitted as pollutant.

Potential emissions of the application represent the potential of all emitting equipment, assuming continuous operation (8760 hours per year). The applicant has requested to limit emissions of all criteria pollutants and HAPs from the entire installation to de minimis levels.

In addition, individual HAP emissions are limited to their respective threshold levels to avoid ambient air quality issues. Appendix A lists all potential HAPs as indicated by the applicant. Attachment A, B, C and D or equivalent forms approved by the Air Pollution Control Program will be used for compliance demonstration with the emissions limitations.

Existing potential emissions were taken from Permit Number 042004-004 and take into account limitations set forth in that permit. Existing actual emissions were taken from the 2005 Emissions Inventory Questionnaire (EIQ). The following table provides an emissions summary for this project.

**Table 20. Emissions Summary (tons per year)**

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2005 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>10</sub>	15.0	10.22	0.28	127.74	<15
SO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
NO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
VOC	40.0	<40	33.92	171.96	<40.0
CO	100.0	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	15.99	N/D	203.92	<10/<25

\*N/A = Not Applicable; N/D = Not Determined

#### PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub>, VOC and HAPs are conditioned to de minimis levels.

#### APPLICABLE REQUIREMENTS

HPI Products shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

## GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110  
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-2.070

## SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400

## STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

---

Maurice Chemweno  
Environmental Engineer

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Date

## PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated July 13, 2006, received July 19, 2006, designating HPI Products as the owner and operator of the installation.
- The Application for Authority to Construct form, dated December 31, 2003, received January 2, 2004, designating HPI Products as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Emission Inventory Improvement Program, Volume II: Point Sources.
- Material Safety Data Sheets
- Kansas City Regional Office Site Survey, received August 16, 2006.
- HPI Products Inc. 2005 EIQ.









**Appendix A:**  
Hazardous Air Pollutants Expected from this Project

Hazardous Air Pollutant	CAS Number	Threshold level (tpy)
Glycol Ether		5
Captan	133-06-2	10
Carbaryl	63-25-2	10
Methanol	67-56-1	10
Naphthalene	91-20-3	10
Ethylene Oxide	76-21-6	0.1
Arsenic Compounds	20-01-9	0.005
Dichlorvos	62-73-7	0.2
Formaldehyde	50-00-0	2
Diethanolamine	111-42-2	5
Pentachloronitrobenzene	82-38-8	0.3
2-Butoxyethanol	107-21-1	10
1, 4 Dioxane	123-91-1	6
Phenol	108-95-2	0.1

**Appendix B:**  
**PM<sub>10</sub> Emission Factors and Control Efficiencies**  
**VOC Emission Factors**

Unit ID	Description of Unit(s)	PM <sub>10</sub>		VOC EF (lb/ton)
		EF (lb/ton)	Control Efficiency (%)	
EU5	Bagger 1 through 4	0.0008	90	
EU8	Dump Station	0.46	99.9	
EU9	Hammermill	0.31	99.9	
EU12	NG Fluid Bed Dryer	1.3	90	
EU13	Belt Conveyor	1.1		
EU14	Screener	0.03	90	
EU15	Bagging	0.16		
EU16	Raw Material Receiving	0.46		17.2632
EU27	Jet Coding			0.9744
EU31 & EU66	Covered Blue Blender & New Blender	0.02	90	0.015
EU32	Covered Blender #1	0.078	99.9	
EU33	Covered Blender #2	0.078	99.9	
EU34	Cyclone	0.46	99.9	
EU35	Covered Blender #3	0.078	99.9	
EU36	Interim Storage	0.46	99.9	
EU37	Lawson Weigh Feeder	0.0024		
EU38	Blender	0.078	90	0.015
EU39	Hand Charged Leg/Hopper	0.46	90	
EU40	Screener	0.03	90	
EU41	Auger	1.1		
EU43	Bagging	0.16		
EU44	Hopper/Hammermill	0.31	90	
EU54	Packaging	0.16	90	
EU55	Hammermill	0.31		
EU57	Ribbon Blender	0.078	90	
EU58	Bagging	0.16		
EU59	Lime/Sulfur	0.46	90	
EU60	Blend Tank BT1	0.078	90	5.1333
EU61	Blend Tank BT2	0.078	90	
EU63	Pan Granulator	0.05	90	
EU64	Granular Unloading Pit	0.0078		
EU65	Storage Bin (4)	0.0063	90	
EU67	Blenders (Two)	0.078		0.015
EU68	Bagging (3 lines)	0.16		
EU69	Hand Fed Dump Pit	0.46		
EU70	Bagging	0.16		
EU71	Oversized Material	0.75		
EU72	Drum	0.75		
EU73	Bulk Filling	0.305		
EU74	Belt Conveyor	1.1		
EU75	Filling Machine	0.0024		
EU76	Discharge	0.75		
EU77	Tote Filling	0.0022		
EU78	Storage Bins (2)	0.0063		

Unit ID	Description of Unit(s)	PM <sub>10</sub>		VOC EF (lb/ton)
		EF (lb/ton)	Control Efficiency (%)	
EU79	Baggers	0.16	90	
EU80	Open Receiving Hopper	0.46		
EU81	Bagger	0.16	90	
EU82	Storage Tank (3)	0.0063		
EU83	Bulk Loading/Packaging (totes, drums, pails)	0.0022		
EU84	Open Dump Station	0.46		0.015
EU85	Blender	0.078		
EU86	Open Belt Conveyor	1.1		
EU87	Open Hopper	0.46		
EU88	Open Belt Conveyor	1.1		
EU89	Packaging (totes, drums, pails)	0.0022		
EU90	Open Receiving Hopper	0.46		0.015

#### **DMA and Dipropylene Glycol Storage**

Unit ID	Description of Unit(s)	VOC EF (lb/1000gal)
EU91A	Dimethylamine Tank	0.1
EU91B	Dimethylamine Tank (Working Loss)	0.004
EU92A	Dipropylene Glycol Storage Tank	0.052
EU92B	Dipropylene Glycol Storage Tank	0.002