

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT

PERMITTEE

Morton International, Inc.
Attn: Mike Swift
1645 South Kilbourn Avenue
Chicago, Illinois 60623-2303

<u>Application No.:</u> 96100074	<u>I.D. No.:</u> 031600EPY
<u>Applicant's Designation:</u>	<u>Date Received:</u> October 15, 1996
<u>Subject:</u> Biocides	
<u>Date Issued:</u> June 19, 2000	<u>Expiration Date:</u> June 19, 2005
<u>Location:</u> 1645 South Kilbourn Avenue, Chicago, 60623-2303	

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment identified in Attachment B, pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 ton/year of particulate matter-10, 25 tons/year of volatile organic material and hazardous air pollutants (HAP), and 10 tons/year for any individual HAP). As a result the source is excluded from the requirements to obtain a Clean Air Act Permit Program permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
2. As a consequence of the established limitations imposed by this permit limiting VOM emissions below 25 tons/year, the source will not be subject to the control requirements of 35 Ill. Adm. Code 218, Subpart RR.
- 3a. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.
- b. Compliance with the monthly limits shall be determined by averaging the last twelve months of data.

- c. Operation of solid biocide production equipment shall not exceed the following limits:

Throughput		VOM		PM-10	
(Ton/Mo*)	(Ton/Yr)	(Lb/Mo*)	(Ton/Yr)	(Lb/Mo*)	(Ton/Yr)
8,400*	100,800	333*	2.0	1,667*	10.0

These limits are based on material balance and a 99.0% collection efficiency of B101 to B105.

- d. Operation of liquid biocide production equipment shall not exceed the following limits:

(Batches/Month*) (Batches/Year)		VOM		PM-10	
(Batches/Month*)	(Batches/Year)	(Lb/Mo*)	(Ton/Yr)	(Lb/Mo*)	(Ton/Yr)
240*	2,880	3,333*	20.0	833*	5.0

- e. Operation of storage tanks TK-1 through TK-16 and TK-155 through TK-157 shall not exceed the following limits:

Combined Throughput	VOM Emissions
(Gal/Yr)	(Tons/Yr)
5,600,000	2.0

These limits are based on standard emission factors from AP-42 as calculated by the TANKS3 program and using the maximum vapor pressure of the material stored in each tank.

- f. Operation of boilers and hot oil heater shall not exceed the following limits:

Equipment	Natural Gas Usage (mmscf/Yr)	E M I S S I O N S		
		NO _x (Ton/Yr)	VOM (Ton/Yr)	PM-10 (Ton/Yr)
Hot Oil Heater and Boilers #1 and #2	6.0	0.3	0.02	0.03

These limits are based on AP-42 emission factors.

4. The Permittee shall maintain sufficient records to calculate monthly emissions of VOM, PM-10, MEK and Total HAPs in order for the Permittee to demonstrate compliance with the emission limitations included within this Permit. The Permittee shall satisfy this standard by maintaining copies of monthly throughput records, applying appropriate control efficiencies

on all control devices and developing emission factors based upon chemical specifications or securing emission factors from generally-accepted published sources.

5. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.
6. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
7. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
8. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Eisenhower Tower
1701 South First Avenue
Maywood, Illinois 60153

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9. The Permittee shall submit the following additional information with the Annual Emission Report, due May 1st of each year: VOM, PM-10, and HAP emissions from the prior calendar year. If there have been no exceedances during the previous calendar year the Annual Emission Report shall include a statement to that effect.

If you have any questions on this, please call John Blazis at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

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cc: Illinois EPA, FOS Region 1
Illinois EPA, Compliance Section
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emissions from the biocide manufacturing facility operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are well below the levels, i.e., 25 tons per year of VOM, 10 and 25 of HAP, at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled.

- 1a. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.
- b. Compliance with the monthly limits shall be determined by averaging the last twelve months of data.
- c. Operation of solid biocide production equipment shall not exceed the following limits:

<u>Throughput</u>		<u>VOM</u>		<u>PM-10</u>	
<u>(Ton/Mo*)</u>	<u>(Ton/Yr)</u>	<u>(Lb/Mo*)</u>	<u>(Ton/Yr)</u>	<u>(Lb/Mo*)</u>	<u>(Ton/Yr)</u>
8,400*	100,800	333*	2.0	1,667*	10.0

These limits are based on material balance and a 99.0% collection efficiency of B101 to B105.

- d. Operation of liquid biocide production equipment shall not exceed the following limits:

<u>(Batches/Month*)</u>		<u>VOM</u>		<u>PM-10</u>	
<u>(Batches/Year)</u>	<u>(Lb/Mo*)</u>	<u>(Ton/Yr)</u>	<u>(Lb/Mo*)</u>	<u>(Ton/Yr)</u>	
240*	2,880	3,333*	20.0	833*	5.0

- e. Operation of storage tanks TK-1 through TK-16 and TK-155 through TK-157 shall not exceed the following limits:

<u>Combined Throughput</u>	<u>VOM Emissions</u>
<u>(Gal/Yr)</u>	<u>(Tons/Yr)</u>
5,600,000	2.0

These limits are based on standard emission factors from AP-42 as calculated by the TANKS3 program and using the maximum vapor pressure of the material stored in each tank.

- f. Operation of boilers and hot oil heater shall not exceed the following limits:

<u>Equipment</u>	Natural Gas Usage (mmscf/Yr)	E M I S S I O N S		
		NO _x (Ton/Yr)	VOM (Ton/Yr)	PM-10 (Ton/Yr)
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These limits are based on AP-42 emission factors.

2. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.

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Attachment B

EMISSION UNIT SUMMARY

1. Process Category: Liquid Biocide Production

Associated Pollution Control Equipment: Tywood Scrubber, Vacuum Pump (VP-101) and Dust Collector (DC-1), as noted

Process Equipment/Emission Units:

<u>Emission Unit Description</u>	<u>Designation</u>	<u>Control Equipment</u>
Vinyzene Vessel	K-1	Tywood, Vacuum Pump, DC-1
Copper Vessel	K-2	Tywood, Vacuum Pump, DC-1
Specialty Vessel	K-3	Tywood, Vacuum Pump
IDA Vessel	K-4	Tywood, DC-1
Plate Filter IDA Vessel	FI-401	Tywood
Steam Jacket Reactor	NA	Tywood
Water Vessel	K-5	Tywood, Vacuum Pump, DC-1
NaBase Tank	TK-17	Tywood
Aluminum Stearate Tank	TSS-201	Tywood, DC-1
Copper Mix Tank	TSS-202	Tywood, DC-1
Durotex Vessel	K-6	Tywood
Durotex Vessel Condenser	TSS 601	Tywood
Mix Tank	M-3	None
Mix Tank	M-4	None
Vinyzene IT Process	K-7	None
New Durotex Vessel	M-8	None
Drumming Station	NA	Tywood
Tank Wagon Loading Station	NA	None
2002 Base Mix Tank	TK-18	None
2002 Product Mix Tank	TK-19	None
Silver Nitrate Vessel	K-20	None

2. Process Category: Solid Biocide Production:

Associated Pollution Control Equipment: Dust Collectors (as noted)

Process Equipment/Emission Units:

<u>Equipment Description</u>	<u>New FESOP I.D.</u>	<u>Old I.D.</u>
Push/Pull System	PP-101	Deleted
Push/Pull System Dust Collector	DC-101	Deleted
Bulk Resin Silo Blower	B-101	B-101
Bulk Resin Silo #1 Dust Collector	DC-102	DC-101
Bulk Resin Silo #2 Dust Collector	DC-103	DC-102

<u>Equipment Description</u>	<u>New FESOP I.D.</u>	<u>Old I.D.</u>
Bulk Resin Silo Blower #2	B-102	Deleted
Resin Feeder Blower	B-202	B-102
Resin Feeder Dust Collector	DC-202B	DC-103
Purge Bag Dump Fan	F-201	F-101
Purge Bag Dump Dust Collector	DC-201A	DC-104
Stearic Acid Bag Dump Fan	F-203	F-102
Stearic Acid Bag Dump Dust Collector	DC-203A	DC-106
Zinc Stearate Bag Dump Fan	F-204	F-103
Zinc Stearate Bag Dump Dust Collector	DC-204A	DC-108
Material Transport Blower	B-201	B-103
Purge Feeder Dust Collector	DC-201B	DC-105
Stearic Acid Feeder Dust Collector	DC-203B	DC-107
Zinc Stearate Feeder Dust Collector	DC-204B	DC-109
Rework Feeder Dust Collector	DC-205	DC-110
OBPA Drum Dump Blower	B-206A	B-104
OBPA Drum Dump Dust Collector	DC-206A	DC-111
OBPA Feeder Blower	B-206B	B-105
OBPA Feeder Dust Collector	DC-206B	DC-112
Vent Vapors Exhaust Fan	F-301	F-104
Storage Silo Blower	B-401	B-106
Storage Silo #1 Dust Collector	DC-401	DC-113
Storage Silo #2 Dust Collector	DC-402	DC-114
Packaging System Blower	B-402	B-107
Material Receiver #1 Dust Collector	DC-403	DC-115
Material Receiver #2 Dust Collector	NA	DC-116
Central Vacuum System Blower	NA	B-108
Central Vacuum System Dust Collector	DC-404	Dc-117
SB-1-PR Extrusion Process	NA	NA
Parts Cleaning Oven	NA	NA

3. Process Category: Storage Tanks

Associated Pollution Control Equipment: Conservation Vents (as noted)

Process Equipment/Emission Units:

<u>Tank Description</u>	<u>Tank I.D.</u>	<u>Conservation Vent</u>
Waste Solvent	TK-1	Yes
Butyl Benzyl Phthalate	TK-2	No
Bis 2 Ethylhexyl Phthalate	TK-3	No
Diisodecyl Phthalate	TK-4	No
Isodecanol	TK-5	Yes
Empty	TK-6	NA
Pluracol 726	TK-7	No
Epoxidized Soybean Oil	TK-8	No
Palatinol 711	TK-9	No
Nonyl Phenol	TK-10	No
Empty	TK-11	NA
White Oil	TK-14	No
Comsolv Naptha Solvent	TK-15	No
2 Ethyl Hexanoic Acid	TK-16	No
Empty	TK-155	NA
Vinyzene BP5-2	TK-156	No
Vinyzene BP5-2 DIDP	TK-157	No

4. Process Category: Combustion Equipment

Associated Pollution Control Equipment: None

Process Equipment/Emission Units:

Two (2) steam generating boilers - 5.98 mmBtu/hr each, natural gas
One (1) Oil heating unit - 5.14 mmBtu/hr, natural gas