



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: September 30, 2010

RE: Dover Chemical – Hammond Works / 089-294951-00227

FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

## Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FNPER.dot12/03/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Mr. Mark Renick  
Dover Chemical – Hammond Works  
3000 Sheffield Ave.  
Hammond, IN 46327

September 30, 2010

Re: Interim Significant Source Modification Petition Approval  
089-294951-00227

Dear Mr. Renick:

On September 9, 2010, the Office of Air Quality (OAQ) received an interim Significant Source Modification petition from Dover Chemical – Hammond Works, located at 3000 Sheffield Ave., Hammond, Indiana for modification of a chemical products production plant.

A public notice of the interim Significant Source Modification petition was published in The Times on September 9, 2010. The public comment period ended on September 23, 2010.

There were no comments received during the public comment period. This interim Significant Source Modification petition is in effect on upon issuance.

The interim Significant Source Modification petition may be revoked after the effective date upon a written finding by the Indiana Department of Environmental Management (IDEM) that any of the reasons for denial in 326 IAC 2-13-1(h) exist or if the final Significant Source Modification permit is denied. The IDEM has reviewed this interim Significant Source Modification petition and has not found any such reason. Operation of the facilities subject to this approval will be governed by 326 IAC 2-7-12 (b)(7).

The interim Significant Source Modification petition is federally enforceable. Detailed construction and operation conditions will be specified in the final Significant Source Modification permit 000-00000-00000.

If you have any questions regarding this interim Significant Source Modification petition, please contact Jillian Bertram, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Jillian Bertram or extension 3-1782, or dial (317)233-1782.

Sincerely,

Tripurari P. Sinha, PhD., Section Chief  
Permits Branch  
Office of Air Quality

Enclosure: Interim Permit Evaluation (4 pages)  
Appendix A – Calculations  
Appendix B – Affidavit of Construction  
Appendix C – Complete Application  
Appendix D – Petition  
Appendix E – Checklist  
Appendix F – Public Notice Letter  
Appendix G – Proof of Publication

JLB

cc: File – Lake County  
Lake County Health Department  
U.S. EPA, Region V  
Compliance and Enforcement Branch

## Indiana Department of Environmental Management Office of Air Management

### Interim Significant Permit Revision / Significant Source Modification Evaluation Sheet

<b>Company Name:</b> Dover Chemical - Hammond Works	
<b>Location:</b> 3000 Sheffield Ave., Hammond, IN	<b>Permit No:</b> 000-000001-00000
<b>Permit Reviewer:</b> Jillian Bertram	<b>Date Receipt of Application:</b> 9/9/2010
	<b>Date of review:</b> 9/9/2010
<b>Description of the interim construction:</b> addition or reactivation of 9 tanks, addition of one reactor	
<b>Public Notice Period</b> = 9/9/2010 to 09/23/10	
<b>Public Notice Date + 3 days = 17 days =</b> 09/26/10	

Interim Petition Applicability: 326 IAC 2-13-1

- (a) Existing Source with valid permit;
- (b) Exemptions:
  - (1) construction of a PSD source or PSD modification;
  - (2) construction or modification in nonattainment area that would emit those pollutants for which the nonattainment designation is based.
  - (3) any modification subject to 326 IAC 2-4.1.
- (c) Public notice comment period is 14 calendar days.

**Instructions: Check (✓) appropriate answers and make a recommendation.**

1. Did the applicant submit a written petition for an interim significant permit revision or significant source modification?

- Yes Go to question 2.  
 No Ignore verbal request.

2. Did the applicant pay the applicable interim permit fee? \$625 for TV, FESOP, and SSOA. \$500 for MSOP.

- Yes Go to question 3.  
 No Deny the application, pursuant to 326 IAC 2-13-1(c)(1).

Comments: \_\_\_\_\_

3. Did the applicant state acceptance of federal enforceability of an interim significant permit revision or significant source modification?

- Yes Go to question 4.  
 No Deny the application, pursuant to 326 IAC 2-13-1(c)(2)(D).

4. Did the applicant or its authorized agent sign the application?

- Yes Go to question 5.  
 No Deny the application, pursuant to 326 IAC 2-13-1(c)(2)(E).

5. Did the applicant submit a notarized affidavit stating that the applicant will proceed at its own risk (if the interim significant permit revision or significant source modification is issued), including, but not limited to:
- (a) Financial risk,
  - (b) Risk that additional emission controls may be required,
  - (c) Risk that the final significant permit revision or significant source modification may be denied.
- Yes Go to question 6.  
 No Deny the application, pursuant to 326 IAC 2-13-1(c)(2)(F).
6. Did the applicant begin construction prior to submitting the interim significant permit revision or significant source modification application?
- Yes Deny the application, pursuant to 326 IAC 2-13-1(h)(6).  
 No Go to question 7.
7. What is the type of the interim construction?
- New Source Deny the application, pursuant to 326 IAC 2-13-1(a)  
 Modification to an existing source Go to question 8.
8. Did the applicant present data in the interim significant permit revision or significant source modification that is sufficient to determine PSD, NSPS, NESHAP, and state rule compliance?
- Yes Go to question 9.  
 No Deny the application pursuant to:  
326 IAC 2-13-1(c)(2)(B), for PSD;  
326 IAC 2-13-1(c)(2)(C), for NSPS or NESHAP;  
326 IAC 2-13-1(c)(2)(C), for state rules.
9. Is the proposed modification to be located in a nonattainment area?
- Yes Go to question 10.  
 No Go to question 11.
- County: Lake County
- Comments: Non-attainment for PM2.5
10. Will the proposed modification emit the pollutant for which the area is nonattainment in quantities greater than the significant levels?
- Yes Deny the application, pursuant to 326 IAC 2-13-1(a)(2).  
 No Go to question 11.
11. Did the petition include a complete description of the process?
- Yes Go to question 12.  
 No Deny the petition, pursuant to 326 IAC 2-13-1(c)(2).
12. Did the interim significant permit revision or significant source modification petition contain conditions accepting either emission controls (baghouse, afterburners, scrubbers, etc.) or enforceable limits or other suitable restriction to avoid PSD applicability; as well as control parameters (incinerator operating temperature, baghouse pressure drop, etc.)? The specific limits must be explicitly spelled out (i.e.: The gas consumption of the boiler shall not exceed 29 million cubic feet per month.) A statement such as that the company agrees to conditions such that PSD rules are not applicable is not acceptable.
- Yes Go to question 13.  
 No Deny the application, pursuant to 326 IAC 2-13-1(c)(2)(B).

13. Do the emission controls and/or throughput limits prevent PSD applicability?  
 Yes Go to question 14.  
 No Deny the application, pursuant to 326 IAC 2-13-1(c)(2)(B).
14. Will the modification, after application of all emission controls and/or throughput limitations comply with all applicable New Source Performance Standards (NSPS) (40 CFR 60)?  
 Yes Go to question 15.  
 No Deny the application, pursuant to 326 IAC 2-13-1(c)(2)(C).
15. Will the modification, after application of all emission controls and/or throughput limitations comply with all applicable National Emission Standards for Hazardous Air Pollutants (NESHAP)?  
 Yes Go to question 16.  
 No Deny the application, pursuant to 326 IAC 2-13-1(c)(2)(C).
16. Will the modification, after application of all emission controls and/or throughput limitations, comply with all applicable state rules?  
 Yes Go to question 17.  
 No Deny the application, pursuant to 326 IAC 2-13-1(c)(2)(C).
17. Does the applicant dispute applicability of any applicable state or federal rule?  
 Yes Deny the application, pursuant to 326 IAC 2-13-1(c)(2)(C).  
 No Go to question 18.
18. Is there good reason to believe that the applicant does not intend to construct in accordance with the interim significant permit revision or significant source modification petition?  
 Yes Deny the application, pursuant to 326 IAC 2-13-1(h)(1).  
 No Go to question 19.
19. Is there good reason to believe that information in the petition has been falsified?  
 Yes Deny the application, pursuant to 326 IAC 2-13-1(h)(7).  
 No Approve the interim significant permit revision or significant source modification petition.
20. Has the petition been adequately public noticed? A proof of publication copy is necessary.  
 Yes Go to question 21.  
 No Deny the application, pursuant to 326 IAC 2-13-1(e).
- Newspaper: The Times
- Date of publication: 09/09/10
21. Were comments received within seventeen (17) days after the public notice of the interim significant permit revision or significant source modification?  
(14 calendar days for comment period + 3 working days for mailing)  
 Yes Evaluate the comments received, and make a recommendation.  
 No Issue the final interim significant permit revision or significant source modification approval.

Comments: None

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Recommendation: Issue Interim\_\_\_\_\_

Date the applicant was informed of the decision: \_\_\_\_\_

Method of informing the applicant: Permit Mailing\_\_\_\_\_

**Appendix A: Emissions Calculations  
Sulfurization Tank**

**Company Name:** Dover Chemical - Hammond Works  
**Address City IN Zip:** 3000 Sheffield Ave. Hammond, IN 46327  
**Permit Number:** T089-29495I-00227  
**Reviewer:** Jillian Bertram  
**Date:** July 26, 2010

	<b>Volume (gallons)</b>	<b>Capacity (lb/batch)</b>	<b>Rate (batch/day)</b>	<b>VOC EF (lb/lb)</b>	<b>VOC (tons/yr)</b>	<b>H2S EF (tons/ton)</b>	<b>H2S (tons/yr)</b>
TR-2128	7500	52000	3	0.000368	10.47696	0.052	1480.44

**Methodology**

Capacity (lb/hr) = Capacity of All Tanks (lb/hr) \* Volume of TR-2128 (gallons) / Volume of All Tanks (gallons) (gallons)\*1/2000(lb/ton)

Uncontrolled VOC emission factor for the existing tanks, from current permit

VOC (tons/yr) = VOC EF (lb/lb) \* Capacity (lb/hr) \* 8760 (hr/yr) \* 1/2000 (lb/ton)

Uncontrolled H2S emission factor back calculated from existing H2S limit and scrubber percent control

H2S Emissions (tons/yr) = Capacity (lb/hr) \* 1/2000 (lb/ton) \* H2S EF (tons/ton) \* 8760 (hr/yr)

Reflux condensers are integral to the process

**Appendix A: Emissions Calculations  
New Products**

**Company Name:** Dover Chemical - Hammond Works  
**Address City IN Zip:** 3000 Sheffield Ave. Hammond, IN 46327  
**Permit Number:** T089-29495I-00227  
**Reviewer:** Jillian Bertram  
**Date:** July 26, 2010

**New Products to be Manufactured in Existing Equipment**

**Doverlube PE80**

Manufactured in Hi-Temp. (TR-2620) and controlled by scrubbers (TP-2624 &TP-2626) and flare (GB-2627)

Step	Time per batch (hours) <sup>1</sup>	VOC		HAP	HAP		Total time per batch (hours)	Potential batches per Year	PTE uncontrolled VOC (TPY)	PTE uncontrolled HAP (TPY)
		Emission factor (lb/hr)	VOC Emissions (lb/batch)		Emission Factor (lb/hr)	HAP Emissions (lb/batch)				
Charging		0.01	0.00		0.00	0.00	48.00	183	0.43	0.00
Reaction	12.00	0.21	2.47							
Mix & Cool	24.00	0.09	2.24							
Total			4.71							

**Doverlube NCEP**

Manufactured in Chlorination reactor due to need for Caustic scrubber but is a fuel additive product (TR-2010) and controlled by scrubbers (TP-2061, TP-2062, TP-2063 and TP\_2064)

Step	Time per batch (hours) <sup>1</sup>	VOC		HAP	HAP		Total time per batch (hours)	Potential Batches per Year	PTE uncontrolled VOC (TPY)	PTE uncontrolled HAP (TPY)
		Emission factor (lb/hr)	VOC Emissions (lb/batch)		Emission Factor (lb/hr)	HAP Emissions (lb/batch)				
Charging	1.00	0.00	0.00		0.00	0.00	48.00	183	0.02	0.00
Reaction	14.00	0.01	0.10							
Mix & Cool	24.00	0.01	0.17							
Total			0.27							

**Milidin GX-3**

Manufactured in Misc. (TR-2224 & TR-2322) and controlled by scrubbers (PE-2228 &TP-2332)

Step	Time per batch (hours) <sup>1</sup>	VOC		HAP	HAP		Total time per batch (hours)	Potential Batches per Year	PTE uncontrolled VOC (TPY)	PTE uncontrolled HAP (TPY)
		Emission factor (lb/hr)	VOC Emissions (lb/batch)		Emission Factor (lb/hr)	HAP Emissions (lb/batch)				
Charging		0.69	0.00		Controlled	Controlled	96.00	91	9.56	
Reaction	48.00	2.91	139.66	Formald ehyde	0.00	0.02				0.00
Mix & Cool	24.00	2.91	69.83							
Total			209.49							

Uncontrolled emissions are conservatively assumed at the worst case which is back calculated from the controlled emissions represented a scrubber with the highest control efficiency of 99%.

**Doverlube B902**

Manufactured in Misc (TR-2224 & TR-2322) and controlled by scrubbers (PE-2228 &TP-2332)

Step	Time per batch (hours) <sup>1</sup>	VOC		HAP	HAP		Total time per batch (hours)	Potential Batches per Year	PTE uncontrolled VOC (TPY)	PTE uncontrolled HAP (TPY)
		Emission factor (lb/hr)	VOC Emissions (lb/batch)		Emission Factor (lb/hr)	HAP Emissions (lb/batch)				
Charging		0.00	0.00		0.00	0.00	72.00	122	10.81	0.00
Reaction	3.00	46.92	140.77							
Mix & Cool	24.00	1.54	36.99							
total per batch			177.76							

**Total PTE of new products**

11.27

0.00 TPY HAP uncontrolled

Note that the Milidin GX-3 and the Doverlube B902 utilize the same reactors. Therefore the PTE for these products is not additive.

**Appendix A: Emissions Calculations  
Sulfurization Tank**

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**Address City IN Zip:** 3000 Sheffield Ave. Hammond, IN 46327  
**Permit Number:** T089-29495I-00227  
**Reviewer:** Jillian Bertram  
**Date:** July 26, 2010

	<b>Volume (gallons)</b>	<b>Capacity (lb/batch)</b>	<b>Rate (batch/day)</b>	<b>VOC EF (lb/lb)</b>	<b>VOC (tons/yr)</b>	<b>H2S EF (tons/ton)</b>	<b>H2S (tons/yr)</b>
TR-2128	7500	52000	3	0.000368	10.47696	0.052	1480.44

**Methodology**

Capacity (lb/hr) = Capacity of All Tanks (lb/hr) \* Volume of TR-2128 (gallons) / Volume of All Tanks (gallons) (gallons)\*1/2000(lb/ton)

Uncontrolled VOC emission factor for the existing tanks, from current permit

VOC (tons/yr) = VOC EF (lb/lb) \* Capacity (lb/hr) \* 8760 (hr/yr) \* 1/2000 (lb/ton)

Uncontrolled H2S emission factor back calculated from existing H2S limit and scrubber percent control

H2S Emissions (tons/yr) = Capacity (lb/hr) \* 1/2000 (lb/ton) \* H2S EF (tons/ton) \* 8760 (hr/yr)

Reflux condensers are integral to the process

**Appendix A: Emissions Calculations  
PIBSA- SNO**

**Company Name:** Dover Chemical - Hammond Works  
**Address City IN Zip:** 3000 Sheffield Ave. Hammond, IN 46327  
**Permit Number:** T089-294951-00227  
**Reviewer:** Jillian Bertram  
**Date:** July 26, 2010

	Oil Vented per Cleanout (lbs/cleanout)				VOC
	Pre-Coat Blow Out	Filter Blow and Burst	Final Filter Blow	Cleanouts /year	(tons/yr)
<b>PIBSA Filtration</b>	2.67E-05	1.91E+01	4.83E+01	224.60	<b>7.56</b>

Oil vented per cleanout is calculated by source based on oil concentration and gas volume

VOC (tons/yr) = (Pre-Coat Blow out (lbs/cleanout) + Filter Blow and Burst (lbs/cleanout) + Final Filter Blow (lbs/cleanout)) \* Cleanouts/year \* 1 ton/ 2000 lbs

	Nitrogen	Oil	VOC
	Blanket Flow Rate (SCF/hr)	Concentration (lbs/SCF)	(tons/yr)
<b>Tank Breathing</b>	30	0.008044	<b>1.06</b>

Oil concentration provided by source, calculated from vapor pressure

VOC (tons/yr) = Nitrogen Blanket Flow Rate (SCF/hr) \* Oil Concentration (lbs/SCF) \* 8760 (hr/yr) \* 1/2000 (tons/lb)

	Batches/yr	Displacement (lbs/batch)	VOC (tons/yr)
<b>Oil Storage Tanks</b>	673.8	0.00001048	<b>3.531E-06</b>

Batches/yr is provided by the source and based on hours per batch

Displacement per Batch is provided by the source

VOC (tons/yr) = Batches/yr \* Displacement (lbs/batch) \* 1/2000 (lb/ton)

**Appendix A: Emissions Calculations  
PIBSA- SNO**

**Company Name:** Dover Chemical - Hammond Works  
**Address City IN Zip:** 3000 Sheffield Ave. Hammond, IN 46327  
**Permit Number:** T089-294951-00227  
**Reviewer:** Jillian Bertram  
**Date:** July 26, 2010

	Batches/yr	Displacement (lbs/batch)	VOC (tons/yr)
<b>T-2720 to T-2730 Transfer</b>	673.8	4.193	<b>1.4126217</b>

Batches/yr is provided by the source and based on hours per batch

Displacement per Batch is provided by the souce

VOC (tons/yr) = Batches/yr \* Displacement (lbs/batch) \* 1/2000 (lb/ton)

	Batches/yr	Displacement (lbs/batch)	VOC (tons/yr)
<b>Filter Pre-Coat and Cake Flush</b>	673.8	3.50538	<b>1.1809625</b>

Batches/yr is provided by the source and based on hours per batch

Displacement per Batch is provided by the souce

VOC (tons/yr) = Batches/yr \* Displacement (lbs/batch) \* 1/2000 (lb/ton)

<b>Emission Point</b>	<b>VOC (tons/yr)</b>
PIBSA Filtration	7.56
Tank Breathing	1.06
Oil Storage Tanks	3.53071E-06
T-2720 to T-2730 Transfer	1.4126217
Filter Pre-coat and Cake Flush	1.180962522
<b>Total PIBSA Process</b>	<b>11.21</b>

## Affidavit of Construction

I, Scott Magee, being duly sworn upon my oath, depose and say:

(Name of the Authorized Representative)

1. I live in Lake County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of Operations Manager for Dover Chemical Company – Hammond Works  

(Title)
(Company Name)
3. By virtue of my position with Dover Chemical Company, I have personal  

(Company Name)

knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of Dover Chemical Company  

(Company Name)
4. I, the undersigned, have submitted an interim minor permit revision and significant source modification petition to the Office of Air Quality for the construction of one 5,000 gallon PIB heat up tank, the modification of the overhead system for reactor TR-2630, the addition of two 12,500 gallon acid neutralization tanks, the reactivation of an existing 1,300 gallon tank for process containment, the installation of one 1,300 gallon filter flush tank and one 5,000 gallon filtrate tank. One existing 7,950 gallon tank will be reactivated for the storage of polyamines and another existing 2,000 gallon tank will be reactivated to serve as containment for the new PIB heat up tank. One new 30,000 gallon storage tank will be installed. These changes will allow Dover to increase the production of PIBSA products. Dover will also construct one 7,500 gallon reactor to be used by the sulfurization process. The raw material usage and production capacity for the sulfurization process are currently limited. Dover is not seeking to increase the production of these products and will not increase emissions from this process by the installation of the new reactor. Dover is also seeking to manufacture four new products at the facility. However, no additional equipment will be installed for this change. Dover will also be removing one reactor and two storage tanks.
5. Dover Chemical Company recognizes the following risks:  

(Company Name)

(a) own financial risk, (b) that IDEM may require additional or different control technology for the final approval, (c) that IDEM may deny issuance of the final approval, and (d) any additional air permitting requirements.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature: [Signature]

Printed Name: Scott Magee

Phone No.: (219) 852-4810

Date: August 27, 2010

STATE OF INDIANA)

COUNTY OF SS Lake)

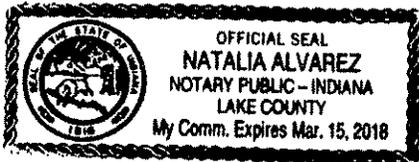
Subscribed and sworn to me, a notary public in and for Lake County and

State of Indiana on this 2<sup>nd</sup> day of September, 20 10.

My Commission expires: March 15, 2018

Signature: [Signature]

Printed Name: Natalia Alvarez





**AIR PERMIT APPLICATION COVER SHEET**  
 State Form 50639 (R4 / 1-10)  
 INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

**IDEM – Office of Air Quality – Permits Branch**  
 100 N. Senate Avenue, MC 61-53 Room 1003  
 Indianapolis, IN 46204-2251  
 Telephone: (317) 233-0178 or  
 Toll Free: 1-800-451-6027 x30178 (within Indiana)  
 Facsimile Number: (317) 232-6749  
[www.IN.gov/idem](http://www.IN.gov/idem)

**NOTES:**

- The purpose of this cover sheet is to obtain the core information needed to process the air permit application. This cover sheet is required for all air permit applications submitted to IDEM, OAQ. Place this cover sheet on top of all subsequent forms and attachments that encompass your air permit application packet.
- Submit the completed air permit application packet, including all forms and attachments, to **IDEM Air Permits Administration** using the address in the upper right hand corner of this page.
- IDEM will send a bill to collect the filing fee and any other applicable fees.
- Detailed instructions for this form are available on the Air Permit Application Forms website.

FOR OFFICE USE ONLY	
<b>PERMIT NUMBER:</b>	
<b>DATE APPLICATION WAS RECEIVED:</b>	

**1. Tax ID Number:** 20-0036988

**PART A: Purpose of Application**

Part A identifies the purpose of this air permit application. For the purposes of this form, the term "source" refers to the plant site as a whole and NOT to individual emissions units.

<b>2. Source / Company Name:</b>	Dover Chemical - Hammond Works	<b>3. Plant ID:</b>	089 – 0022
<b>4. Billing Address:</b>	3000 Sheffield Avenue		
<b>City:</b>	Hammond	<b>State:</b>	IN
		<b>ZIP Code:</b>	46327 –
<b>5. Permit Level:</b>	<input type="checkbox"/> Exemption <input type="checkbox"/> Registration <input type="checkbox"/> SSOA <input type="checkbox"/> MSOP <input type="checkbox"/> FESOP <input checked="" type="checkbox"/> TVOP <input type="checkbox"/> PBR		
<b>6. Application Summary:</b>	Check all that apply. Multiple permit numbers may be assigned as needed based on the choices selected below.		
<input type="checkbox"/> Initial Permit	<input type="checkbox"/> Renewal of Operating Permit	<input type="checkbox"/> Asphalt General Permit	
<input type="checkbox"/> Review Request	<input type="checkbox"/> Revocation of Operating Permit	<input type="checkbox"/> Alternate Emission Factor Request	
<input checked="" type="checkbox"/> Interim Approval	<input type="checkbox"/> Relocation of Portable Source	<input type="checkbox"/> Acid Deposition (Phase II)	
<input type="checkbox"/> Site Closure	<input type="checkbox"/> Emission Reduction Credit Registry		
<input type="checkbox"/> Transition (between permit levels)	From:	To:	
<input type="checkbox"/> Administrative Amendment:	<input type="checkbox"/> Company Name Change	<input type="checkbox"/> Change of Responsible Official	
	<input type="checkbox"/> Correction to Non-Technical Information	<input checked="" type="checkbox"/> Notice Only Change	
	<input type="checkbox"/> Other (specify):		
<input checked="" type="checkbox"/> Modification:	<input type="checkbox"/> New Emission Unit or Control Device	<input type="checkbox"/> Modified Emission Unit or Control Device	
	<input type="checkbox"/> New Applicable Permit Requirement	<input type="checkbox"/> Change to Applicability of a Permit Requirement	
	<input type="checkbox"/> Prevention of Significant Deterioration	<input type="checkbox"/> Emission Offset	<input type="checkbox"/> MACT Preconstruction Review
	<input type="checkbox"/> Minor Source Modification	<input checked="" type="checkbox"/> Significant Source Modification	
	<input checked="" type="checkbox"/> Minor Permit Modification	<input type="checkbox"/> Significant Permit Modification	
	<input type="checkbox"/> Other (specify):		
<b>7. Is this an application for an initial construction and/or operating permit for a "Greenfield" Source?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>8. Is this an application for construction of a new emissions unit at an Existing Source?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

### PART B: Pre-Application Meeting

Part B specifies whether a meeting was held or is being requested to discuss the permit application.

9. Was a meeting held between the company and IDEM prior to submitting this application to discuss the details of the project?

No  Yes: Date: 07/21/2010

10. Would you like to schedule a meeting with IDEM management and your permit writer to discuss the details of this project?

No  Yes: Proposed Date for Meeting:

### PART C: Confidential Business Information

Part C identifies permit applications that require special care to ensure that confidential business information is kept separate from the public file.

Claims of confidentiality must be made at the time the information is submitted to IDEM, and must follow the requirements set out in the Indiana Administrative Code (IAC). To ensure that your information remains confidential, refer to the IDEM, OAQ information regarding submittal of confidential business information. For more information on confidentiality for certain types of business information, please review IDEM's Nonrule Policy Document Air-031-NPD regarding Emission Data.

11. Is any of the information contained within this application being claimed as **Confidential Business Information**?

No  Yes

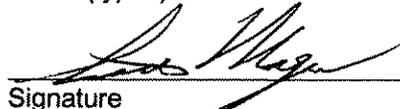
### PART D: Certification Of Truth, Accuracy, and Completeness

Part D is the official certification that the information contained within the air permit application packet is truthful, accurate, and complete. Any air permit application packet that we receive without a signed certification will be deemed incomplete and may result in denial of the permit.

For a Part 70 Operating Permit (TVOP) or a Source Specific Operating Agreement (SSOA), a "responsible official" as defined in 326 IAC 2-7-1(34) must certify the air permit application. For all other applicants, this person is an "authorized individual" as defined in 326 IAC 2-1.1-1(1).

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate, and complete.

Scott Magee  
Name (typed)

  
Signature

Operations Manager  
Title

9/7/2010  
Date

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

**PETITION FOR INTERIM MINOR PERMIT REVISION and SIGNIFICANT  
SOURCE MODIFICATION**

**Source Name: Dover Chemical Company – Hammond Works**

**Source Address: 3000 Sheffield Avenue, Hammond, IN 46327**

**Mailing Address: Same as above**

**SIC/NAICS Code: 2899/325998**

**Description of Equipment:**

Dover Chemical Company, Hammond Works (Dover) is proposing to make several changes to the operations at the facility in Hammond, Indiana. These changes will require modifications to their current Title V Permit. The proposed changes include:

1. The removal of currently permitted equipment and deletion of the equipment from the permit.
2. The addition of a new storage tank and a new sulfurization reactor.
3. The manufacture of products which are currently manufactured at Dover's Ohio facility and which have not been manufactured at the Hammond Works. The products will be manufactured with existing equipment after all local ap0provals are granted.
4. The modification of the Hi-Temp process to accommodate a modification in the formulation of the primary PIBSA product, the addition of equipment and the modification of existing equipment. These changes will increase the potential annual production of the PIBSA product by reducing the total time per batch resulting in an increase in the emissions of VOC per batch.

In addition to these changes, Dover has identified some equipment descriptions in the current permit which require clarification.

**EQUIPMENT REMOVAL**

Dover will be removing two storage tanks and one reactor and is requesting that these pieces of equipment be removed from the permit. These are:

D.6 Miscellaneous system

(w) Delete reactor TR-2228

## D.7 VOC Storage Tanks

Delete (52) - Storage Tank TS-2279

Delete (53) - Storage Tank TS-2080

### NEW PRODUCTS

In an effort to improve efficiency and better utilize equipment, Dover is proposing to move several product lines from their facility in Dover, Ohio to the Hammond, IN facility. These products will be manufactured in existing equipment and will utilize reactor time that is currently not being utilized. Production of these products will not begin until Dover receives approval from the City of Hammond to store the new raw materials and products at the Hammond plant. Therefore, production of these products is not expected to begin for several months.

The new products are:

1. Doverlube PE80 – To be manufactured in Hi-Temp reactor TR-2620
2. Doverlube NCEP – Which is a fuel additives product but will be manufactured in Chlorination Reactor TR-2010 so that it can be vented to a caustic scrubber
3. Milidin GX-3 – To be manufactured in the Miscellaneous process reactors TR-2224 and TR-2322.
4. Doverlube B902 – To be manufactured in the Miscellaneous process reactors TR-2224 and TR-2322.

As is typical with products manufactured at Dover, there are no published emissions factors for any of these products. As a result, Dover estimates potential emissions from these products by using engineering calculations to predict the emissions displacement emissions from charging the reactor and the emissions release per hour at the different temperatures for the different steps in the process. The hourly emissions factors are multiplied by the hours per batch at each temperature and added to the initial charging displacement emissions calculation to calculate the total emissions per batch. The PTE for VOC is then calculated by dividing 8760 hours per year by the total batch time to calculate the maximum number of batches per year and then multiplying by the batch emissions factor.

Milidin GX-3 has the potential to release formaldehyde which is a HAP. Emissions testing were conducted on March 24 and 25, 2010 on the equipment at Dover's Ohio facility. The emissions were sampled after the control device and represent controlled emissions. In order to estimate the uncontrolled emissions, the worst case conditions were assumed. The worst case for uncontrolled emissions represents an assumption of the highest control efficiency. Therefore, for purposes of estimating PTE, a scrubber control efficiency of 99 percent was assumed. The HAP PTE for controlled emissions of 0.001 TPY is divided by 0.01 to produce an uncontrolled PTE of 0.09 TPY formaldehyde.

Note that the Milidin GX-3 and Doverlube B902 will be manufactured in the same reactors. As a result, when calculating the increase in potential emissions from the

products, the total PTE is not the sum of the PTE from both products, but the worst case of the two. The Doverlube B902 has higher PTE for VOC and the Milidin GX-3 has higher PTE of HAP. The other two Doverlube products have minimal VOC. Therefore, the total PTE from these new products is 11.26 TPY of VOC and 0.09 TPY of HAP (formaldehyde).

### **PIBSA PROCESS EQUIPMENT MODIFICATIONS AND FORMULATION CHANGE**

Dover currently manufactures PIBSA products in the Hi-Temp Process equipment. Dover is proposing to modify existing process equipment and to add equipment to the process to provide improved process control, product quality control, and to increase production through a reduction in the total time required per batch. Once all of these equipment modifications are in place the total batch time will be reduced from 25 hours to 13 hours per batch. This will result in a potential increase in production from approximately 6 million pounds per year to approximately 11.6 million pounds per year. In addition to the equipment changes, a new product formulation will be used. This new formulation includes a raw material containing higher VOC content and portions of the process will occur at higher temperatures. As a result, the VOC emissions per batch will increase. However, the modification to the reactor is predicted to result in lower emissions of HAP, maleic anhydride. The proposed PIBSA process changes are as follows:

#### **Addition of PIB heat up tank – TP-2542**

Currently the heating of the Polyisobutylene (PIB) takes place in the initial reactor TR-2630. A new heat up tank, TP-2542 with a capacity of 5,000 gallons, equipped with a hot oil type heat exchanger will be constructed. This will add one transfer of material per batch and will reduce the total time per batch by approximately six hours. The second transfer of the material, from the heat up tank to the reactor will occur at higher temperature. The current emissions per batch for transfer of PIB to the reactor are 0.063 pounds per batch. With the installation of the heat up tank these emissions will increase to 6.355 pounds per batch.

#### **Replacement of Reactor TR-2630 Overhead System**

The overhead system is an integral part of the reactor and is utilized to remove un-reacted raw materials from the product in order to meet product quality specifications. The existing overhead system is a vacuum strip system. It will be replaced with a multi-stage steam eductor and condenser system. Both the existing system and the proposed system are followed by a carbon drum for odor control. No change in the emissions of Voc per batch are expected to result from this change. However, reaction simulation models predict that there will be a reduction in the emissions of maleic anhydride. Emissions of the maleic anhydride from the current reactor system are estimated using emissions factors developed from stack testing in November 2009.

### **Maleic Acid Neutralization Tanks TP-2538 and TP-2539**

Currently the waste stream from the reactor 2630 overhead system is drummed and sent offsite for disposal. The replacement of the overhead system with the new system will now produce a wastewater containing maleic acid. The maleic anhydride removed from the reactor by the overhead system reacts with the water in the condensers to form maleic acid. This wastewater will be transferred to two neutralization tanks, TP-2538 and TP-2539, each with a capacity of 12, 500 gallons. Caustic will be added to these tanks to neutralize the acid and the wastewater will be discharged to the onsite wastewater treatment plant. Both of these tanks are existing, inactive and unpermitted tanks. There are no VOC or HAP emissions from these tanks.

### **Reactor TR-2630 Overhead system Overflow Tank TP-2760**

In the event that there is a malfunction in the overhead system and the condensate is not diverted to the neutralization tanks and exits the system through the carbon drum, an overflow tank will be utilized to prevent the release of the liquid through the stack. Existing, inactive tank TP-2760, with a capacity of 1,300 gallons, will be re-permitted for this purpose. The liquid captured by this tank will be the same as that in the neutralization tanks and will not generate VOC or HAP emissions.

### **Utilization of Reactor TR-2016**

Currently both steps of the PIBSA reaction process occur in Reactor TR-2630. Reactor 2016, which is currently listed in the permit as a chlorination reactor, will be utilized for the second reactor step. This reactor will be deleted from the chlorination sections (Section D.2 (b) (2) of the permit and added to the Hi-Temp sections of the permit (Section D.4 (l)). reactor TR-2016 will also be fitted with an air cooled heat exchanger. The use of Reactor TR-2016 will reduce the overall time per PIBSA batch.

### **Installation of Filter Flush Tank TP-2726**

The filters for the PIBSA process need to be flushed periodically for cleaning. Currently the flush material is stored in totes. A new tank, TP-2726 with a capacity of 1,300 gallons will be installed. The emissions from this tank are included in the PIBSA SNO calculations spreadsheet.

### **Installation of Additional Filtrate Tanks TP-2732**

A second filtrate tank will be added to the filter line for the PIBSA process. This tank, TP-2732 will have a capacity of 5,000 gallons. The additional emissions from this tank are included in the PIBSA process emissions calculations.

### **Emissions Calculations from the PIBSA Modifications**

The emissions increase associated with the installation and modifications to the PIBSA productions equipment as discussed above are the result of the shortened batch time, additional material transfers, and transfer of material at higher temperatures. In addition, there will be a change in the raw materials used in the process. The current product is PIBSA x-12888. The new product formula is referred to as PIBSA SNO. The emissions of VOC per batch with the new formula are higher. The PTE from the proposed changes are 11.27 TPY VOC and 0.09 TPY HAP. The total PTE from the modified process and formula is compared to the actual emissions from the PIBSA process for 2008 and 2009. The PIBSA baseline emissions, the average of the 2-year period of 2008 and 2009 are 1.5 TPY VOC and 0.023 TPY of HAP. Therefore, the PTE after the modifications are compared to the actual baseline emissions and result in an increase of 9.77 TPY of VOC and a decrease of 0.14 TPY of HAP.

### **NEW TANKS**

Several new tanks will be added to store raw materials and products.

#### **Polyamine Storage Tank TS-2391**

Dover is proposing to reactivate and re-permit an existing tank for the storage of one of the PIBSA raw materials, polyamines. This tank, TS-2391 has a capacity of 7,950 gallons. Emissions were calculated using the TANKS program and are estimated to be 0.04 TPY VOC.

#### **Overflow Tank TP-2537**

Dover will be reactivating and re-permitting an existing tank to act as overflow containment for the new PIB heat up tank. This tank, TP-2537 will only be used in case of a malfunction and overflow during filling of new tank TP-2542. However, as instructed by IDEM, potential emissions, which have been calculated using the TANKS program, assumed potential use during charging of each batch of PIB and are calculated assuming the maximum potential batches, 674 per year. Potential emissions are estimated as 0.004 TPY VOC.

#### **Storage Tank TS-2607**

Dover is proposing to install one additional storage tank, TS-2607. This tank will have a capacity of 30,000 gallons. Emissions were calculated using the TANKS program and are estimated at 0.02 TPY VOC.

### **NEW SULFURIZATION REACTOR TR-2128**

The existing reactors utilized by the sulfurization process were installed prior to 1976 and are nearing the end of their useful life. A new reactor, TR-2128, with a capacity of 7,500 gallons will be installed to reduce the production load on the existing reactors. Eventually at least one of the existing reactors will be shutdown. This new reactor will

be equipped with an integral quench tank, TP-2128B which will store 1,200 gallons of an olefin or heavy oil. The quench tank is utilized to quench runaway reactions in the reactor, and is necessary for safe reactor operation. The olefin or oils stored in the quench tank do not release VOC.

Production from the sulfurization process is currently limited by permit conditions D.3.2 which limits the amount of sulfur used by the process and condition D.3.3 which limits the amount of sulfurized product produced. Dover is not requesting any changes to these conditions. Therefore there will be no increase in the actual or potential emissions from the installation of this new reactor or quench tank after the permit is modified

### **EQUIPMENT DESCRIPTIONS CHANGES**

A review of the current permit language has identified several emissions source descriptions that require clarification or which were not accurately depicted in the current permit. These are discussed below:

#### **Chlorination**

Section D.2 (b) (9)

The replacement chlorine vaporizer has not yet been installed. The permit language should be modified to remove the phrase "installed in 2008".

#### **Sulfurization**

Section D.3 (e) (1)

There is one reflux condenser listing in this permit condition. There are actually two existing reflux condensers, on reactor TR-2120, listed in the permit and on reactor TR02121, which is not listed in the permit. A third reflux condenser will be installed with the new reactor TR-2128. All of these condensers are integral to the reactors, in other words the reactors cannot operate without them. Therefore, there are no additional emissions associated with these condensers. The language of the permit conditions should be modified to add the additional condensers or to remove the listed condenser for consistency.

There are currently two reactor quench tanks TP-2121A and TP-2121B, serving the sulfurization process. Neither of these existing tanks is listed in the permit. These tanks hold non-volatile olefins and oils. As discussed above, tank TP-2121B will be replaced with a larger 1,200 gallon tank with the same number. Both of these quench tanks should be added to the equipment description for the reactors.

### **Hi-Temp**

With the addition of the new equipment for the PIBSA process, it was determined that the descriptions for the existing equipment should be re-organized to combine equipment controlled by the same control devices and to list all of the equipment in a more logical order.

### **Fuel Additives**

The description of the fuel additives process equipment contained in Section A of the permit duplicates one set of equipment. (v) and (w) are identical and duplicate. This duplication does not occur in sections D and E where the equipment descriptions are also listed.

### **POTENTIAL TO EMIT**

The facility is currently a major source of criteria pollutants and a minor source of HAP.

The result of all of the proposed changes is a potential increase in emissions (PTE) of VOC, and H<sub>2</sub>S and HAPs. The production of the new products in existing equipment results in an increase in potential emissions of VOC and HAP. The new tanks result in a increase in emissions of VOC. The new sulfurization reactor does not result in an increase in PTE as the sulfurization process already had permit limits on raw material sulfur used and sulfurized products produced limiting potential emissions from the process. The changes in production equipment and the formulation of the PIBSA product result in a potential increase in emissions (PTE) of VOC and HAP from PIBSA manufacturing. Table 1 below show the total emissions changes from all of these changes to be 33.09 TPY VOC, 0.18 TPY HAP and 1480.4 TPY H<sub>2</sub>S (uncontrolled). The H<sub>2</sub>S emissions are controlled by caustic scrubbers with 99% removal efficiency for controlled emissions of 1.48 TPY.

**Table 1 PTE**

<b>Total Project PTE</b>					
<b>New Products</b>			<b>PTE VOC (TPY)</b>	<b>PTE HAP (TPY)</b>	<b>PTE H<sub>2</sub>S. (TPY)</b>
	Doverlube PE80		0.43	0	0
	Doverlube NCEP		0.02	0	0
	Milidin GX-3	Made in same reactors as B902	9.56	0.09	0
	Doverlube B902	Made is same reactors as GX-3	10.81	0	0
	<b>Total</b>		<b>11.26</b>	<b>0.09</b>	<b>0</b>
<b>Tanks</b>					
	TS-2391		0.04	0	0
	TP-2607		0.02	0	0
	TP-2542	Included with PIBSA Process PTE			
	TP-2726	Included with PIBSA Process PTE			
	TP-2537		0.004	0	0
	TP-2538	No VOC or HAP	0	0	0
	TP-2539	No VOC or HAP	0	0	0
	TP-2760	No VOC or HAP	0	0	0
<b>Sulfurization Reactor TR-2128</b>					
	TR-2128		10.5		1480.4
<b>PIBSA Modification</b>					
	PIBSA-SNO	New production and batch time	11.27	0.09	0
<b>Increased PTE</b>			<b>33.09</b>	<b>0.18</b>	<b>1480.4</b>
			<b>TPY VOC</b>	<b>TPY HAP</b>	<b>TPY H<sub>2</sub>S.</b>

Note that Doverlube B902 and Milidin GX-3 cannot both be made at 8760 as they use the same reactors. Therefore the PTE calculations use the worst case of the PTE from B902 for VOC and the GX-3 for the HAP, not the total of the two.

## **PSD REQUIREMENTS**

The emissions from the sulfurization process are currently limited by Condition D.3.2 which limits the amount of sulfur used by the process and requires the use of a caustic scrubber to H<sub>2</sub>S control emissions by 99.9% This condition limits the actual emissions of H<sub>2</sub>S to less than ten tons per twelve month period and renders the requirements of PSD not applicable.

The emissions of VOC from the proposed new and modified equipment and processes are less than 40 TPY without controls or limits on production rendering PSD not applicable for VOC. There are no other criteria pollutants associated with the proposed changes.

## **NSPS REQUIREMENTS**

Proposed new storage tank TS-2607 will be subject to 326 IAC 12 and 40 CFR Part 60.11B, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels and will become subject to the requirements of Existing Condition D.7.1

## **NESHAP REQUIREMENTS**

The emissions of HAP from the proposed changes do not trigger any NESHAP requirements. Existing Permit Condition E.1.1 restricts the PTE of single HAP and combined HAP emissions below 10 and 25 tons per year respectively rendering NESHAP 40 CFR Part 63, Subpart NNNNN and Subpart A not applicable.

## **STATE RULES AND REQUIREMENTS:**

The following state rules are currently applicable to the entire source:

**326 IAC 2-2 Prevention of Significant Deterioration (PSD).** The proposed changes do not trigger PSD as discussed above.

**326 IAC 2-3 Emissions Offset.** The proposed changes do not trigger Offset requirements.

**326 IAC 2-6 Emission Reporting**

**326 IAC 5-1 Opacity Limitations**

**326 IAC 6-4 Fugitive Dust Emissions**

**326 IAC 6.8-10-1 Lake County: Fugitive Particulate Matter**

**326 IAC 8-7 Specific VOC Reduction Requirements for Lake County**

The following state rules are currently applicable to specified emission units at the source

**326 IAC 5-1-3 Opacity Limitations : Temporary alternative Opacity Limitations**  
(Boiler B-4, B0-5 and B-6 only)

**326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating**  
(Boiler B-6 only)

**326 IAC 6.8 Particulate Matter Limitations for Lake County** (TR-2620,TR-2630,  
TR-2224, TR-2225, TR-2226, TR-2227. Tr-2228, Tr-2229, Tr-2329, TR-2322)

**326 IAC 6.8-2 Lake County PM10 Emission Requirements** (Boilers B-3, B-4 and B-5,  
chlorination process and Sulfurization process)

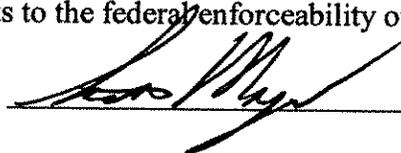
**326 IAC 8-9 Volatile Organic Liquid Storage Vessels** (TS-1004, TS-1005, TS-  
1006, TS-1007, TS-1008, TS-1009, TS-1010,  
TS-1011, TS-1012, TS-1013, TS-1014, TS-1016, TS-1017, TS-1018, TS-1026, TP-1033,  
TS-1039, TS-1040, TS-1042, TS-1043, TS-1056, TS-1057, TS-1081, TS-1082, TS-2160,  
TS-2163, TS-2168, TS-2169, TS-2170, TS-2209, TS-2218, TS-2252, TS-2253, TS-2255,  
TS-2264, TS-2265, TS-2271, TS-2272, TS-2275, TS-2276, TS-2277, TS-2605, TS-2611,  
TS-2612, TS-2618, TS-2619, TP-2550, TP-2551, TP-2617)

The current permit contains conditions as necessary to assure compliance with all of the applicable regulations. The conditions contained in the current Title V permit will be applicable to the proposed new and modified equipment and processes upon permit issuance. No additional conditions are required to assure compliance with all applicable state rules and requirements.

### **Federal Enforceability**

The company consents to the federal enforceability of this interim petition.

Signature:



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Printed Name: Scott Magee

Title or Position: Operations Manager

Phone Number: (219) 852-4810

Date: August 31, 2010

**Indiana Department of Environmental Management  
Office of Air Quality**

<b>Interim Petition Checklist</b>	
<b>Instructions:</b> (a) Please answer yes or no.	
(b) Enclosed this checklist with the completed interim petition package.	
<b>Company Name:</b> Dover Chemical Company - Hammond Works	
<b>Location:</b>	
yes	1. Is the written interim petition prepared?
yes	2. Is the written petition signed and dated?
yes	3. Is the public notice drafted?
yes	4. Is the filing and review fee enclosed? \$625 for TV, FESOP, and SSOA. \$500 for MSOP.
yes	5. Is the account number written on the check or money order?
yes	6. Is the Affidavit of Construction signed, dated, and notarized?
yes	7. Is the proposed modification/revision described in detail?
yes	8. Is the proposed modification/revision a modification or addition to an existing source?
no	9. Is the proposed modification/revision located in an attainment area for all the criteria pollutants?
yes	10. Is the proposed modification/revision located in a nonattainment area? If yes, answer No. 11.
no	11. Is the pollutant, which the nonattainment designation is based on, going to be emitted in this proposed modification/revision?
yes	12. Are potential emissions calculated?
yes	13. Is federal enforceability consent specifically indicated?
yes	14. Are specific conditions, limitations, and/or restrictions included that preclude applicability of PSD?
no	15. Are specific conditions, limitations, and/or restrictions included that preclude applicability of NSPS?
yes	16. Are specific conditions, limitations, and/or restrictions included that preclude applicability of NESHAP?
yes	17. Are specific conditions, limitations, and/or restrictions included that assure compliance with all applicable state air pollution rules?
yes	18. Has a regular modification/revision permit application been submitted to OAQ?
no	19. Has the proposed modification/revision commenced prior to the submission of the interim permit petition?
yes	20. The interim petition comment period has been decided to be: <b>14 calendar days</b>
<b>Additional Comments:</b>	

**NOTICE OF 14-DAY PERIOD  
FOR PUBLIC COMMENT**

Proposed Approval of Interim Minor Permit Revision/Significant Source Modification  
for  
**Dover Chemical Company – Hammond Works  
in Lake County**

Notice is hereby given that the above company located at 3000 Sheffield Avenue, Hammond, Indiana 46327, has made application to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for an interim permit to construct and/or modify equipment including: one 5,000 gallon PIB heat up tank, the modification of the overhead system for reactor TR-2630, the addition of two 12,500 gallon acid neutralization tanks, the reactivation of an existing 1,300 gallon tank for process containment, the installation of one 1,300 gallon filter flush tank and one 5,000 gallon filtrate tank. One existing 7,950 gallon tank will be reactivated for the storage of polyamines and another existing 2,000 gallon tank will be reactivated to serve as containment for the new PIB heat up tank. One new 30,000 gallon storage tank will be installed. These changes will allow Dover to increase the production of PIBSA products. Dover will also construct one 7,500 gallon reactor to be used by the sulfurization process. The raw material usage and production capacity for the sulfurization process are currently limited. Dover is not seeking to increase the production of these products and will not increase emissions from this process by the installation of the new reactor. Dover is also seeking to manufacture four new products at the facility. However, no additional equipment will be installed for this change. Dover will be removing one reactor and two storage tanks. The emissions from the proposed sulfurization reactor will be controlled by existing caustic scrubbers. The emissions from the sulfurization process are currently restricted by limitations on production. These limits will not change. Based upon 8,760 hours per year of operation, the VOC, HAP and H<sub>2</sub>S emissions are 33.09, 0.18 and 1.48 tons per year, respectively after controls.

The company has submitted an application for a minor permit revision/significant source modification. The OAQ shall review the application in accordance with the Permit Review Rules. Operation of the source cannot commence until a valid operating permit is issued. The construction of the proposed project is entirely at the applicant's risk .

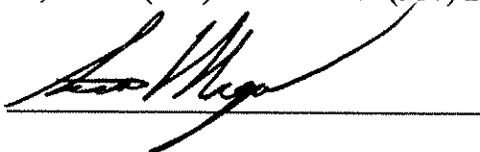
Notice is hereby given that there will be a period of 14 days from the date of publication of this notice during which any interested person may comment on why this interim permit should or should not be issued. Appropriate comments should be related to air quality issues, interpretation of the applicable state and federal rules, calculations made, technical issues, or the effect that the operation of this facility would have on any

aggrieved individuals. A copy of the application and staff review is available for examination at the **Hammond Public Library, 564 State Street, Hammond, Indiana, 46327-1532**. All comments, along with supporting documentation, should be submitted in writing to the IDEM, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251.

Persons not wishing to comment at this time, but wishing to receive notice of future proceedings conducted related to this action, must submit a written request to the Office of Air Quality (OAQ), at the above address. All interested parties of record will receive a notice of the decision on this matter and will then have 15 days after receipt of the Notice of Decision to file a petition for administrative review. Procedures for filing such a petition will be enclosed with the Notice.

Questions should be directed to OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 or (317) 233-0178.

Company Official's Signature:



Company Official's Printed Name : Scott Magee

Company Name:

Dover Chemical Company – Hammond Works

**NOTICE OF 14-DAY PERIOD FOR PUBLIC COMMENT PRO**

**NOTICE OF 14-DAY PERIOD FOR PUBLIC COMMENT Proposed Approval of Interim Minor Permit Revision/Significant Source Modification for Dover Chemical Company - Hammond Works in Lake County** Notice is hereby given that the above company located at 3000 Sheffield Ave., Hammond, IN 46327, has made application to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for an interim permit to construct and/or modify equipment including: one 5,000 gallon PIB heat up tank, the modification of the overhead system for reactor TR-2630, the addition of two 12,500 gallon acid neutralization tanks, the reactivation of an existing 1,300 gallon tank for process containment, the installation of one 1,300 gallon filter flush tank and one 5,000 gallon filtrate tank. One existing 7,950 gallon tank will be reactivated for the storage of polyamines and another existing 2,000 gallon tank will be reactivated to serve as containment for the new PIB heat up tank. One new 30,000 gallon storage tank will be installed. These changes will allow Dover to increase the production of PIBSA products. Dover will also construct one 7,500 gallon reactor to be used by the sulfurization process. The raw material usage and production capacity for the sulfurization process are currently limited. Dover is not seeking to increase the production of these products and will not increase emissions from this process by the installation of the new reactor. Dover is also seeking to manufacture four new products at the facility. However, no additional equipment will be installed for this change. Dover will be removing one reactor and two storage tanks. The emissions from the proposed sulfurization reactor will be controlled by existing caustic scrubbers. The emissions from the sulfurization process are currently restricted by limitations on production. These limits will not change. Based upon 8,760 hours per year of operation, the VOC, HAP emissions and H<sub>2</sub>S emissions are 33.09, 0.18 and 1.48 tons per year, respectively after controls. The company has submitted an application for a minor permit revision/ significant source modification. The OAQ shall review the application in accordance with the Permit Review Rules. Operation of the source cannot commence until a valid operating permit is issued. The construction of the proposed project is entirely at the applicant's risk. Notice is hereby given that there will be a period of 14 days from the date of publication of this notice during which any interested person may comment on why this interim permit should or should not be issued. Appropriate comments should be related to air quality issues, interpretation of the applicable state and federal rules, calculations made, technical issues, or the effect that the operation of this facility would have on any aggrieved individuals. A copy of the application and staff review is available for examination at the Hammond Public Library, 564 State St., Hammond, IN 46327-1532. All comments, along with supporting documentation, should be submitted in writing to the IDEM, OAQ, 100 N. Senate Ave., MC 61-53, Room 1003, Indianapolis, IN 46204-2251. Persons not wishing to comment at this time, but wishing to receive notice of future proceedings conducted related to this action, must submit a written request to the Office of Air Quality (OAQ), at the above address. All interested parties of record will receive a notice of the decision on this matter and will then have 15 days after receipt of the Notice of Decision to file a petition for administrative review. Procedures for filing such a petition will be enclosed with the Notice. Questions should be directed to OAQ, 100 N. Senate Ave., MC 61-53, Room 1003, Indianapolis, IN 46204-2251, or call (800) 451-6027 or (317) 233-0178. Scott Magee, Dover Chemical Company- Hammond Works 9/4-24 -

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# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
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100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

## **SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED**

**TO:** Mark Renick  
Dover Chemical - Hammond Works  
3000 Sheffield Ave  
Hammond, IN 46327

**DATE:** September 30, 2010

**FROM:** Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

**SUBJECT:** Final Decision  
Interim  
089-29495I-00227

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:  
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at [jbrush@idem.IN.gov](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07

# Mail Code 61-53

IDEM Staff	CDENNY 9/30/2010 Dover Chemical - Hammond Works 089-294951-00227 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Mark Renick Dover Chemical - Hammond Works 3000 Sheffield Ave Hammond IN 46327 (Source CAATS)										
2		Scott Magee Ops Mgr Dover Chemical - Hammond Works 3000 Sheffield Ave Hammond IN 46327 (RO CAATS)										
3		Mr. Terrance Wagner 726 First Street Crete IL 60417 (Affected Party)										
4		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 (Local Official)										
5		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 (Affected Party)										
6		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 (Health Department)										
7		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 (Affected Party)										
8		Hammond City Council and Mayors Office 5925 Calumet Avenue Hammond IN 46320 (Local Official)										
9		Mr. Peter Engelbert 7542 New Hampshire Avenue Hammond IN 46323 (Affected Party)										
10		Dennis Jancosek 234 Oakwood Street Hammond IN 46324 (Affected Party)										
11		Mr. Wayne Sandefur 1231 177th Place Hammond IN 46324 (Affected Party)										
12		Mr. Bill Simmons 6326 Van Buren Avenue Hammond IN 46324 (Affected Party)										
13		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 (Affected Party)										
14		Ms. Dorothy Alabach 647 North 125 West Valparaiso IN 46385 (Affected Party)										
15		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 (Affected Party)										

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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1		Nancy 1947 Wespark Avenue Whiting IN 46394 (Affected Party)										
2		Mr. J. Rogina 2718 White Oak Avenue Whiting IN 46394 (Affected Party)										
3		D. Atteberry 2701 Achrage Whiting IN 46394 (Affected Party)										
4		Mr. Ed Dybel 2440 Schrage Avenue Whiting IN 46394 (Affected Party)										
5		Mr. Steve Zabroski PO Box 524 Whiting IN 46394 (Affected Party)										
6		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 (Affected Party)										
7		Mr. Robert Binder 7608 West 163 Street Tinley Park IL 60477 (Affected Party)										
8		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 (Affected Party)										
9		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 (Affected Party)										
10		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 (Affected Party)										
11		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 (Local Official)										
12		Ms. Christa O. Russell Schreiber Yonley and Assoc. 5829 Haverford Avenue Indianapolis IN 46220 (Consultant)										
13		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 (Affected Party)										
14		Barbara G. Perez 506 Lilac Street East Chicago IN 46312 (Affected Party)										
15		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 (Affected Party)										

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											Remarks
1		Karen 8212 Madison Ave Munster IN 46321-1627 (Affected Party)									
2		Calumet Township Trustee 31 E 5th Avenue Gary IN 46402 (Affected Party)									
3		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)									
4		Gary City Council 401 Broadway # 209 Gary IN 46402 (Local Official)									
5		Ron Novak Hammond Dept. of Environmental Management 5925 Calumnet Ave. Hammond IN 46320 (Local Official)									
6		Mr. Larry Davis 268 South, 600 West Hebron IN 46341 (Affected Party)									
7		Gitte Laasby Post Tribune 1433 E. 83rd Ave Merrillville IN 46410 (Affected Party)									
8		Susan Severtson City of Gary Law Dept. 401 Broadway 4th Floor Gary IN 46402 (Local Official)									
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