



Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

August 6, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Dover Chemical Corporation- Hammond Works / 089-18855-00227

FROM: Paul Dubenetzky
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 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, 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 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) 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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

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{ TIME \@ "MMMM d, yyyy" }

Jack Hamner
Environmental Manager
Dover Chemical Corporation - Hammond Works
3000 Sheffield Avenue
Hammond, IN 46327

Re: 089-18855-00227
Significant Permit Modification to:
Part 70 permit No.: T089-7797-00227

Dear Mr. Hamner:

Dover Chemical Corporation was issued Part 70 operating permit T089-7797-00227 on March 19 2004, for the chemical manufacturing operation. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document:

The modification consists of enforceable limits of volatile organic compounds (VOC) and hydrogen sulfide (H₂S) emissions to less than 10 tons per year each by limiting the production of sulfurization products together with operation of H₂S scrubber for H₂S control at 99.9 percent efficiency. This also involves construction and operation of new reflux condenser on sulfurization reactor TR-2120.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter please contact Dr. Trip Sinha, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, extension 3-3031, or dial (317-233-3031).

Sincerely,
Original signed by

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

TPS

cc: File - Lake County
Lake County Health Department
U.S. EPA, Region V
Hammond Department of Environmental Management
Northwest Regional Office
Compliance Data Section
Administrative and Development



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100 North Senate Avenue
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Indianapolis, Indiana 46206-
6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

Technical Support and Modeling



Joseph E. Kernan
 Governor

Lori F. Kaplan
 Commissioner

100 North Senate Avenue
 P.O. Box 6015
 Indianapolis, Indiana 46206-6015
 (317) 232-8603
 (800) 451-6027
 www.in.gov/idem

**PART 70 OPERATING PERMIT
 OFFICE OF AIR QUALITY
 and
 HAMMOND DEPARTMENT
 of ENVIRONMENTAL MANAGEMENT**

**Dover Chemical Corporation– Hammond Works
 3000 Sheffield Avenue
 Hammond, IN 46327**

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 089-7797-00227	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: 03-19-2004 Expiration Date: 03-18-2009
1st. Significant Permit Modification No.: 089-18855-00227 Additional and 57(a)	Pages affected 1, 3, 4, 7, 41, Pages 1(a), 7(a), 41(a), 41(b), 41(c),
Issued by: Original signed by	Issuance Date: { TIME \@ "MMMM d, yyyy" }

Paul Dubenetzky, Branch Chief Office of Air Quality	
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DRAFT

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

- C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
- C.12 Monitoring Methods [326 IAC 3] [40 CFR 60][40 CFR 63]
- C.13 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

- C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
- C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]
- C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]
- C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]
- C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
- C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

- C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

MACT Application Submittal Requirement

- C.22 Application Requirements for Section 112(j) of the Clean Air Act [40 CFR 63.52(e)] [40 CFR 63.56(a)] [40 CFR 63.9(b)] [326 IAC 2-7-12]

D.1 FACILITY OPERATION CONDITIONS - 12.55, 20.92 and 20 MMBtu Natural Gas Fired Boilers

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.1.1 Particulate Matter Limitation (PM) [326 IAC 6-1-10.1] [326 IAC 6-2-4]

D.2 FACILITY OPERATION CONDITIONS - Chlorination Process

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.2.1 Lake County PM₁₀ Emission Requirements [326 IAC 6-1-10.1] [326 IAC 6-1-5]
- D.2.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]
- D.2.3 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]
- D.2.4 National Emissions Standards for Hazardous Air Pollutants for Hydrochloric Acid Manufacturing [40 CFR Part 63, Subpart NNNNN]

Record Keeping and Reporting Section:

- D.2.5 National Emissions Standards for Hazardous Air Pollutants for Hydrochloric Acid Manufacturing - Notification Requirements [40 CFR 63, Subpart NNNNN]
- D.2.6 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12][326 IAC 2-7-5]

D.3 FACILITY OPERATION CONDITIONS - Sulfurization Process

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.3.1 Lake County PM₁₀ Emission Requirements [326 IAC 6-1-10.1] [326 IAC 6-1-5]
- D.3.2 PSD Minor Limit and Emission Offset Minor Limit [326 IAC 2-2] [326 IAC 2-3]
- D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]
- Testing and Monitoring Requirement [326 IAC 2-7-6 (1)] [326 IAC 2-7-5 (1)]**

Requirements

- D.3.4 Scrubber Operation Requirement [326 IAC 2-7-10.5]
- D.3.5 Hydrogen Sulfide (H₂S) [326 IAC 2-7-10.5]
- D.3.6 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

Monitoring Requirements

- D.3.7 Parametric Monitoring

Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.3.8 Record Keeping Requirements
- D.3.9 Reporting Requirements

D.4 FACILITY OPERATION CONDITIONS - Hi-Temp Process

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.4.1 Particulate Emissions Limitations, Work Practices and Control Technologies-
Manufacturing Processes [326 IAC 6-3-2]

D.5 FACILITY OPERATION CONDITIONS - Fuel Additive Process

D.6 FACILITY OPERATION CONDITIONS - Miscellaneous Process

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.6.1 Particulate Emissions Limitations, Work Practices and Control Technologies-
Manufacturing Processes [326 IAC 6-3-2]

**D.7 FACILITY OPERATION CONDITIONS - Specifically Regulated Insignificant Activities
[326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] VOC Storage Tanks**

Emission Limitations and Standards [326 IAC 2-7-5(1)]

- D.7.1 Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60, Part Kb]
- D.7.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.7.3 Record Keeping Requirements

**D.8 FACILITY OPERATION CONDITIONS - Specifically Regulated Insignificant Activities
[326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] 10 MMBtu/hr Boiler**

- D.8.1 Emission Limitations and Standards [326 IAC 2-7-5(1)]

Certification

Emergency Occurrence Report

Monthly Record

Quarterly Deviation and Compliance Monitoring Report

Part 70 Quarterly Sulfur Usage Report

Part 70 Quarterly Sulfurization Products Report

- (2) One (1) chlorinated product-drumming tank, identified as TS-2012, constructed in 1978, and with a maximum capacity of 1,500 gallons.

SECTION D.3 Sulfurization system

with a maximum rated capacity of 6,000 pounds per hour of sulfurized products consisting of the following equipment:

- (e) The system consisting of
 - (1) Three (3) Sulfurization reactors, identified as TR-2120, 2121, and 2123, constructed before 1976, with maximum capacity of 3,700, 3,700, and 7,500 gallons, respectively, controlled by two (2) caustic scrubbers, identified as TP-2162 and TP-2163 and exhausting at Stack TP-2163.
 - (2) Five (5) blowing tanks, identified as TP-2150 (constructed in 1977), 2151 (constructed in 1977), 2152 (constructed in 1977), 2153 (constructed in 1977); and 2154 (constructed in 1997), with maximum capacity of 11,000, 9,650, 11,500, 4,000, and 7,600 gallons, respectively, venting to a blowing tank knockout tank identified as TP-2159; controlled by two (2) caustic scrubbers, identified as TP-2162 and TP-2163 and exhausting at Stack TP-2163.
 - (3) One (1) knockout storage tank, identified as TP-2164, constructed in 1976, with a maximum capacity of 1,500 gallons, exhausted to a caustic slop tank, identified as TP-2167, constructed in 1995, and exhausting at Stack TP-2167.
 - (4) One (1) scrubber liquor storage tank, identified as TS-1029, constructed in 1979, and with a maximum capacity of 15,880 gallons.
 - (5) One (1) reflux condenser associated with sulfurization reactor TR-2120.

SECTION D.4 Hi-Temp System

with a maximum rated capacity of 4,200 pounds per hour of hi-temp products consisting of the following equipment:

- (f) The system consisting of
 - (1) Two (2) reactors, identified as TR-2320 and TR-2630, constructed in 1989, and 1990, respectively, and with a maximum capacity of 4,000 gallons each;
 - (2) Two (2) recovered methanol tanks, identified as TS-2602 and TS-2603, constructed in 1989, and with maximum capacity of 2,500, and 4,000 gallons, respectively;
 - (3) One (1) sludge tank, identified as TP-2604, constructed in 1989, and with a maximum capacity of 750 gallons;
 - (4) One (1) scrubber liquor tank, identified as TS-2610, constructed in 2001, and with a maximum capacity of 10,000 gallons; and
 - (5) One (1) intermediate holding tank, identified as TP-2601, constructed in 1989, and

with a maximum capacity of 4,550 gallons;
controlled by two (2) caustic scrubbers identified as TP-2624 and TP-2626, constructed in

1989; and one flare, identified as GG-2627, constructed in 1990, in series, and exhausting at one (1) stack, identified as Stack GG-2627. Alternately, the reactors identified in item (f.1) can be controlled by one (1) scrubber identified as TP-2636, constructed in 1990; and exhausting at one (1) stack identified as

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

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

Sulfurization process- with a maximum rated capacity of 6,000 pounds per hour of sulfurized products consisting of the following equipment:

- (e) The system consisting of
 - (1) Three (3) Sulfurization reactors, identified as TR-2120, 2121, and 2123, constructed before 1976, with maximum capacity of 3,700, 3,700, and 7,500 gallons, respectively, controlled by two (2) caustic scrubbers, identified as TP-2162 and TP-2163 and exhausting at Stack TP-2163.
 - (2) Five (5) blowing tanks, identified as TP-2150 (constructed in 1977), 2151 (constructed in 1977), 2152 (constructed in 1977), 2153 (constructed in 1977); and 2154 (constructed in 1997), with maximum capacity of 11,000, 9,650, 11,500, 4,000, and 7,600 gallons, respectively, venting to a blowing tank knockout tank identified as TP-2159; controlled by two (2) caustic scrubbers, identified as TP-2162 and TP-2163 and exhausting at Stack TP-2163.
 - (3) One (1) knockout storage tank, identified as TP-2164, constructed in 1976, with a maximum capacity of 1,500 gallons, exhausted to a caustic slop tank, identified as TP-2167, constructed in 1995, and exhausting at Stack TP-2167.
 - (4) One (1) scrubber liquor storage tank, identified as TS-1029, constructed in 1979, and with a maximum capacity of 16,000 gallons.
 - (5) One (1) reflux condenser associated with sulfurization reactor TR-2120.

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Lake County PM₁₀ Emission Requirements [326 IAC 6-1-10.1.1] [326 IAC 6-1-5]

Pursuant to 326 IAC 6-1-10.1-20, the allowable PM₁₀ emission rate from the Sulfurization process shall not exceed 0.157 pounds per ton, and 0.23 pounds per hour. Pursuant to 326 IAC 6-1-5(d), the Sulfurization process shall comply with both limits.

D.3.2 PSD Minor Limit and Emission Offset Minor Limit [326 IAC 2-2] [326 IAC 2-3]

- (a) The amount of sulfur used by the sulfurization process shall be limited to less than 10,335 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit and the scrubber's H₂S control efficiency of 99.9 percent is required to limit the hydrogen sulfide (H₂S) emissions to less than 10 tons per twelve (12) consecutive month period. If the monitoring data is not available or indicates the scrubber is not achieving this control efficiency, the Permittee shall use a control efficiency of zero percent (0%). Compliance with this limit makes the rule 326 IAC 2-2 (Prevention of

Significant Deterioration (PSD)) not applicable.

- (b) The amount of sulfurized products produced by the sulfurization process shall be limited to less than 26,500 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit is required to limit the potential to emit of volatile organic compounds (VOC) emissions to less than 10 tons (Based on 0.000368 pounds of VOC per pound of finished sulfurization products) per twelve (12) consecutive month period. Compliance with this limit makes the rule 326 IAC 2-3 (Emission Offset) not applicable.

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Testing and Monitoring Requirement [326 IAC 2-7-6 (1)] [326 IAC 2-7-5 (1)]

Requirements

D.3.4 Scrubber Operation Requirements [326 IAC 2-7-10.5]

The Permittee shall operate the scrubber control system, at all times the sulfurization system is in operation.

D.3.5 Hydrogen Sulfide (H₂S) [326 IAC 2-7-10.5]

- (a) The sulfurization scrubber for H₂S controls shall be in operation and control H₂S emissions from the sulfurization process at all times the sulfurization process is in operation.
- (b) Caustic Scrubber - First Stage of Series: The caustic strength operations limit shall be no less than 1%. If a representative sample taken during any 8-hour shift shows a caustic percent reading of 1% or less, then the Permittee shall take one of the following steps:
 - (1) The caustic solution will be changed within 8 hours of test reading; or
 - (2) The process shall be shutdown and the caustic solution changed before the process is started up.
- (c) Caustic Scrubber - Second Stage of Series: The caustic strength at the second stage operations limit shall be no less than 10%.
- (d) The on-site Quality Control laboratory shall randomly test one of the 5-day split samples retained per week, unless the process is down for five consecutive days to verify the accuracy of operations data. Enough sample of the randomly tested sample shall also be retained so that an analysis can be run if so requested by the IDEM, OAQ or HDEM within 5 day holding period. Upon request of IDEM, OAQ or HDEM, a sample of the scrubber caustic solution shall be provided and/or the IDEM, OAQ or HDEM may witness a sample collection and test of the scrubber solution.

D.3.6 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

Within one hundred and eighty (180) days after initial startup, the Permittee shall conduct a performance test to verify H₂S control efficiency as per condition D.3.2 (a) and establish the caustic concentration (% by weight), hourly average operating temperature and minimum liquid circulation volume in the second stage sulfurization scrubber using methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

Monitoring Requirements

D.3.7 Parametric Monitoring

- (a) The Permittee shall calibrate, maintain, and operate a continuous monitoring system on the second stage sulfurization scrubber for measuring hourly average operating temperature. From the date of issuance of this permit until the approved stack test results are available the hourly average temperature of the scrubber shall not exceed 170^oF.
- (b)
 - (1) The Permittee shall monitor the concentration (% by weight) of caustic per shift and the scrubber liquid flow rate in second stage sulfurization scrubber once per hour. From the date of issuance of this permit until the approved stack test results are available the concentration (% by weight) of caustic and the scrubber liquid flow rate of the scrubber shall not be lower than 10% and 80 gallons per minute, respectively.
 - (2) The Permittee shall test the concentration (% by weight) of caustic in first stage sulfurization scrubber once per shift.
 - (3) Split samples taken from the second stage scrubber shall be maintained at the facility for the most current five day calendar period.
- (c) The Permittee shall monitor the volume and caustic concentration charged to the scrubbers during the recharge operations once per day.
- (d) Split samples taken from the second stage scrubber shall be maintained at the facility for the most current five day calendar period.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.8 Record Keeping Requirements

- (a) The Permittee shall maintain the following records in accordance with Section C - General Record Keeping Requirements, of this permit:
 - (1) The amount of sulfur used and sulfurization products manufactured for each month.
 - (2) The hourly average operating temperature of the second stage of the scrubber.
 - (3) Records of the per shift caustic concentration and per hour liquid flow rate in second stage of the scrubber.
 - (4) Per shift records of the caustic concentration in the first stage of the scrubber.
 - (5) Daily volume and caustic concentration charged to the scrubbers during recharge.
 - (6)
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.9 Reporting Requirements

- (a) The Permittee shall submit a quarterly report of data required by condition D.3.2 (a) and (b) within 30 days following the reporting period using the reporting forms located at the

end of this permit, or their equivalent;

- (b) The Permittee shall submit periodic reports to the addresses listed in Section C – General Reporting Requirements, of this permit. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Part 70 Quarterly Sulfur Usage Report**

Source Name: Dover Chemical CorporationB Hammond Works
Source Address: 3000 Sheffield Avenue, Hammond, IN 46320
Mailing Address: 3000 Sheffield Avenue, Hammond, IN 46320
Significant Source Modification No.: SSM 089-18109-00227
Facility: Sulfurization Process
Limit: 10,335 tons of sulfurs used per year

YEAR:

Month	Sulfur Used	Sulfur Used	Sulfur Used
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

{ FORMCHECKBOX } No deviation occurred in this quarter.

{ FORMCHECKBOX } Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Part 70 Quarterly Production Report**

Source Name: Dover Chemical CorporationB Hammond Works
Source Address: 3000 Sheffield Avenue, Hammond, IN 46320
Mailing Address: 3000 Sheffield Avenue, Hammond, IN 46320
Significant Source Modification No.: SSM 089-18109-00227
Facility: Sulfurization Process
Limit: 26,500 tons of sulfurization products per year

YEAR:

Month	Sulfurization Products	Sulfurization Products	Sulfurization Products
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

{ FORMCHECKBOX } No deviation occurred in this quarter.

{ FORMCHECKBOX } Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by:
Title / Position:
Signature:
Date:
Phone:

Attach a signed certification to complete this report.

Appendix A

Determination of Production Limit when Volatile Organic Compounds (VOC) and Hydrogen Sulfides (H₂S) Emissions are Limited to 10 Tons Per Year Each.

The top consideration was to run the process at high production rate. The target was to operate at 95% of the maximum capacity. This would mean that all three reactors were running and at least two blowing tanks were in operation. The diagnostic testing was done at about 93% of the capacity. A second objective was to run the process with a mixture of different products with two products being higher selling production volume materials. The third objective was to run at least two reactors with products expected to be high VOC emitting. The Hi -Tech 7084 and Base 401 batches are two of the top three highest emitting VOC batches based on our vapor pressure calculation model and these two products met the second and third objectives stated above.

It was expected that the most "vapor" would occur when material in the reactor was the hottest (i.e., exothermic stage). The exothermic generation of H₂S gas becomes the motive force to push the VOCs out of the reactor to the scrubber system. Therefore, test runs were started when the reactors approached peak temperature. In fact during our test, two reactors hit peak temperature during the test run. Because the exact VOC generation profile is not known for the process, a longer test period was used to record emissions (three two-hour test periods were used). Note: Blowing tank operations were running during the test periods.

Dover can not run the same product in all three reactors, because each reactor is set up with different controls and ancillary equipment. For examples, there is only one reactor that has equipment and controls to automatically quench i.e. Reactor 20. There is one reactor that has automatic cooling to control temperature of the higher reaction temperature products i.e. Reactor 21. As a general rule of thumb, if the Sulfur content is greater than 14 percent, the product is usually made in Reactor 21.

The total estimated pounds of VOC per day was divided by the total production for the day. This ratio was then multiplied by 8760 hrs to yield the emissions of slightly over 9 tons/yr. Hence a 10-ton limit for VOCs was proposed. The process does not run 8760 hours.

Scrubber efficiency - In an effort to be conservative, Dover did not claim any control efficiency for VOC from the scrubber system.

The production limit for the sulfurization process is calculated by recording the finished products and multiplying by the lb VOC per lb finished product ratio already determined from the stack test.

The ratio of 0.000368 lb VOC to 1 pound of finish product was determined from the tests.

The amount of finished products allowed = (10 tons per year) / (0.000368 lbs/ pounds of finished products)
= 27,173 tons per year

Dover Chemical will be limited to 27,000 tons of sulfurized products per 24 months period.

Hydrogen Sulfide Generation Calculation

$$\text{min lbs S in product} = (\text{lbs product}) (\text{min \%S product spec})$$

$$\text{max lbs S from blends} = (\%S \text{ input from blends}) (\text{min lbs S in product})$$
$$\frac{\text{-----}}{(\%S \text{ input} + \%S \text{ input from blends})}$$

$$\text{lbs molten S charged} = (\text{lbs product}) (\%S \text{ input}) (1 - \text{min \%S product spec})$$
$$\frac{\text{-----}}{(1 - \%S \text{ input})}$$

$$\text{lbs S unreacted} = (\text{lbs molten S charged} + \text{max lbs S from blends} - \text{min lbs S in product})$$

$$\text{lbs H}_2\text{S generated} = (\text{lbs S unreacted})(\text{MW H}_2\text{S} = 34.080) / (\text{MW S} = 32.064)$$

$$\text{lbs H}_2\text{S per lb product} = (\text{lbs H}_2\text{S generated}) / (\text{lbs product})$$

Sulfurization Estimated VOC Emissions Before/After Scrubber Modifications

Production Period	Sulfurized Product lbs./year	Weighted Average tons/per year VOC at scrubber inlet	Weighted Average tons/year VOC at scrubber outlet (pre-2003 scrubber)	VOC tons/year at scrubber outlet (2003 new scrubber system)	Diagnostic Stack Test Emission Factor
<i>December 1998 to July 2001</i> Production period used to establish weighted averages	24,100,000	12.4	3.0		
<i>Year 2001</i> Actual production	13,700,000	7.1	1.7		
<i>Year 2002</i> Actual production	19,700,000	10.2	2.4		
<i>September 2003 to August 2004</i> Projected production ⁽¹⁾	37,000,000			6.8	
<i>September 2004 to August 2005</i> Projected production ⁽¹⁾	36,300,000			6.7	
Notes		Pre-2003 Weighted average lbs. VOC generated per lb. product 0.00103	Pre-2003 Weighted average lbs VOC exhausted per lb product 0.00025	No specific scrubber efficiency is claimed for VOC emissions.	Stack Test 2004 lb VOC per lb product 0.000368

⁽¹⁾ Projected annual production figures for 2004 and 2005 reflect production increases due to the referenced modifications as well as forecast market conditions.

Sulfurization Estimated Emissions Old/New Scrubber System and Sulfur Usage

Production Period	Sulfurized Product lbs./year	Weighted Average tons/per year H₂S at scrubber inlet	Weighted Average tons/year H₂S at scrubber outlet (pre-2003 scrubber)	Emissions if all Base 401 tons/year H₂S at scrubber outlet (2003 scrubber)	Tons of Sulfur used in process to produce all Base 401
<i>December 1998 to July 2001</i> Production period used to establish weighted averages	24,100,000	254.5	5.1		
<i>Year 2001</i> Actual production	13,700,000	144.7	2.9		
<i>Year 2002</i> Actual production	19,700,000	208.1	4.2		
<i>September 2003 to August 2004</i> Projected production ⁽¹⁾	37,000,000	962 ⁽¹⁾		0.962	7215
<i>September 2004 to August 2005</i> Projected production ⁽¹⁾	36,300,000	943.8 ⁽¹⁾		0.943	7078.5
Notes		Sept '03 – Aug '05 Assumes all Base 401 @ 0.052 lbs. H ₂ S generated per lb. product.	Pre-2003 H ₂ S Scrubber efficiency 0.98	2003 Design H ₂ S scrubber efficiency 0.999	2003-2005 Base 401 is the highest sulfur content of any product for Sulfurization which is 39%

⁽¹⁾ Considers new scrubber system and projected annual production figures for Sept 2003 to Aug 2005 reflect production increases due to the proposed modifications as well as forecast market conditions. Assumes worse case product for H₂S emissions and highest sulfur content. Therefore, Base 401 is used to represent all production not weighted average of a product mix.

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Addendum to the Technical Support Document for a Part 70 Significant Source Modification (SSM) and Significant Permit Modification (SPM)

Source Name:	Dover Chemical Corporation- Hammond Works
Source Location:	3000 Sheffield Avenue, Hammond, IN 46320
County:	Lake
SIC Code:	2899
Operation Permit No.:	T089-7797-00227
Operation Permit Issuance Date:	03-19-04
Significant Source Modification No.:	SSM 089-18109-00227
Significant Permit Modification No.:	SPM 089-18855-00227
Permit Reviewer:	Dr. Trip Sinha

On April 24, 2004, the Office of Air Quality (OAQ) had a notice published in The Post tribune, Merrillville and The Times, Munster, Indiana, stating that Dover Chemical had applied for a Part 70 Operating Permit to modify, construct, and operate the sulfurization system with a maximum rated capacity of 6,000 pounds per hour of sulfurized products at its Hammond facility. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments were received on the proposed Part 70 permit from the public. On April 29, 2004, Dover Chemical submitted written comments on the proposed Part 70 permit. The summary of the comments and corresponding responses is as follows:

Note: The bolded language has been added and the language with a line through it has been deleted.

Comment 1: Virginia S. Mroz:

Mrs. Mroz wanted to know whether each type of volatile organic compounds (VOC) emission is limited to less than 10 tons per year or total emissions of all VOC species combined are 10 tons per year. There are fourteen schools where approximately 500 children go to two nearby schools. She is concerned that these VOC and hydrogen sulfide emissions into the air can effect children and adults in a harmful way.

Response 1: The combined VOC emissions of different types of VOC are limited to less than 10 tons per year, not ten tons of each kind of VOC. This is stated in operation condition no. D.3.2 (b).

Condition 3.2 (b)	The amount of sulfurized products produced by the sulfurization process shall be limited to less than 26,500 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit is required to limit the potential to
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emit of volatile organic compounds (VOC) emissions to less than 10 tons (Based on 0.000368 pounds of VOC per pound of finished sulfurization products) per twelve (12) consecutive month period. Compliance with this limit makes the rule 326 IAC 2-3 (Emission Offset) not applicable.

The permit does not allow any new processes or more air pollution from Dover Chemical. This permit requires the operation of a caustic scrubber to reduce emissions of total volatile organic compounds (VOC), and hydrogen sulfide (H₂S) to 10 tons, each. Dover Chemical already operates the scrubber. The permit requires that Dover Chemical monitor the scrubber and keep records of the monitoring requirements. In addition, Dover Chemical must report the emissions of VOC and H₂S quarterly to Indiana Department of Environmental Management and Hammond Department of Environmental Management. This record keeping and reporting requirements will ensure that Dover Chemical is not exceeding its emissions limits.

Dover Chemical

Comment 1: On page 5 of 7 Section D.3.7 (b) (1), It should say "The Permittee shall monitor the concentration (% by weight) of caustic once per shift and the scrubber flow rate in second stage sulfurization scrubber once per hour." The words "once per shift" were left out to monitor the caustic concentration.

On D.3.8 (a) (3) It should read " per shift records of the caustic concentration and liquid flow rate in second stage scrubber once per hour." The "once per hour" was left out.

There are other sections that reference the same record keeping or operation conditions that use the same language so these sections would need to be changed also.

Response 1: The changes have been made accordingly.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

1. In order to make the heading in Table of Contents consistent with the section D.3.2, the following change has been made:

D.3.2 ~~Emission Offset~~ **PSD Minor Limit** and **Emission Offset** ~~PSD Minor Limit~~ [326 IAC 2-23]
[326 IAC 2-23]

2. In second paragraph of section D.3.2, the typo has been corrected.

D.3.2 (a)This usage limit **and the** scrubber's efficiency.....

3. In section D.3.4 title, the citation [326 IAC 2-7-10.5] has been added.

4. In section D.3.5 (b) the word Dover has been changed to The Permittee.

.....~~Dover~~ **the Permittee** shall take

5. In section D.3.5 (d), the first sentence has been corrected.

The on-site Quality Control laboratory shall randomly test one of the 5-day split samples retained per week, unless the process is down for five consecutive days to verify the accuracy of operations data.

6. In section D.3.6, the citation D.3.2 has been changed to D.3.2 (a).
7. The condition no. D.3.8 (a)(6) has been moved to monitoring section as D.7 (d).
8. The amount of usage figure typo in the reporting form has been corrected.
9. Few typos have been corrected.

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

Technical Support Document (TSD) for a Significant Source Modification
and Significant Permit Modification

Source Background and Description

Source Name:	Dover Chemical CorporationB Hammond Works
Source Location:	3000 Sheffield Avenue, Hammond, IN 46320
County:	Lake
SIC Code:	2899
Operation Permit No.:	T089-7797-00227
Operation Permit Issuance Date:	03-19-04
Significant Source Modification No.:	SSM 089-18109-00227
Significant Permit Modification No.:	SPM 089-18855-00227
Permit Reviewer:	Dr. Trip Sinha

The Office of Air Quality (OAQ) has reviewed a modification application from Dover Chemical Corporation relating to the construction and operation of the following emission units and pollution control devices:

SECTION D.3 Sulfurization system

with a maximum rated capacity of 6,000 pounds per hour of sulfurized products consisting of the following equipment:

The system consisting of

Existing Equipment:

- (1) Three (3) Sulfurization reactors, identified as TR-2120, 2121, and 2123, constructed before 1976, with maximum capacity of 3,700, 3,700, and 7,500 gallons, respectively, controlled by two (2) caustic scrubbers, identified as TP-2162 and TP-2163 and exhausting at Stack TP-2163.
- (2) Five (5) blowing tanks, identified as TP-2150 (constructed in 1977), 2151 (constructed in 1977), 2152 (constructed in 1977), 2153 (constructed in 1977); and 2154 (constructed in 1997), with maximum capacity of 11,000, 9,650, 11,500, 4,000, and 7,600 gallons, respectively, venting to a blowing tank knockout tank identified as TP-2159; controlled by two (2) caustic scrubbers, identified as TP-2162 and TP-2163 and exhausting at Stack TP-2163.
- (3) One (1) knockout storage tank, identified as TP-2164, constructed in 1976, with a maximum capacity of 1,500 gallons, exhausted to a caustic slop tank, identified as TP-2167, constructed in 1995, and exhausting at Stack TP-2167.

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- (4) One (1) scrubber liquor storage tank, identified as TS-1029, constructed in 1979, and with a maximum capacity of 15,880 gallons.

New Equipment:

- (5) One (1) reflux condenser associated with sulfurization reactor TR-2120.

Dover Chemical is taking an enforceable limit of 10 tons per year each of the volatile organic compounds (VOC) and hydrogen chloride (H₂S) emissions. This also made the sulfurization scrubber an enforceable control device.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on September 5, 2003. Additional information were received on September 11, 13, November 3, 24, 2003, and March 5, 19, 23, 26, and 30, 2004.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (**Appendix A, 3 pages**)

Justification for Modification

This existing source was issued a Part 70 permit on March 19, 2004.

Dover Chemical Corporation is taking enforceable limit of 10 tons per year each of VOC and H₂S emissions. Previously the control equipment was voluntary. Therefore, this modification is reviewed for Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5.

The Part 70 Operating permit is being modified through a Part 70 Significant Permit Modification.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM ₁₀	Attainment
SO ₂	Nonattainment
NO ₂	Attainment
Ozone	Nonattainment

CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as severe nonattainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Emissions Offset, 326 IAC 2-3.
- (b) H₂S emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2, because H₂S is a pollutant regulated under PSD.
- (b) Fugitive Emissions

This type of operation is one of the 28 listed source categories under 326 IAC 2-3. Therefore, the fugitive emissions from chemical processing are counted toward the determination of Emissions Offset and PSD applicability.

Source Status

Existing Source Emissions Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
VOC	> 25

- (a) This existing source is a major stationary source because it is one of the 28 listed source categories and the source has a PTE of VOC of 25 tons per year or more, and situated in Lake County, which is severe nonattainment for ozone.

Potential To Emit of Modification

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

This table reflects the changes in PTE of the new units and existing units going through this modification before controls. Control equipment is not considered federally enforceable until it has been required in an enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	0.0
PM-10	0.0
SO ₂	0.0
VOC	0.0

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CO	0.0
H ₂ S	0.0
NO _x	0.0

HAP's	Potential To Emit (tons/year)
H ₂ S	0.0

The Permittee has requested to make the existing pollution control equipment enforceable as practical matter, so that this modification will not be subject to major PSD or Emissions Offset review. Therefore, pursuant to 326 IAC 2-7-10.5 this modification is subject to Significant Source Modification.

Potential to Emit of Modification (After issuance of this permit)

Determination of Deminimis Emissions for Emissions Offset (326 IAC 2-3) purposes

Pollutant	VOC (ton/yr)
Future PTE of the new equipment	0

The future PTE of the new equipment i.e. reflux condenser, is less than 25 tons per year. Therefore, the Emissions Offset rule 326 IAC 2-3 does not apply to this modification.

Determination of Emissions Increase for PSD (326 IAC 2-2) purposes

The table below summarizes the potential to emit of the modified emission units, reflecting all limits and emissions controls. This table also shows past actual emissions and emissions increase. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Pollutant	H ₂ S
Future PTE*	<10.0
Past Actual**	3.55
Emissions increase	<6.00
Significant Level	10.0

* Future PTE is based on emissions after control

** Past actual emissions are based on an average of years 2001 and 2002 emissions.

- (a) This modification to an existing major stationary source is not major because the emissions increase of H₂S is not above the PSD significant level. Therefore, the rule 326 IAC 2-2 does not apply to this modification.

Federal Rule Applicability

326 IAC 12 and 40 CFR Part 60, Subpart VV (Standards of Performance for Equipment Leaks of VOC in Synthetic Organic Chemical Manufacturing Industry (SOCMI))

The source does not produce specified organic chemicals as an intermediate or final product or byproduct. Therefore it is exempt from the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.480), Subpart VV - Standards of Performance for Equipment Leaks of VOC In Synthetic Organic Chemical Manufacturing Industry (SOCMI).

326 IAC 12 and 40 CFR Part 60, Subpart III (Standards of Performance for Volatile Organic Compounds (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes)

The source does not produce specified organic chemicals as an intermediate or final product or byproduct. Therefore, it is exempt from the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.610, Subpart III - Standards of Performance for Volatile Organic Compounds (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes.

326 IAC 12 and 40 CFR Part 60, Subpart NNN (Standards of Performance for Volatile Organic Compounds (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations)

The source does not produce specified organic chemicals as an intermediate or final product or byproduct. Therefore it is exempt from the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.660, Subpart NNN - Standards of Performance for Volatile Organic Compounds (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations).

326 IAC 12 and 40 CFR Part 60, Subpart RRR (Standards of Performance for Volatile Organic Compounds (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes)

The source does not produce specified organic chemicals as an intermediate or final product or byproduct. Therefore it is exempt from the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.700, Subpart RRR – (Standards of Performance for Volatile Organic Compounds (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes).

326 IAC 14 and 40 CFR 61 (National Emission Standards For Hazardous Air Pollutants)

The Standards for Hazardous Air Pollutants (NESHAPs) 326 IAC 14, (40 CFR 61) are not applicable to this source, because none of the pollutants covered by this rule is emitted from any of its processes.

326 IAC 20 and 40 CFR 63, Parts F and G (National Emission Standards for Hazardous Air Pollutants)

The Sulfurization process

(a) does not produce as a primary product a SOCMI chemical listed in table 1 of subpart F;

and

(a) does not use as a reactant or manufacture as a product one or more of the organic HAPs listed in table 2 of subpart F.

Therefore, Sulfurization process is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 326 IAC 20, (40 CFR 63, Parts F and G).

326 IAC 20 and 40 CFR 63, Part H (National Emission Standards for Hazardous Air Pollutants) The National Emission Standards for Hazardous Air Pollutants (NESHAPs), 326 IAC 20, and 40 CFR 63 Subpart H, standard for equipment leaks, is not applicable to this source, because no 40 CFR 63 Subparts currently apply to this source.

326 IAC 20 and 40 CFR 63, Part I (National Emission Standards for Hazardous Air Pollutants) The National Emission Standards for Hazardous Air Pollutants (NESHAPs), 326 IAC 20, and 40 CFR 63 Subpart I, Standards for Negotiated Regulation for Equipment Leaks, is not applicable to this source, because none of the listed chlorinated paraffins are emitted from this source.

National Emissions Standards for Hazardous Air Pollutants for Hydrochloric Acid Manufacturing [40 CFR Part 63, Subpart NNNNN]

The affected source, the hydrochloric production facility is the collection of unit operations and equipment associated with production of liquid hydrochloric acid (HCl) product at a concentration of 30 weight percent or greater during its normal operations, is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Hydrochloric Acid Manufacturing [40 CFR Part 63, Subpart NNNNN]. Pursuant to this rule, the Permittee must comply with 40 CFR 63, Subpart NNNNN no later than 3 years after April 17, 2003, or accept to and meet an enforceable HAP emissions limit below the major source threshold prior to three years after April 17, 2003.

State Rule Applicability

There is no 326 IAC rule applicable to this modification.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Requirements and Monitoring Requirements.

Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Monitoring Requirements, also Section D of the permit. Unlike Requirements, failure to meet Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a monitoring condition will arise through a source failure to take the appropriate corrective actions within a specific time period.

The monitoring requirements applicable to this modification are as follows:

- (a) The Permittee shall monitor the followings:
 - (1) Scrubber second stage operating temperature once an hour;
 - (2) Scrubber liquid recirculation flow rate once a hour; and
 - (3) Scrubber caustic concentration per shift.
 - (4) Volume and caustic concentration charged to the scrubbers once a day.

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These monitoring conditions are necessary because the scrubbers controlling the processes must operate properly to ensure to satisfy the emissions limit for H₂S established in this permit.

Conclusion

The operation of the sulfurization products manufacturing operation shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 089-18109-00227 and Significant Permit Modification No. 089-18855-00227.