

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP) Renewal**

**INDIANA DEPARTMENT OF ENVIRONMENTAL
MANAGEMENT
OFFICE OF AIR QUALITY
and
VIGO COUNTY AIR POLLUTION CONTROL**

**Ulrich Chemical, Inc.
1400 Lockport Road
Terre Haute, Indiana 47802**

(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.

The Permittee must comply with all conditions of this permit. Noncompliance with any provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application. 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.

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 2-8 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.: F167-14113-00052	
Issued by:	Issuance Date: June 9, 2005
ORIGINAL SIGNED BY:	Expiration Date: June 9, 2010
George M. Needham, Director Vigo County Air Pollution Control	

SECTION A SOURCE SUMMARY 5

- A.1 General Information [326 IAC 2-8-3(b)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]
- A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]
- A.4 FESOP Applicability [326 IAC 2-8-2]
- A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

SECTION B GENERAL CONDITIONS..... 8

- B.1 Permit No Defense [IC 13]
- B.2 Definitions [326 IAC 2-8-1]
- B.3 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5]
- B.4 Enforceability [326 IAC 2-8-6]
- B.5 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]
- B.6 Severability [326 IAC 2-8-4(4)]
- B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]
- B.8 Duty to Provide Information [326 IAC 2-8-4(5)(E)]
- B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]
- B.10 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]
- B.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]
- B.12 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]
- B.13 Emergency Provisions [326 IAC 2-8-12]
- B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]
- B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]
- B.16 Permit Renewal [326 IAC 2-8-3(h)]
- B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]
- B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]
- B.19 Permit Revision Requirement [326 IAC 2-8-11.1]
- B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]
- B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]
- B.22 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-8-4(6)][326 IAC 2-8-16][326 IAC 2-1.1-7]
- B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314]

SECTION C SOURCE OPERATION CONDITIONS..... 18

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- C.1 Overall Source Limit [326 IAC 2-8]
- C.2 Opacity [326 IAC 5-1]
- C.3 Open Burning [326 IAC 4-1][IC 13-17-9]
- C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]
- C.5 Fugitive Dust Emissions [326 IAC 6-4]
- C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]
- C.7 Stack Height [326 IAC 1-7]
- C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61 Subpart M]

Testing Requirements [326 IAC 2-8-4(3)]

- C.9 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]

- C.10 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(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 2-8-4(3)][326 IAC 2-8-5(1)]

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]

- C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.15 Compliance Response Plan -Preparation, Implementation, Records, and Reports [326 IAC 2-8-4][326 IAC 2-8-5]
- C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

- C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]
- C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

- C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 FACILITY OPERATION CONDITIONS

Material Handling, MH-1, MH-2, and MH-3 25

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.1.1 Particulate Emissions – Vigo County (Soda Ash Throughput) [326 IAC 6-1-13]
- D.1.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.3 Particulate Control [326 IAC 2-8]

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- D.1.4 Visible Emissions Notations
- D.1.5 Parametric Monitoring
- D.1.6 Baghouse Inspections
- D.1.7 Broken or Failed Bag Detection

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

- D.1.8 Record Keeping Requirements
- D.1.9 Reporting Requirements

SECTION D.2 FACILITY OPERATION CONDITIONS

Paint Booths, PA and PB..... 28

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.2.1 Particulate Emissions Limitations [326 IAC 6-1-2] [326 IAC 2-8-4]
- D.2.2 Miscellaneous Metal Coating [326 IAC 8-2-9]
- D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.2.4 Particulate Matter
- D.2.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-4][326 IAC 8-1-2(a)]

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- D.2.6 Monitoring

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

- D.2.7 Record Keeping Requirements

SECTION D.3 FACILITY OPERATION CONDITIONS

Shot Blasting, Blast 1 30

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.3.1 Particulate Emissions Limitations [326 IAC 6-1-2] [326 IAC 2-8-4]

D.3.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

D.3.3 Particulate Matter

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.3.4 Record Keeping Requirements

Certification Form	32
Emergency Occurrence Form.....	33
Quarterly Report Form.....	35
Quarterly Deviation and Compliance Monitoring Report Form	36

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and the Vigo County Air Pollution Control (VCAPC). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary chemical processing and distribution plant.

Authorized individual:	Environmental Services Director
Source Address:	1400 Lockport Road, Terre Haute, Indiana 47802
Mailing Address:	1400 Lockport Road, Terre Haute, Indiana 47802
General Source Phone:	(812) 234-7757
SIC Code:	5169
Source Location Status:	Vigo County
Source Status:	Nonattainment for ozone under the 8-hour standard, Attainment for all other criteria pollutants. Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD; Minor Source, under Emissions Offset; Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

- (a) Three (3) material handling operations, installed in 1978, handling materials including, but not limited to, soda ash, calcium chloride, Calcium pellets and flakes, sodium sulfate, carbonate, borax, boric acid, sodium gluconate, and oxalic acid including the following:
 - (1) Transfer of material from screw auger to bucket lift, identified as MH1, with a maximum throughput of 52,000 tons per year.
 - (2) Transfer of material from rail car to bag, identified as MH2, with a maximum throughput of 54,750 tons per year.
 - (3) Bagging operations, identified as MH3, maximum throughput of 52,000 tons per year, with baghouse for particulate control, identified as MH.
- (b) One (1) paint booth, identified as PB, installed in 1978, equipped with an air atomization spray gun for metal chemical containers, with a maximum capacity of 1.53 gallons per hour, controlled by a dry filter.
- (c) One (1) enclosed spray area, identified as PA, installed in 1978, with a maximum capacity of 0.305 gallons per hour, used for spraying metal chemical containers with aerosol cans, controlled by a dry filter.
- (d) One (1) shot blasting system, identified as Blast 1, installed in 1978, with a maximum blasting capacity of 3.75 pounds per hour, controlled by a filter system, and venting to an enclosed container, which also controls particulate emissions.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) One (1) natural gas fired boiler, with a maximum capacity for 2.564 million Btu per hour (MMBtu/hr).
- (b) Seven (7) natural gas fired space heaters, each with a maximum capacity of 8.177 million Btu per hour (MMBtu/hr).
- (c) Handling and packaging of liquid chemicals.
- (d) Drum cleaning.
- (e) Three (3) storage tanks, identified as T2, T3, and T4, each with a 12,000 gallon capacity, used to store sodium hydroxide.
- (f) One (1) storage tank, identified as T5, with a maximum storage capacity of 20,000 gallons, used to store sodium hydroxide.
- (g) One (1) storage tanks, identified as T6, with a maximum storage capacity of 22,000 gallons, used to store sodium hydroxide.
- (h) Two (2) storage tanks, identified as T7 and T8, each with a maximum storage capacity of 5,500 gallons, used for a bleach generation.
- (i) One (1) storage tank, identified as T9, with a maximum storage capacity of 5,500 gallons, used for a finished bleach.
- (j) Two (2) storage tanks, identified as T10 and T11, each with maximum storage capacities of 10,000 gallons, used for bleach.
- (k) One (1) storage tank, identified as T12, with a maximum storage capacity of 8,200 gallons, used for Muratic Acid.
- (l) One (1) storage tank, identified as T13, with a maximum storage capacity of 6,000 gallons, used for Sulfuric Acid.
- (m) One (1) storage tank, identified as T14, with a maximum storage capacity of 15,000 gallons, used for aqua ammonia.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), and Vigo County Air Pollution Control (VCAPC) to renew a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted

by this permit.

- (b) All previous registrations and permits are superseded by this permit.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

B.3 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.4 Enforceability [326 IAC 2-8-6]

- (a) Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM and VCAPC, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.
- (b) Unless otherwise stated, all terms and conditions in this permit that are local requirements, including any provisions designed to limit the source's potential to emit, are enforceable by VCAPC.

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, and VCAPC within a reasonable time, any information that IDEM, OAQ, and VCAPC may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, and VCAPC copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, and VCAPC, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ and VCAPC may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in One (1) submittal.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and VCAPC on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, and VCAPC may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.12 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, and VCAPC upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, and VCAPC. IDEM, OAQ, and VCAPC may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.13 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and VCAPC, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM, OAQ

Telephone No.: 1-800-451-6027 (ask for IDEM, OAQ, Compliance Section) or,
Telephone No.: 317-233-5674 (ask for IDEM, OAQ, Compliance Section)
Facsimile No.: 317-233-5967

and

VCAPC

Telephone No.: 812-462-3433
Facsimile No.: 812-462-3447

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) IDEM, OAQ, and VCAPC, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ, and VCAPC, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

- (g) Operations may continue during an emergency only if the following conditions are met:
- (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.
- Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The

notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if VCAPC determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by VCAPC to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by VCAPC at least thirty (30) days in advance of the date this permit is to be reopened, except that VCAPC may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and VCAPC and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
 - (1) A timely renewal application is one that is:
 - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and VCAPC on or before the date it is due.

(2) If IDEM, OAQ, and VCAPC upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ, and VCAPC takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, and VCAPC, any additional information identified as needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

(d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, and VCAPC, in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, VCAPC, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, VCAPC, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.

- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4320 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and nonattainment New Source Review (NSR);
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than two-hundred and fifty (250) tons per twelve (12) consecutive month period.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ, and VCAPC.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ, and VCAPC of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee

does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, and VCAPC not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, and VCAPC, if the Permittee submits to IDEM, OAQ, and VCAPC a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

C.13 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (" 2%) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of any other parameter, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (" 2%) of full scale reading.
- (c) The Permittee may request the IDEM, OAQ, and VCAPC approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.15 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4]
[326 IAC 2-8-5]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ, and VCAPC upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:
- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ, and VCAPC of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.

- (4) The process has already returned or is returning to operating within “normal” parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, and VCAPC within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ, and VCAPC that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ, and VCAPC may extend the retesting deadline.
- (c) IDEM, OAQ, and VCAPC reserve the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the VCAPC Administrator makes a request for records to the Permittee, the Permittee shall furnish the records to the VCAPC Administrator within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, IN 47807

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and VCAPC on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (a) Three (3) material handling operations, installed in 1978, handling materials including, but not limited to, soda ash, calcium chloride, Calcium pellets and flakes, sodium sulfate, carbonate, borax, boric acid, sodium gluconate, and oxalic acid including the following:
- (1) Transfer of material from screw auger to bucket lift, identified as MH1, with a maximum throughput of 52,000 tons per year.
 - (2) Transfer of material from rail car to bag, identified as MH2, with a maximum throughput of 54,750 tons per year.
 - (3) Bagging operations, identified as MH3, maximum throughput of 52,000 tons per year, with baghouse for particulate control, identified as MH.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Emissions – Vigo County (Soda Ash Throughput) [326 IAC 6-1-13]

- (a) Pursuant to 326 IAC 6-1-13, particulate emissions from soda ash handling, from operation of material handling, identified as MH-1, MH-2, and MH-3, shall not exceed 4.5 tons of particulate per year, or 0.03 grains per dry standard cubic foot (dscf).
- (b) In order to comply with D.1.1(a), the throughputs for MH-1, MH-2, and MH-3 of soda ash shall each be limited to 21,902 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.1.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B – Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.3 Particulate Control [326 IAC 2-8]

In order to comply with Condition D.1.1 and in order that the requirements of 326 IAC 2-7 do not apply:

- (a) the baghouse, MH, must be operated at all times the material handling, identified as MH-3 is in operation.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.4 Visible Emissions Notations

- (a) Visible emission notations of the material handling operation exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation and Implementation shall be considered a deviation from this permit.

D.1.5 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the MH-3, at least once shift when the bagging is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 4.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan – Preparation, Implementation, Records and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and VCAPC, and shall be calibrated at least once every six (6) months.

D.1.6 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the material handling operations when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. All defective bags shall be replaced.

D.1.7 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ, and VCAPC of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been

repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.8 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records of soda ash throughput for MH-1, MH-2, and MH-3. Records maintained for this requirement shall be taken daily and compiled monthly. These records shall be complete and sufficient to establish compliance with the soda ash handling limits established in Condition D.1.1.
- (b) To document compliance with Condition D.1.4, the Permittee shall maintain records of visible emission notations of the bagging operation exhaust once per shift.
- (c) To document compliance with Condition D.1.5, the Permittee shall maintain the following:
 - (1) Weekly records of the total static pressure drop during normal operation when venting to the atmosphere.
 - (2) Documentation of the dates vents are redirected.
- (d) To document compliance with Condition D.1.6, the Permittee shall maintain records of the results of the inspections required under Condition D.1.6 and the dates the vents are redirected.
- (e) To document compliance with Condition D.1.2, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.9 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the addresses listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification of the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (b) One (1) paint booth, identified as PB, equipped with an air atomization spray gun for metal chemical containers, with a maximum capacity of 1.53 gallons per hour.
- (c) One (1) enclosed spray area, identified as PA, with a maximum capacity of 0.305 gallons per hour, used for spraying aerosol cans to contain metal chemical.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate Emissions Limitations [326 IAC 6-1-2] [326 IAC 2-8-4]

Pursuant to 326 IAC 6-1-2(a), the particulate emissions from the PB and PA shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.2.2 Miscellaneous Metal Coating [326 IAC 8-2-9]

- (a) (1) Pursuant to 326 IAC 8-2-9(d)(2) (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the paint booth, PB, shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried coatings.
- (2) Pursuant to 326 IAC 8-2-9(d)(4), the volatile organic compound (VOC) content of coating delivered to the applicator at the spray booth, identified as PA, shall be limited to 3.0 pounds of VOCs per gallon of coating less water, for all other coatings not listed under 326 IAC 8-2-9(d)(1), (2), or (3).
- (b) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.2.4 Particulate Matter

In order to comply with D.2.1, the dry filters for overspray particulate emissions shall be in operation and control emissions from the paint booth, PB, at all times that the paint booth is in operation.

D.2.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-4][326 IAC 8-1-2 (a)]

Compliance with the VOC content and usage limitations contained in Conditions D.2.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, and VCAPC, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.6 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the paint booth stack while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.7 Record Keeping Requirements

- (a) To document compliance with Condition D.2.6, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections.
- (b) To document compliance with Condition D.2.3, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (d) One (1) shot blasting system, identified as Blast 1, installed in 1978, with a maximum blasting capacity of 3.75 pounds per hour, controlled by a filter system, and venting to an enclosed container, which also controls particulate emissions.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate Emissions Limitations [326 IAC 6-1-2] [326 IAC 2-8-4]

Pursuant to 326 IAC 6-1-2(a), the particulate emissions from the PB and PA shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.3.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.3.3 Particulate Matter

In order to comply with D.3.1, the filters shall be in operation and control emissions from the shot blasting operations, identified as Blast 1, at all times that Blast 1 is in operation.

D.3.4 Visible Emissions Notations

- (a) Daily visible emission notations from the shot blast system exhaust, if exhausted to the atmosphere, shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records and Reports shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.3.5 Record Keeping Requirements

- (a) To document compliance with Condition D.3.2, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (b) To document compliance with Condition D.3.4, the Permittee shall maintain records of daily visible emission notations of the shot blast system exhaust.

- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
and
VIGO COUNTY AIR POLLUTION CONTROL**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Ulrich Chemical, Inc.
Source Address: 1400 Lockport Road, Terre Haute, Indiana 47807
Mailing Address: 1400 Lockport Road, Terre Haute, Indiana 47807
FESOP No.: 167-14113-00052

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) _____
- Report (specify) _____
- Notification (specify) _____
- Affidavit (specify) _____
- Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967
and
VIGO COUNTY AIR POLLUTION CONTROL
103 South 3rd Street
Terre Haute, IN 47807**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Ulrich Chemical, Inc.
Source Address: 1400 Lockport Road, Terre Haute, Indiana 47802
Mailing Address: 1400 Lockport Road, Terre Haute, Indiana 47802
FESOP No.: 167-14113-00052

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
 - The Permittee must notify the VCAPC, within four (4) business hours (812-462-3433); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967 and 812-462-3447), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
VIGO COUNTY AIR POLLUTION CONTROL**

FESOP Quarterly Report

Source Name: Ulrich Chemical, Inc.
Source Address: 1400 Lockport Road, Terre Haute, Indiana 47802
Mailing Address: 1400 Lockport Road, Terre Haute, Indiana 47802
FESOP No.: 167-14113-00052
Facilities: MH-1, MH-2, and MH-3
Parameter: Combined Soda Ash Throughput (in Tons)
Limit: 21,902 tons per twelve (12) consecutive months for each emission unit.

MONTH / YEAR: _____

	This Month	Previous 11 Months	12-month Total
MH-1			
MH- 2			
MH- 3			

No deviation occurred in this quarter.

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
VIGO COUNTY AIR POLLUTION CONTROL**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Ulrich Chemical, Inc.
Source Address: 1400 Lockport Road, Terre Haute, Indiana 47802
Mailing Address: 1400 Lockport Road, Terre Haute, Indiana 47802
FESOP No.: 167-14113-00052

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Quality
and
Vigo County Air Pollution Control**

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit
(FESOP) Renewal

Source Background and Description

Source Name:	Ulrich Chemical, Inc.
Source Location:	1400 Lockport Road, Terre Haute, Indiana 47802
County:	Vigo
SIC Code:	5169
Operation Permit No.:	167-5668-00052
Operation Permit Issuance Date:	December 13, 1996
Permit Renewal No.:	167-14113-00052
Permit Reviewer:	Rob Harmon/KR

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Vigo County Air Pollution Control (VCAPC) have reviewed a FESOP renewal application from Ulrich Chemical, Inc. relating to the operation of a chemical processing and distribution plant.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) Three (3) material handling operations, installed in 1978, handling materials including, but not limited to, soda ash, calcium chloride, calcium pellets and flakes, sodium sulfate, carbonate, borax, boric acid, sodium gluconate, and oxalic acid including the following:
 - (1) Transfer of material from screw auger to bucket lift, identified as MH1, with a maximum throughput of 52,000 tons per year, controlled by an auger transport dust collector.
 - (2) Transfer of material from rail car to bag, identified as MH2, with a maximum throughput of 54,750 tons per year.
 - (3) Bagging operations, identified as MH3, maximum throughput of 52,000 tons per year, with baghouse for particulate control, identified as MH.
- (b) One (1) paint booth, identified as PB, installed in 1978, equipped with an air atomization spray gun for metal chemical containers, with a maximum capacity of 1.53 gallons per hour, controlled by a dry filter.
- (c) One (1) enclosed spray area, identified as PA, installed in 1978, with a maximum capacity of 0.305 gallons per hour, used for spraying metal chemical containers with aerosol cans, controlled by a dry filter.

- (d) One (1) shot blasting system, identified as Blast 1, installed in 1978, with a maximum blasting capacity of 3.75 pounds per hour, controlled by a filter system, and venting to an enclosed container, which also controls particulate emissions.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) One (1) natural gas fired boiler, with a maximum capacity of 2.564 million Btu per hour (MMBtu/hr).
- (b) Seven (7) natural gas fired space heaters, each with a maximum capacity of 8.177 million Btu per hour (MMBtu/hr).
- (c) Handling and packaging of liquid chemicals.
- (d) Drum cleaning.
- (e) Three (3) storage tanks, identified as T2, T3, and T4, each with a 12,000 gallon capacity, used to store sodium hydroxide.
- (f) One (1) storage tank, identified as T5, with a maximum storage capacity of 20,000 gallons, used to store sodium hydroxide.
- (g) One (1) storage tanks, identified as T6, with a maximum storage capacity of 22,000 gallons, used to store sodium hydroxide.
- (h) Two (2) storage tanks, identified as T7 and T8, each with a maximum storage capacity of 5,500 gallons, used for a bleach generation.
- (i) One (1) storage tank, identified as T9, with a maximum storage capacity of 5,500 gallons, used for a finished bleach.
- (j) Two (2) storage tanks, identified as T10 and T11, each with maximum storage capacities of 10,000 gallons, used for bleach.
- (k) One (1) storage tank, identified as T12, with a maximum storage capacity of 8,200 gallons, used for Muratic Acid.
- (l) One (1) storage tank, identified as T13, with a maximum storage capacity of 6,000 gallons, used for Sulfuric Acid.
- (m) One (1) storage tank, identified as T14, with a maximum storage capacity of 15,000 gallons, used for aqua ammonia.

Existing Approvals

The source has been operating under the previous FESOP 167-5668-00052 issued on December 13, 1996, with an expiration date of December 13, 2001, and the following amendments and revisions:

- (a) First Administrative Amendment 167-8216-00052, issued on March 24, 1997,

- (b) Second Administrative Amendment 167-8663-00052, issued on June 24, 1997,
- (c) Third Administrative Amendment 167-9448-00052, issued on February 12, 1998, and
- (d) First Minor Permit Revision 167-12164-00052, issued on June 12, 2000.

All conditions from previous approvals were incorporated into this FESOP.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Administrator that the FESOP renewal 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 administratively complete FESOP renewal application for the purposes of this review was received on March 9, 2001.

Emission Calculations

See Appendix A of this document for detailed emission (Six pages).

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	Greater than 100, Less than 250
PM-10	Greater than 100, Less than 250
SO ₂	Less than 100
VOC	Less than 100
CO	Less than 100
NO _x	Less than 100

HAPs	Unrestricted Potential Emissions (tons/yr)
Total	negligible

Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP and its revision and amendments.

Process/emission unit	Potential To Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
MH-1	31.46	31.46	negligible	negligible	negligible	negligible	negligible
MH-2	41.06	41.06	negligible	negligible	negligible	negligible	Negligible
MH-3	2.86	2.86	negligible	negligible	negligible	negligible	negligible
Shot Blasting	0.16	0.16	negligible	negligible	negligible	negligible	negligible
Paint Booth/ Spray Coating	1.57	1.57	negligible	18.94	negligible	negligible	negligible
Tanks	negligible	negligible	negligible	negligible	negligible	negligible	negligible
Combustion	2	2.0	0.2	1.40	22	26.20	negligible
Total Emissions	79.11	79.11	0.2	20.34	22	26.20	negligible

County Attainment Status

The source is located in Vigo County.

Pollutant	Status
PM-10	Attainment
SO ₂	Maintenance Attainment
NO ₂	Attainment
8-hour Ozone	Basic Nonattainment
1-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Vigo County has been designated as basic non-attainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for non-attainment new source review (326 IAC 2-3).
- (b) Vigo County has been classified as attainment or unclassifiable, in Indiana, for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (c) Fugitive Emissions
 Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	79.11
PM-10	79.11

SO ₂	0.2
VOC	20.34
CO	22.00
NO _x	26.20
Single HAP	negligible
Combination HAPs	negligible

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and no non-attainment pollutant is emitted at a rate of 100 tons per year or greater and it is not in one of the 28 listed source categories.

Federal Rule Applicability

- (a) The requirements of 40 CFR 60, Subpart Dc, are not included in the permit because each of the steam generating units has a maximum design heat input capacity of less than ten (10) million Btu per hour (10 mm Btu/hr).
- (b) The requirements of 40 CFR 60 Subparts Ka or Kb are not included in the permit because none of the storage tanks at the source are used to store volatile organic liquid (VOL).
- (c) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60.480, Subpart VV, Standards of Performance for Volatile Organic Compound Emissions From the Synthetic Organic Chemical Manufacturing Industry) because no synthetic organic chemicals are manufactured at the source and no new construction or modification commenced after January 5, 1981.
- (d) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60.610, Subpart III, Standards of Performance for Volatile Organic Compound Emissions From the Synthetic Organic Chemical Manufacturing Industry Air Oxidation Unit Processes), because neither synthetic organic chemicals are manufactured nor air oxidation process is used at the source.
- (e) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60.660, Subpart NNN, Standards of Performance for Volatile Organic Compound Emissions From the Synthetic Organic Chemical Manufacturing Industry Distillation Operations), because neither synthetic organic chemicals are manufactured nor distillation operations are used at the source.
- (f) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60.700, Subpart RRR, Standards of Performance for Volatile Organic Compound Emissions From the Synthetic Organic Chemical Manufacturing Industry Reactor Processes), because neither synthetic organic chemicals are manufactured nor reactor process is used at the source.
- (g) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in this permit for the source.
- (h) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 14, 20 and 40 CFR Part 63, Subparts F, G & H because the chemical manufacturing process units are not located at a plant site that is a major source as defined in Section 112 (a) of the Clean Air Act.

- (i) This source is not an affected source and hence not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), 326 IAC 14, 20 and 40 CFR Part 63, Subpart DDDDD, because the steam generating units are not located at a plant site that is a major source as defined in Section 112 (a) of the Clean Air Act.
- (j) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR 63) included in the permit for this source.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emission Offset)

This source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3, the PSD and Emission Offset requirements do not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source is not subject to 326 IAC 2-4.1, because it has not constructed a major source of hazardous air pollutants, as defined in 40 CFR 63 after July 27, 1997.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is located in Vigo County, it is not required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, and it does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year.

326 IAC 2-8-4 (FESOP)

Pursuant to this rule, source wide emissions of PM-10, SO₂, VOC and NO_x shall be limited to less than one hundred (100) tons per year such that it does not fall within any of the categories listed in 326 IAC 2-7-2(a) and that assure compliance with all applicable requirements at the time of FESOP issuance (see Emissions Calculations, Appendix A). The potential to emit PM-10 before limitations from the entire source is greater than 100 tons/yr. The following limit shall apply to assure compliance with this rule:

Particulate Matter-10 (PM-10):

- (a) the baghouse, MH, must be operated at all times the material handling, identified as MH-3 is in operation.
- (c) the dry filters must be operated at all times the paint booths, identified as PA and PB, are in operation.
- (d) the filter system must be operated at all times the shot blasting, identified as Blast 1, is in operation, and the operation must be venting to the enclosed container, which also controls particulate emissions.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

326 IAC 7-1 (Sulfur Dioxide Emission Limitations)

This rule does not apply to this source because the potential to emit from the source is less than 25 tons per year and 10 pounds per hour of Sulfur Dioxide.

State Rule Applicability – Material Handling

326 IAC 6-1-13 (Particulate Emissions – Vigo County)

Pursuant to 326 IAC 6-1-13, particulate emissions from soda ash handling, from operations identified as MH-1, MH-2, and MH-3, shall not exceed 4.5 tons of particulate per year, or 0.03 grains per dry standard cubic foot (dscf).

326 IAC 6-1-2 (Particulate emission limitations)

The particulate matter emissions from MH-1, MH-2, and MH-3 are not subject to the requirements of 325 IAC 6-1-2(a) (Particulate Emissions Limitations) because this source is located in Vigo County, and particulate emissions are subject to 326 IAC 6-1-13.

State Rule Applicability – Surface Coating

326 IAC 6-1-2 (Particulate emission limitations)

The particulate matter emissions from PB and PA are subject to the requirements of 325 IAC 6-1-2(a) (Particulate Emissions Limitations) because this source is located in Vigo County, has potential particulate emissions greater than one hundred (100) tons per year, and came into existence after June 11, 1973. Pursuant to 326 IAC 6-1-2(a), the particulate emissions from the PB and PA shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf). The source complies with 326 IAC 6-1-2(a) through the use of a dry particulate filters on both PB and PA.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

This source is subject to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), because it conducts surface coating operations on metal parts under the standard industrial classification code of major group #3411, metal cans. Pursuant to 326 IAC 8-2-9(d)(2) (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the spray booth, identified as PB, shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for air dried coatings. Pursuant to 326 IAC 8-2-9(d)(4), the volatile organic compound (VOC) content of coating delivered to the applicator at the spray booth, identified as PA, shall be limited to 3.0 pounds of VOCs per gallon of coating less water, for all other coatings not listed under 326 IAC 8-2-9(d)(1), (2), or (3).

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

State Rule Applicability – Shot Blasting

326 IAC 6-1-2 (Particulate emission limitations)

The particulate matter emissions from the shotblaster, identified as Blast 1, are subject to the requirements of 325 IAC 6-1-2(a) (Particulate Emissions Limitations) because this source is located in Vigo County, has potential particulate emissions greater than one hundred (100) tons per year, and came into existence after June 11, 1973. Pursuant to 326 IAC 6-1-2(a), the particulate emissions from the Blast 1 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

Compliance Requirements

Permits issued under 326 IAC 2-8 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, and VCAPC, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination 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 Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The material handling operation has applicable compliance monitoring conditions as specified below:
 - (a) Visible emissions notations of the material handling operation shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting start up or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emissions is observed.
 - (b) The Permittee shall record the total static pressure drop across the baghouse controlling MH-3, at least once per shift when the material handling is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within a range of 0.5 and 4.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range of any one reading.
2. The spray coating operation has applicable compliance monitoring conditions as specified below:
 - (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the paint booth stack while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance

Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-1, and to ensure that emission levels are maintained below one hundred (100) tons per year of PM-10, such that this source does not fall within any of the categories listed in 326 IAC 2-7-2(a).

Conclusion

The operation of this chemical processing and distribution plant shall be subject to the conditions of the FESOP 167-14113-00052.

Appendix A Emissions Calculations					Page 1 of 6
Soda Ash Handling Operations					
Source Name: Ulrich Chemical, Inc.					
Source Location: 1400 Lockport Road, Terre Haute, Indiana 47802					
County: Vigo					
Permit No.: F167-14113-00052					
Permit Reviewer: Rob Harmon/KR					
Date: July 12, 2004					
PTE For Material Handling and Compliance					
Emissions Unit ID	Throughput (tons/yr)	Emissions Factor ¹ (lb PM-10/ton)	Potential to Emit ² (tons/yr)	Control Efficiency ³	Controlled emissions
MH-1	52000	1.5	39		39
MH-2	54750	1.5	41.0625		41.0625
MH-3	52000	1.5	39	95%	1.95
		Total	119.0625		82.0125 tons PM & PM-10 per year
¹ Emissions Factors based on AP-42, Chapter 11-17 for material handling and PM = PM10:					
² PTE = throughput (tons/yr) * ef (lb PM-10/ton) * 1 ton / 2000 lbs					
³ Control Efficiency for MH-1 for the auger transport was assumed to be one half of the actual of the dust collector (89.9%). This is because most of the emissions are contained in the transport mechanism (the piping), however there is a junction at the point where the auger drops the material to the bucket lift which does produce uncontrolled fugitive emissions.					
In order to comply with 326 IAC 6-1-13, PM emissions of soda ash handling from MH-1, MH-2, MH-3, combined may not exceed 4.5 tons per year.					
$L = (.2)(2000)[(1-.45)x + x + (1-.95)x]$		where L = limited emission (tons/yr) = 4.4 x = limited throughput (tons/yr)			
x =	21902	tons/yr			
Therefore, soda ash throughput shall be limited to the following:					
Emissions Unit ID	Limited Throughput (tons/yr)	Emissions Factor ¹ (lb PM-10/ton)	Potential to Emit ² (tons/yr)	Control Efficiency	Controlled emissions
MH-1	21902	0.2	2.1902		2.1902
MH-2	21902	0.2	2.1902		2.1902
MH-3	21902	0.2	2.1902	95%	0.10951
				Total	4.48991 tons PM per year from soda ash

Appendix A: Emission Calculations

Abrasive Blasting - Confined

Company Name: Ulrich Chemical, Inc.
Address City IN Zip: 1400 Lockport Road, Terre Haute, Indiana 47802
Permit Number: Vigo
Pt ID: F167-14113-00052
Reviewer: Rob Harmon/KR
Date: July 12, 2004

Table 1 - Emission Factors for Abrasives

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

Internal diameter, in	Nozzle Pressure (psig)							
	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)

FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =

354

D = Density of abrasive (lb/ft3) From Table 2 =

99

D1 = Density of sand (lb/ft3) =

99

ID = Actual nozzle internal diameter (in) =

0.31

ID1 = Nozzle internal diameter (in) from Table 3 =

0.31

Flow Rate (FR) (lb/hr) =

354.000 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =

0.010

FR = Flow Rate (lb/hr) =

354.000

w = fraction of time of wet blasting =

0 %

N = number of nozzles =

1

Uncontrolled Emissions =

3.54 lb/hr

of PM and PM10*

15.51 ton/yr

METHODOLOGY

90% control by filter

1.55

90% control by contained exhaust area

0.16 ton/yr controlled emissions

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)

Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs

Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)

E = EF x FR x (1-w/200) x N

w should be entered in as a whole number (if w is 50%, enter 50)

updated 1/99

* PM10 is assumed equal to PM

Abrasive.xls 9/95

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

Company Name: Ulrich Chemical, Inc.

Address City IN Zip: 1400 Lockport Road, Terre Haute, Indiana 47082

Permit Number: F-167-14113

Pit ID: 00052

Reviewer: Rob Harmon/KR

Date: 12-Jul-04

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

59.8

523.8

Emission Factor in lb/MMCF	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	2.0	2.0	0.2	26.2	1.4	22.0

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations**Natural Gas Combustion Only****MM BTU/HR <100****Small Industrial Boiler****HAPs Emissions****Company Name: Ulrich Chemical, Inc.****Address City IN Zip: 1400 Lockport Road, Terre Haute, Indiana 47082****Permit Number: 167-14113****Pit ID: 00052****Reviewer: Rob Harmon/KR****Date: 12-Jul-04**

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	5.500E-04	3.143E-04	1.964E-02	4.714E-01	8.905E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.310E-04	2.881E-04	3.667E-04	9.953E-05	5.500E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Company Name: Ulrich Chemical, Inc.
Address City IN Zip: 1400 Lockport Road, Terre Haute, Indiana 47802
Permit Number: Vigo
Plt ID: F167-14113-00052
Reviewer: Rob Harmon/KR
Date: July 12, 2004

	Uncontrolled Potential to Emit (tons/yr)					
Emission Unit	PM	PM10	SO2	VOC	CO	NOX
MH-1	39.00	39.00				
MH-2	41.06	41.06				
MH-3	39.00	39.00				
Blasting	15.50	15.50				
Combustion	2.00	2.00	0.20	1.40	22.00	26.20
Coating	15.70	15.70		18.94		
Total	152.26	152.26	0.20	20.34	22.00	26.20
	Controlled, Limited Emissions (tons/yr)					
Emission Unit	PM	PM10	SO2	VOC	CO	Nox
MH-1	39.00	39.00				
MH-2	41.06	41.06				
MH-3	1.95	1.95				
Blasting	0.16	0.16				
Combustion	2.00	2.00	0.20	1.40	22.00	26.20
Coating	1.57	1.57		18.94		
Total	85.74	85.74	0.20	20.34	22.00	26.20