Ohio Environmental Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

8/17/2010

Certified Mail

Facility ID: 0204010056
Permit Number: P0084063
County: Ashtabula

John Reese
Ashta Chemicals Inc.
3509 Middle Road
P.O. Box 858
Ashtabula, OH 44004

RE: FINAL AIR POLLUTION CONTROL TITLE V PERMIT
Permit Type: Initial

Dear Permit Holder:

Enclosed is the Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this Title V permit is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00, made payable to "Ohio Treasurer Kevin Boyce," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northeast District Office. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Ohio EPA DAPC, Northeast District Office

# Response to Comments

Response to comments for: Title V Permit

| | |
|---|---|
| Facility ID: | 0204010056 |
| Facility Name: | Ashta Chemicals Inc. |
| Facility Description: | mercury cell chlor-alkali plant |
| Facility Address: | 3509 Middle Road<br>P.O. Box 858<br>Ashtabula, OH 44004<br>Ashtabula County |
| Permit #: | P0084063, Initial |
| A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Star Beacon on 04/21/2010. The comment period ended on 05/21/2010. | |
| Hearing date (if held) | None. |
| Hearing Public Notice Date (if different from draft public notice) | None. |

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: None.
    a. Comment: No comments were received.
    b. Response: No response is needed.

Ohio | Environmental Protection Agency

# FINAL

# Division of Air Pollution Control
# Title V Permit
for
Ashta Chemicals Inc.

| | |
|---|---|
| Facility ID: | 0204010056 |
| Permit Number: | P0084063 |
| Permit Type: | Initial |
| Issued: | 8/17/2010 |
| Effective: | 9/7/2010 |
| Expiration: | 9/7/2015 |

Ohio Environmental Protection Agency

**Division of Air Pollution Control**
**Title V Permit**
for
Ashta Chemicals Inc.

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# Authorization

Facility ID: 0204010056
Facility Description: mercury cell chlor-alkali plant
Application Number(s): A0014564, A0014565
Permit Number: P0084063
Permit Description: Operating permit
Permit Type: Initial
Issue Date: 8/17/2010
Effective Date: 9/7/2010
Expiration Date: 9/7/2015
Superseded Permit Number:

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Ashta Chemicals Inc.
3509 Middle Road
P.O. Box 858
Ashtabula, OH 44004

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 43087
(330)425-9171

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Ohio EPA DAPC, Northeast District Office. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

# A. Standard Terms and Conditions

## 1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

*(Authority for term: ORC 3704.036(A))*

## *2.* Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))*

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))*

c) The permittee shall submit required reports in the following manner:

(1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

(2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.
If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.
See A.29 below if no deviations occurred during the quarter.
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

(3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.
In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.
These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.
If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))*

(4) Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."

*(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))*

(5) Reports of any required monitoring and/or record keeping information shall be submitted to Ohio EPA DAPC, Northeast District Office.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

**3. Scheduled Maintenance**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

**4. Risk Management Plans**

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

*(Authority for term: OAC rule 3745-77-07(A)(4))*

**5. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.
*(Authority for term: OAC rule 3745-77-07(A)(5))*

**6. Severability Clause**

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
*(Authority for term: OAC rule 3745-77-07(A)(6))*

**7. General Requirements**

a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

b) 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 federally enforceable terms and conditions of this permit.

c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with Standard Term and Condition A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

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

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminent sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.
*(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))*

**8. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.
*(Authority for term: OAC rule 3745-77-07(A)(8))*

**9. Marketable Permit Programs**

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.
*(Authority for term: OAC rule 3745-77-07(A)(9))*

**10. Reasonably Anticipated Operating Scenarios**

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.
*(Authority for term: OAC rule 3745-77-07(A)(10))*

**11. Reopening for Cause**

This Title V permit will be reopened prior to its expiration date under the following conditions:

a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

*(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))*

**12. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.
*(Authority for term: OAC rule 3745-77-07(B))*

**13. Compliance Requirements**

a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c) The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

(1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

a. An identification of each term or condition of this permit that is the basis of the certification.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittent.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period.

e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

(3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

*(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))*

**14. Permit Shield**

a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

*(Authority for term: OAC rule 3745-77-07(F))*

**15. Operational Flexibility**

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with,

or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).
*(Authority for term: OAC rules 3745-77-07(H)(1) and (2))*

**16. Emergencies**

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.
*(Authority for term: OAC rule 3745-77-07(G))*

**17. Off-Permit Changes**

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.
*(Authority for term: OAC rule 3745-77-07(I))*

**18. Compliance Method Requirements**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by

law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.
*(This term is provided for informational purposes only.)*

**19. Insignificant Activities or Emissions Levels**

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.
*(Authority for term: OAC rule 3745-77-07(A)(1))*

**20. Permit to Install Requirement**

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.
*(Authority for term: OAC rule 3745-77-07(A)(1))*

**21. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.
*(Authority for term: OAC rule 3745-77-07(A)(1))*

**22. Permanent Shutdown of an Emissions Unit**

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the responsible official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.
After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.
No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.
*(Authority for term: OAC rule 3745-77-01)*

**23. Title VI Provisions**

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 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 specified in 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.

*(Authority for term: OAC rule 3745-77-01(H)(11))*

**24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only**

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**25. Records Retention Requirements Under State Law Only**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

**26. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine

whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.
*(Authority for term: OAC rule 3745-77-07(C))*

**27. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**28. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.
*(Authority for term: OAC rule 3745-77-01(C))*

**29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations**

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.
The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or

b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or

c) where the company's responsible official has certified that an emissions unit has been permanently shut down.

# B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

2. The following insignificant emissions units are located at the facility:

   P007 - Potassium hydroxide solution concentrator, comprised of an evaporator and a condenser (PTI 02-09680); and

   T002 - 6,100 gallon storage tank for chloropicrin with adsorptive (disposable) carbon system to control OC emissions (PTI 02-05971).

   Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more applicable requirements contained in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, and 3745-21.

3. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

   F001 - Potassium chloride (KCl) railcar unloading;

   F002 - Potassium chloride storage pile(s) with a cover to control particulate emissions from wind erosion;

   T003 - 6,100 gallon storage tank for chloropicrin with adsorptive (disposable) carbon system to control OC emissions;

   T004 - 28,425 gallon storage tank for chlorine (North Chlorine AST);

   T005 - 28,425 gallon storage tank for chlorine (South Chlorine AST);

   T006 - 247,100 gallon storage tank for potassium hydroxide (Tank 2 scrap KOH);

   T007- 253,358 gallon storage tank for 45% potassium hydroxide (Tank 3 45% KOH);

   T008 - 253,358 gallon storage tank for 50% potassium hydroxide (Tank 4 50% KOH);

   T009 - 246,071 gallon storage tank for 45% potassium hydroxide (Tank 5 45% KOH);

   T010 - 247,100 gallon storage tank for 45% potassium hydroxide (Tank 6 45% KOH);

   T011 - 12,044 gallon storage tank for hydrochloric acid (Tank 1015 HCl AST);

   T012 - 12,532 gallon storage tank for sulfuric acid ($H_2SO_4$ AST); and

   T013 - 49,289 gallon storage tank for liquid potassium carbonate (Tank 1 liquid $K_2CO_3$).

4. MACT Rule(s) Applicability - The following emissions units contained in this permit are subject to 40 CFR Part 63, Subpart IIIII: P001 and P005. The complete Maximum Achievable Control Technology (MACT) requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Ohio EPA, Northeast District Office.

   a) Mercury emissions shall not exceed 0.076 gram per megagram of chlorine produced ($1.5 \times 10^{-4}$ lb Hg/ton $Cl_2$) from all by-product hydrogen stream(s) and all end box ventilation system vents when both types of emissions points are present. These emissions points are associated with emissions unit (P001) chlor-alkali process.

      [Authority for term: 40 CFR 63.8190(a)(2)(i)]

   b) The cooling tower, blower and other associated equipment (P005) is an ancillary operation used in the manufacture of product chlorine, product caustic and by-product hydrogen at a plant site as defined in 40 CFR 63.8184(a). The mercury emissions from this emissions unit are not subject to the emissions limitation in 40 CFR 63.8190(a)(2)(i) according to a 7/07/09 U.S. EPA, Region V evaluation.

      [Authority for term: 40 CFR 63.8264]

5. Mercury Cell Chlor-Alkali Plant MACT Work Practice Standards & General MACT Requirements

   a) The permittee must meet the work practice standards in Tables 1 through 4 of Subpart IIIII of 40 CFR Part 63, except as specified in 40 CFR 63.8192(g):

      (1) Table 1 – Design, Operation, and Maintenance Requirements;

      (2) Table 2 – Required Inspections;

      (3) Table 3 – Required Actions for Spills and Accumulations and Hydrogen and Mercury Vapor Leaks; and

      (4) Table 4 – Requirements for Mercury Liquid Collection.

   b) The permittee must adhere to the response intervals specified in Tables 1 through 4 of Subpart IIIII of 40 CFR Part 63 at all times. Non-adherence to the intervals in Tables 1 through 4 constitutes a deviation and must be documented and reported in the compliance report, as required by 40 CFR 63.8254(b), with the date and time of the deviation, cause of the deviation, a description of the conditions, and time actual compliance was achieved.

   c) As provided in 40 CFR 63.6(g), the permittee may request to use an alternative to the work practice standards in Tables 1 through 4 of Subpart IIIII of 40 CFR Part 63.

   d) The pemittee must institute a floor-level mercury vapor measurement program to limit the amount of mercury vapor in the cell room environment through periodic measurement of mercury vapor levels and actions to be taken when a floor-level mercury concentration action level is exceeded. The program must meet the requirements listed in 40 CFR 63.8192(d)(1) through (4). As specified in 40 CFR 63.8252(e)(1)(i) to implement this program, the permittee must prepare and submit to the Director a floor-level mercury vapor measurement plan which must contain the elements listed in Table 5 of Subpart IIIII of 40 CFR Part 63.

(1) The permittee must utilize a mercury measurement device described in Table 6 of Subpart IIIII of 40 CFR Part 63 to measure the level of mercury vapor in the cell room at floor-level.

(2) The permittee must conduct at least one floor-level mercury vapor measurement evaluation each half day. This evaluation must include three measurements of the mercury concentration at locations representative of the entire cell room floor area. The average of these measurements must be recorded as specified in 40 CFR 63.8156(c)(1). At a minimum, the permittee must measure the level of mercury vapor above mercury-containing cell room equipment, as well as areas around the cells, decomposers, or other mercury-containing equipment.

(3) The permittee must establish a floor-level mercury concentration action level that is no higher than 0.05 milligrams per cubic meter ($mg/m^3$).

(4) If a mercury concentration greater than the action level is measured during any floor-level mercury vapor measurement evaluation, the permittee must meet the requirements in either paragraph (d)(4)(i) or (ii) of 40 CFR 63.8192.

a. If the permittee determines that the cause of the elevated mercury concentration is an open electrolyzer, decomposer, or other maintenance activity, the permittee must record the information specified in 40 CFR 63.8192(d)(4)(i)(A) through (C) as follows:

i. a description of the maintenance activity resulting in elevated mercury concentration;

ii. the time the maintenance activity was initiated and completed; and

iii. a detailed explanation how all the applicable requirements of Table 1 of Subpart IIIII of Part 63 were met during the maintenance activity.

b. If the permittee determines that the cause of the elevated mercury concentration is not an open electrolyzer, decomposer, or other maintenance activity, the permittee must follow the procedures specified in paragraphs (d)(4)(ii)(A) and (B) of 40 CFR 63.8192 until the floor-level mercury concentration falls below the floor-level mercury concentration action level. The permittee must also keep all the associated records for these procedures as specified in Table 9 of Subpart IIIII of 40 CFR Part 63.

i. Within 1 hour of the time the floor-level mercury concentration action level was exceeded, the permittee must conduct each inspection specified in Table 2 of Subpart IIIII of 40 CFR Part 63 in the area where the concentration higher than the floor-level mercury concentration action level was measured, with the exception of the cell room floor and the pillars and beam inspections.

ii. The permittee must also inspect all decomposers, hydrogen system piping up to the hydrogen header, and other potential locations of mercury vapor leaks in the area using a technique specified in Table 6 of Subpart IIIII of 40 CFR Part 63. The permittee must correct any problem

identified during these inspections according to the requirements in Tables 2 and 3 of Subpart IIIII of Part 63.

e) The permittee must prepare, submit, and operate according to a written washdown plan designed to minimize fugitive mercury emissions through routine washing of surfaces where liquid mercury could accumulate. The written plan must address the elements contained in Table 7 of Subpart IIIII of 40 CFR Part 63.

f) The permittee must keep records of the mass of all virgin mercury added to cells on an annual basis.

g) As an alternative to the work practice standards in 40 CFR 63.8912(a) through (d), the permittee may institute a cell room monitoring program to continuously monitor the mercury vapor concentration in the upper portion of each cell room and to take corrective actions as quickly as possible when elevated mercury vapor levels are detected. As specified in 40 CFR 63.8252(e)(1)(iv), if the permittee chooses this option, the permittee must prepare and submit to the Administrator/Director, a cell room monitoring plan containing the elements listed in Table 5 of Subpart IIIII of 40 CFR Part 63 and meet the requirements in 40 CFR 63.8912(g)(1) through (4).

[Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.8192]

h) As required by 40 CFR 63.6(e)(1)(i), the permittee must always operate and maintain the affected source(s), including air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

[Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.8222]

i) The permittee must be in compliance with the applicable emission limitations for by-product hydrogen streams and end box ventilation system vents (specified) in 40 CFR 63.8190 at all times, except during periods of startup, shutdown, and malfunction. The permittee must be in compliance with the applicable work practice standards in 40 CFR 63.8192 at all times, except during periods of startup, shutdown, and malfunction.

[Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.8226(a)]

j) The permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions of 40 CFR 63.6(e)(3).

[Authority for term: OAC rule 3745-77-07(A)(1) and 40 CFR 63.8226(b)]

<u>Mercury Cell Chlor-Alkali Plant MACT Continuous Compliance Requirements</u>

6. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-7749, issued on 10/21/94 for P005: 7. through 12. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

7. The permittee has selected the periodic monitoring option specified in 40 CFR 63.8240(b), which requires that the permittee periodically monitor the mercury emissions according to the requirements in 40 CFR 63.8242(b) and 40 CFR 63.8244(b).

   [Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.8240]

   [NOTE: In accordance with 40 CFR 63.8242(b), since the permittee has chosen the periodic monitoring option and the final control device is nonregenerable carbon adsorber, the permittee is not required to install, operate, and maintain a continuous parameter monitoring system (CPMS) for each parameter specified in 40 CFR 63.8232(f)(1), according to 40 CFR 63.8(c).]

8. Since the final control device is a nonregenerable carbon adsorber, the permittee must conduct at least three test runs per week meeting the criteria specified in 40 CFR 63.8232(c)(1) and (2) to measure mercury emissions using the test methods specified in 40 CFR 63.8232(d). Alternatively, the permittee may use any other method that has been validated using the applicable procedures in 40 CFR Part 63, Appendix A, Method 301.

   [Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.8244(b)]

9. For all by-product hydrogen streams and all end box ventilation system vents, if applicable, the permittee must demonstrate continuous compliance with the applicable mercury emission limit by reducing the mercury emissions data to 52-week averages using Equation 1 of 40 CFR 63.8243 and maintaining the 52-week average mercury emissions no higher than the applicable mercury emissions limit in 40 CFR 63.8190(a)(2). To obtain the data to calculate these 52-week averages, the permittee must monitor in accordance with 40 CFR 63.8246(a)(1)(i) or (ii).

10. Since the permittee has chosen the periodic monitoring option, the permittee must conduct at least three test runs per week to collect mercury emissions samples according to 40 CFR 63.8244(b)(1) and (2)(i).

    [NOTE: Since the final control device is nonregenerable carbon adsorber, the permittee is not required to collect data for monitoring values according to 40 CFR 63.8244(b)(2)(ii) through (v).]

11. The permittee must maintain records of mercury emissions and 52-week average values, as required in 40 CFR 63.8256(b)(3) and (4).

    [NOTE: Since the final control device is a nonregenerable carbon adsorber, the permittee is not required to maintain records according to 40 CFR 63.8256(d).]

12. The permittee must demonstrate continuous compliance with the applicable work practice standards in 40 CFR 63.8192 by maintaining records in accordance with 40 CFR 63.8256(c).

    [Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.8246]

    <u>Mercury Cell Chlor-Alkali Plant MACT Record Keeping Requirements</u>

13. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-7749, issued on 10/21/94 for P005: 14. through 16. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these

requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

14. The permittee must keep general records as follows:

    a) a copy of each notification and report submitted to comply with Subpart IIIII of 40 CFR Part 63, including all documentation supporting any initial notification or Notification of Compliance Status submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv); and

    b) the records in 40 CFR 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

15. The permittee must keep records associated with the by-product hydrogen stream and end box ventilation system vent emission limitations, related to the emission limitations in 40 CFR 63.8190(a)(2) through (3) and (b) which include the following:

    a) records of performance tests as required in 40 CFR 63.10(b)(2)(viii);

    b) records of the mercury emissions monitoring conducted during the performance tests;

    c) records of the periodic mercury emissions monitoring data;

    d) records of the 52-week rolling average mercury emissions; and

    e) records of chlorine production on a weekly basis.

16. The permittee must keep records associated with the work practice standards which include the following:

    a) if the permittee chooses not to institute a cell room monitoring program according to 40 CFR 63.8192(g), the records specified in 40 CFR 63.8256(c)(1)(i) through (v);

        (1) records specified in Table 9 of Subpart IIIII of 40 CFR Part 63 related to the work practice standards in Tables 1 through 4 of Subpart IIIII of 40 CFR Part 63;

        (2) the current floor-level mercury vapor measurement plan;

        (3) the records of the average value calculated from at least three measurements taken according to the floor-level mercury vapor measurement plan;

        (4) the records indicated in 40 CFR 63.8192(d)(4)(i) for maintenance activities that cause the floor-level mercury concentration to exceed the action level; and

        (5) records of all inspections and corrective actions taken in response to a non-maintenance related situation in which the mercury vapor concentration exceeds the floor-level mercury concentration action level.

    b) a copy of the current washdown plan and records of when each washdown occurs; and

    c) records of the mass of virgin mercury added to cells for each reporting period.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.8256]

Mercury Cell Chlor-Alkali Plant MACT Reporting Requirements

17. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-7749, issued on 10/21/94 for P005: 18. through 21. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

    [OAC rule 3745-77-07(A)(3)(a)(ii)]

18. Compliance reports must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31, and must be postmarked or delivered no later than July 31 or January 31, respectively.

19. Each compliance report must contain the information in 40 CFR 63.8254(b)(1) through (3), and as applicable, 40 CFR 63.8254(b)(4) through (12).

    a) company name and address;

    b) statement by a responsible official, with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the report; and

    c) date of report and beginning and ending dates of the reporting period.

    d) If there was a startup, shutdown or malfunction during the reporting period and the permittee took actions consistent with the startup, shutdown, and malfunction plan, the compliance report must include the information in 40 CFR 63.10(d)(5)(i).

    e) If there were no deviations from the continuous compliance requirements in 40 CFR 63.8246 that apply to the permittee, a statement that there were no deviations from the emission limitations, work practice standards, and operation and maintenance standards during the reporting period.

    f) For each deviation from the requirements for work practice standards in Tables 1 through 4 to this subpart that occurs at an affected source (including deviations where the response intervals were not adhered to as described in 40 CFR 63.8192(b), the compliance report must contain the information in 20.a) through 20.d) and the information in 20)(f)(1) and (2). This includes periods of startup, shutdown, and malfunction.

        (1) the total operating time of each affected source during the reporting period; and

        (2) information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

    g) The compliance report must contain the mass of virgin mercury added to cells for the reporting period.

20. If the permittee took an action during a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with the startup, shutdown, and malfunction plan required in 40

CFR 63.8226(b), and the source exceeded any applicable emission limitation in Subpart IIIII of 40 CFR Part 63, the permittee must submit an immediate startup, shutdown, and malfunction report according to the requirements in 40 CFR 63.10(d)(5)(ii).

21. Some of the contents of a semi-annual "MACT" compliance report, required by 40 CFR 63.8254(b), may be included in a quarterly deviation report, required by A.2.c.(2) for deviations of emission limitations, operational restrictions and control device operating parameter limitations. Some of the contents of a semi-annual "MACT" compliance report, required by 40 CFR 63.8254(b), may be included in a semi-annual deviation report, required by A.2.c.(3), for other deviations not required by A.2.c.(2) and including any monitoring, record keeping, and reporting requirement deviations. The quarterly deviation report, required by A.2.c.(2), and the semi-annual deviation report, required by A.2.c.(3), must cross-reference the semi-annual "MACT" compliance report requirements.

    [Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.8254]

    Mercury Cell Chlor-Alkali Plant MACT Compliance Methods and Testing Requirements

22. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #02-7749, issued on 10/21/94 for P005: 23. through 27. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

    [OAC rule 3745-77-07(A)(3)(a)(ii)]

    *Initial Compliance Requirements*

23. On 3/07/06 and 3/17/06, the permittee had conducted a performance test, in accordance with 40 CFR 63.7(e)(1) and 40 CFR 63.8232(a) through (e) on the end box ventilation system vent and by-product hydrogen stream, respectively, both associated with emissions unit P001, and determined an emissions rate of 0.000761 gram of mercury per megagram of chlorine produced (0.000761 g Hg/Mg $Cl_2$) via U.S. EPA Methods 101 and 102 of 40 CFR Part 61, Appendix B, respectively, and via applicable equations in 40 CFR 63.8234.

24. For this mercury cell chlor-alkali production facility, the permittee has demonstrated initial compliance with the emission limit of 0.076 g Hg/Mg $Cl_2$ for by-product hydrogen streams and end box ventilation system vents specified in 40 CFR 63.8190(a)(2) if the permittee complies with 40 CFR 63.8236(a)(1): total mercury emission rate from all by-product hydrogen streams and all end box ventilation system vents, if applicable, at the affected source, determined according to 40 CFR 63.8232 and 40 CFR 63.8234(a), did not exceed the applicable emission limit of 0.076 g Hg/Mg $Cl_2$ as specified in 40 CFR 63.8190(a)(2)(i).

    [NOTE: In accordance with 40 CFR 63.8236(2), since the permittee has chosen the periodic monitoring option specified in 40 CFR 63.8240(b) and the final control device is nonregenerable carbon adsorber, the permittee is not required to establish a parameter value according to 40 CFR 63.8232(f)(2).]

25. For this affected source, the permittee has demonstrated initial compliance with the applicable work practice standards in 40 CFR 63.8192 with the 5/13/04 submittal of the Initial Notification which certifies compliance in accordance with the requirements of 40 CFR 63.8236(c)(1) through (7).

26. As required by 40 CFR 63.8236(d) the permittee has demonstrated initial compliance with the 4/05/06 submittal of Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.8252(e).

    [Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.8236]

27. Compliance with the allowable emission limitation in B.4.a) of these terms and conditions shall be determined in accordance with the following methods:

    a) Emission Limitation:

    Mercury emissions shall not exceed 0.076 g Hg/Mg $Cl_2$ produced from all by-product hydrogen stream(s) and all end box ventilation system vents.

    Applicable Compliance Method:

    Compliance shall be determined using the procedures in 40 CFR 63.8243(a)(1) through (3):

    (1) Each week, the permittee must determine the weekly mercury emission rate in grams per week for each by-product hydrogen stream and for each end box ventilation system vent, if applicable, using the periodic monitoring option according to 40 CFR 63.8244(b).

    (2) Each week, the permittee must determine the chlorine production and keep records of the production rate as required under 40 CFR 63.8256(b)(6).

    (3) Beginning 52 weeks after the compliance date specified in 40 CFR 63.8186 for the affected source, the permittee must calculate the 52-week average mercury emission rate from all by-product hydrogen steam and all end box ventilation system vents, if applicable, using Equation 1 of this section as follows:

$$E_{Hg} = \sum_{i=1}^{52} \left[ \frac{\left(R_{week_i}\right)}{\left(P_{Cl_2,week_i}\right)} \right] \quad (Eq.\ 1)$$

    where:

    $E_{Hg}$= 52-week average mercury emission rate for $week_i$, g Hg/Mg $Cl_2$;

    $R_{week,\ i}$= Mercury emission rate for $week_i$ as specified in a)(1), g Hg/week; and

    $P_{Cl2,\ weeki}$= Amount of chlorine produced during $week_i$, as specified in a)(2),Mg $Cl_2$/week.

    [Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.8243]

Consent Order and Supplementary Environmental Projects

28. A December, 2004 complaint included an account of numerous violations of the surface water discharge limits and monitoring violations within the National Pollutant Discharge Elimination System permit for mercury, phenolics, pH, acute toxicity for ceriodaphnia dubia, and acute toxicity for pimephales promelas. The 11/18/04 consent order no. 2001-CV-982 includes the following requirements to reduce and monitor air pollution and surface water pollution:

a) achieve an accelerated deadline of 7/01/06 instead of 12/19/06 for final compliance with the Mercury Cell Chlor-Alkali MACT rule, 40 CFR Part 63, Subpart IIIII, which was completed on 12/05 with the installation and operation of additional equipment to control mercury emissions to the air from the hydrogen exhaust stream and from the end box air exhaust stream associated with (P001) mercury cell chlor-alkali process; and

b) install and operate additional fugitive mercury controls beyond the requirements of 40 CFR Part 63, Subpart IIIII by 5/25/08 as stated in the 4/09/08 second amendment to the consent order for the installation and operation of the following supplementary environmental projects (SEPs);

(1) cell "basement" floor upgrade for installation of a sloped floor to allow for proper drainage to water-sealed trenches and mercury collection traps, and application of a non-porous, corrosion resistant coating material. This project was completed prior to 9/26/07;

(2) multi-panel cell maintenance cover to collect mercury vapors from a cell when the "permanent" cell lid is removed for maintenance with a connection to vent collected mercury vapors to an absorptive carbon system. This project was completed by 5/09/08;

(3) central vacuum system to recover elemental mercury via vacuum recovery points positioned along the cell floor and lower level basement and vent collected mercury vapors to a carbon adsorption system which vents cleaned air back to the cell floor area at P001. The project was completed by 5/09/08; and

(4) containment areas to capture fugitive mercury emissions during maintenance of equipment associated with P001 and vent exhausts to an outdoor carbon drum system. These projects were completed by 5/09/08 and include the following:

a. mercury pump maintenance room for mercury pumps removed from a decomposer mercury sump, which will be stored under a water seal prior to and after maintenance tasks;

b. decomposer rebuild room for graphite changeout and maintenance; and

c. potassium hydroxide (KOH) mercury filter area, which is comprised of two mercury vapor capture systems:

i. filter precoat tank with a filter blowdown tank each have sealed tops that are vented to an adsorptive carbon system; and

ii. filter press & hopper rebuild/maintenance room, under negative pressure, has a fume hood that exhausts to a preheater & adsorptive carbon system.

29. Monitoring and/or Recordkeeping Requirements of Consent Order & SEP Requirements

a) The permittee shall inspect and record the inspection and associated tasks in accordance with a standard operating procedure on a monthly basis for the following:

(1) the cell floor and cell "basement" floor (via task no. 1M-O-T001-MACT or a revised procedure);

(2) the multi-panel cell maintenance cover; and

(3) the central vacuum system.

b) The permittee shall monitor and record the mercury concentrations from all adsorptive carbon systems exhausts in accordance with a standard operating procedure (i.e. "Fugitive Emission Control Device Monitoring – Procedure No. ENV-18") on a monthly basis for the following:

(1) the mercury pump maintenance room;

(2) decomposer rebuild room; and

(3) the potassium hydroxide (KOH) mercury filter area, which is comprised of two mercury vapor capture systems:

a. filter precoat tank with a filter blowdown tank each have sealed tops that are vented to an adsorptive carbon system; and

b. filter press & hopper rebuild/maintenance room.

[Authority for term: consent order no. 2001-CV-982]

30. Reporting Requirements of Consent Order & SEP Requirements

a) The permittee shall submit a quarterly deviation report, required by A.2.c.(2) for deviations of operational restrictions and control device operating parameter limitations required by paragraphs 8(a) and 8(b) of the consent order.

b) The permittee shall submit a semi-annual deviation report, required by A.2.c.(3), for other deviations not required by A.2.c.(2) and including any deviations of monitoring, record keeping, and reporting requirements required by paragraphs 8(a) and 8(b) of the consent order.

[Authority for term: consent order no. 2001-CV-982]

31. Miscellaneous Requirements

a) The final control device on each of the end box air stream and the hydrogen stream (associated with P001) is a nonregenerable carbon adsorber.

b) The permittee has chosen to comply with the work practice standards in Tables 1-4 and has instituted a floor-level mercury vapor measurement program, as specified in 40 CFR 63.8192(a) through (d) instead of adopting the alternative continuous mercury vapor cell room monitoring program, as specified in 40 CFR 63.8192(g).

c) The permittee has chosen to comply with the periodic mercury emissions monitoring program for each of the end box air stream and the hydrogen stream (associated with P001) in accordance with 40 CFR 63.8240(b) instead of continuously monitoring each vent stream, as specified in 40 CFR 63.8240(a).

# C. Emissions Unit Terms and Conditions

**1. B001, 9.7 mmBtu/hr natural gas & hydrogen fired (north) boiler**

**Operations, Property and/or Equipment Description:**

9.7 mmBtu/hr natural gas & hydrogen fired (north) boiler

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| a. | OAC rule 3745-17-07(A) | Visible particulate emissions (PE) from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| b. | OAC rule 3745-17-10(B)(1) | The PE rate shall not exceed 0.020 lb/mmBtu of actual heat input, whenever natural gas fuel is combusted. |
| c. | OAC rule 3745-31-05(A)(3) (PTI 02-05971) | The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and OAC rule 3745-17-10(B)(1). See b)(2)a through b)(2)c. |
| d. | OAC rule 3745-31-05(E) | See b)(2)c. |

(2) Additional Terms and Conditions

a. The fuel combusted in this emissions unit shall consist of natural gas, by-product hydrogen gas or a combination of both natural gas and by-product hydrogen.

b. The air pollutant emissions from this emissions unit shall not exceed the limits specified below:

i. 1 ton/year PE;

ii. 0.006 lb/hr and 0.025 ton/year sulfur dioxide ($SO_2$);

iii. 0.81 lb/hr and 3.55 tons/year carbon monoxide (CO);

iv. 0.97 lb/hr and 7.65 tons/year nitrogen oxides ($NO_X$); and

v. 0.039 lb/hr, as a weekly average, and 0.17 ton/year mercury (Hg).

The hourly $SO_2$, CO and $NO_X$ emission limitations were established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with these short term emission limitations. Based on these hourly potential emission rates, the unrestricted potential to emit $SO_2$, CO and $NO_X$ emissions from this emissions unit, based on 8,760 hours of operation per year, is 0.025 ton/year $SO_2$, 3.55 tons/year CO and 7.65 tons/year $NO_X$.

c. The maximum mercury content in the hydrogen fuel burned in this emissions unit shall not exceed 0.221 milligram per cubic meter (0.221 mg Hg/$m^3$) of by-product hydrogen, as a weighted, arithmetic average of the analytical results provided by the permittee, as specified in B.8., during each calendar week.

[Authority for term: OAC rule 3745-31-05(E) for OAC rule 3745-31-05(A)(3)]

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-05971, issued on 10/30/91 and modified on 9/14/06: d)(2) through d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall perform weekly checks, when this emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log for each emissions unit:

a. the company identification and Ohio EPA emissions unit identification number;

b. the color of the emissions;

c. whether the emissions are representative of normal operations;

d. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

e. the total duration of any visible emission incident; and

f. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (e) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(3) The permittee shall maintain weekly records of the following information for this emissions unit as specified below:

a. the company identification and Ohio EPA emissions unit identification number; and

[Authority for term: PTI 02-05971 and OAC rule 3745-77-07(C)(1)]

b. the mercury content in the hydrogen fuel burned, in mg $Hg/m^3$, as a weekly weighted, arithmetic average of the analytical results of the by-product hydrogen stream, as specified in B.8.

[Authority for term: OAC rule 3745-31-05(E) for OAC rule 3745-31-05(A)(3)and OAC rule 3745-77-07(C)(1)]

(4) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit’s maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified Permit to Install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4)]

e) Reporting Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-05971, issued on 10/30/91 and modified on 9/14/06: e)(2) and e)(3). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permits to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall submit semiannual written reports that identify:

a. the company identification and Ohio EPA emissions unit identification number of this emissions unit;

b. all days during which any visible particulate emissions were observed from any of the stack(s) serving this emissions unit; and

c. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. the company identification and Ohio EPA emissions unit identification number of this emissions unit; and

b. any exceedance of the hydrogen fuel mercury content limitation specified in b)(2)c, and the actual weekly weighted, arithmetic average of the analytical results of the by-product hydrogen stream during any exceedance.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit, A.2.

[Authority for term: OAC rule 3745-15-03(B)(1)(a), OAC rule 3745-15-03(C) and OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #02-05971, issued on 10/30/91 and modified on 9/14/06: f)(2). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permits to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) Compliance with the allowable emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

Visible PE from any stack, associated with this emissions unit, shall not exceed 20 percent opacity as a six-minute average, except as specified by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible PE observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

[Authority for term: OAC rule 3745-17-03(B)(1)(a)]

b. Emission Limitation:

The PE rate shall not exceed 0.020 lb/million Btu of actual heat input, whenever natural gas fuel is combusted.

Applicable Compliance Method:

To determine the maximum PE rate the following equation may be used:

E(mmBtu)_PE = (Q x EF_PE)/H

where:

E(mmBtu)_PE = the PE rate, which is 0.0019 lb/mmBtu of actual heat input;

Q = maximum natural gas fuel inflow rate, which is 9,656 cubic feet/hr ($ft^3$/hr) as noted in the application for PTI# 02-05971;

EF_PE = emissions factor for filterable PE, which is 1.9 lbs PE per 1,000,000 $ft^3$ of natural gas fuel as noted in Table 1.4-2 in AP-42, Chap. 1.4 (7/98); and

H = maximum heat input, which is 9.7 mmBtu/hr, which is determined by multiplying the maximum gas inflow rate of 9,656 cubic $ft^3$/hr by the average heat content of natural gas of 1,020 Btu/$ft^3$ and dividing by 1,000,000 Btu/mmBtu.

[Authority for term: OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

The PE rate shall not exceed 1 ton/year.

Applicable Compliance Method:

To determine the maximum PE rate the following equation may be used:

E(YR)_PE = E(mmBtu)_PE x H x HRS/year x ton PE/2000 lbs PE

where:

E(YR)_PE = the maximum, annual PE rate, which is 0.07 ton/year; and

HRS = maximum annual hours of operation, which is 8,760 hours/year.

[Authority for term: OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Mercury emissions shall not exceed 0.039 lb/hr, as a weekly average.

Applicable Compliance Method:

To determine the "worst case", hourly mercury (Hg) emissions, the following equation may be used:

EH_Hg = Q x $dsm^3$/35.3145 $dsft^3$ x $C_{Hg}$ x 1 g Hg/1,000 mg Hg
x 0.002205 lb Hg/g Hg

where:

EH_Hg = the worst case hourly, Hg emissions, which is 0.00013 lb/hr;

Q = maximum natural gas fuel inflow rate, which is 9,656 $ft^3$/hr as noted in the application for PTI 02-05971; and

$C_{Hg}$ = the hydrogen fuel mercury content limitation, which is 0.221 mg Hg/$dsm^3$, developed from assumptions that combined emissions from the by-product hydrogen stream and all end box ventilation system vents are no more than 0.076 g Hg/Mg $Cl_2$, the emissions limit specified in B.4.a). and engineering estimates based on a maximum production rates of 145 ton $Cl_2$/day (131.6 Mg $Cl_2$/day) and 4.0 ton $H_2$/day as discussed in Ashta Chemicals' 2/24/10 e-mail.

If required, the following test method(s) shall be employed to demonstrate compliance with the hourly allowable mass emissions rate(s): Method 102, as found in 40 CFR Part 61, Appendix B. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

Mercury emissions shall not exceed 0.17 ton/year.

Applicable Compliance Method:

To determine the "worst case", annual mercury (Hg) emissions, the following equation may be used:

E(YR)_Hg = EH_Hg x ton/2000 lbs x HRS/yr

where:

E(YR)_Hg = the worst case annual mercury emissions rate, which is 0.00057 ton;

EH_Hg = the worst case hourly, Hg emissions rate, which is 0.00013 lb/hr; and

HRS = maximum annual hours of operation, which is 8,760 hours/year.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

$SO_2$ emissions shall not exceed 0.006 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated as follows:

EH_ $SO_2$ = Q x EF_ $SO_2$

where:

EH_ $SO_2$ = the hourly $SO_2$ emissions rate, which is 0.0058 lb $SO_2$/hr; and

Q = maximum natural gas fuel inflow rate, which is 9,656 $ft^3$/hr as noted in the application for PTI 02-05971; and

EF_ $SO_2$ = emissions factor for $SO_2$, which is 0.6 lbs $SO_2$ per 1,000,000 $ft^3$ of natural gas fuel as noted in Table 1.4-2 in AP-42, Chap. 1.4 (7/98).

[Authority for term: OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

CO emissions shall not exceed 0.81 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated as follows:

EH_CO = Q x EF_CO

where:

EH_CO = the hourly CO rate, which is 0.81 lb/hr;

Q = maximum natural gas fuel inflow rate, which is 9,656 $ft^3$/hr as noted in the application for PTI 02-05971; and

EF_CO = emissions factor for CO, which is 84 lbs CO per 1,000,000 $ft^3$ of natural gas fuel as noted in Table 1.4-1 of AP-42 Chap. 1.4 (7/98).

[Authority for term: OAC rule 3745-77-07(C)(1)]

h. Emission Limitation:

$NO_X$ emissions shall not exceed 0.97 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated as follows:

$EH_NO_X = Q \times EF_NO_X$

where:

$EH_NO_X$ = the hourly $NO_X$ rate, which is 0.97 lb/hr;

Q = maximum natural gas fuel inflow rate, which is 9,656 $ft^3$/hr as noted in the application for PTI 02-05971; and

$EF_NO_X$ = emissions factor for $NO_X$, which is 100 lbs $NO_X$/1,000,000 $ft^3$ of natural gas as noted in Table 1.4-1 of AP-42 Chap. 1.4 (7/98).

[Authority for term: OAC rule 3745-77-07(C)(1)]

i. Emission Limitation(s):

The $SO_2$ emissions shall not exceed 0.025 ton/year.

The CO emissions shall not exceed 3.55 tons/year.

The $NO_X$ emissions shall not exceed 7.65 tons/year.

Applicable Compliance Method:

Compliance may be demonstrated as follows:

E(YR)_Pollutant = EH_Pollutant x HRS/year x ton/2000 lbs

where:

E(YR)_Pollutant = the annual emissions of the specified pollutant which are: 0.025 ton/year $SO_2$, 3.55 tons/year CO and 4.25 tons/year $NO_X$;

EH_Pollutant = the maximum, hourly emissions of $SO_2$, CO and $NO_X$ from natural gas combustion, as specified in f)(2)f through f)(2)h; and

HRS = maximum annual hours of operation, which is 8,760 hours/year.

[Authority for term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) Per 40 CFR 63.8266 a mercury cell chlor-alkali production facility means an affected source consisting of all cell rooms and ancillary operations used in the manufacture product chlorine, product caustic, and by-product hydrogen at a mercury cell chlor-alkali plant. Since by-product hydrogen is not manufactured at either emissions unit, the requirements of 40 CFR 63.8184(a)(1), 40 CFR Part 63 Subpart IIIII, National Emission Standards for Hazardous Air Pollutants for Mercury Emissions from Mercury Cell Chlor-Alkali Plants is not applicable to emissions unit B001.

**2. B002, 8.4 mmBtu/hr natural gas & hydrogen fired (south) boiler**

**Operations, Property and/or Equipment Description:**

8.4 mmBtu/hr natural gas & hydrogen fired (south) boiler

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| a. | OAC rule 3745-17-07(A) | Visible particulate emissions (PE) from any stack serving either of this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| b. | OAC rule 3745-17-10(B)(1) | The emissions limitation specified by this rule is less stringent than the emission limitation(s) established pursuant to OAC rule 3745-31-05(A)(3). |
| c. | OAC rule 3745-31-05(A)(3) | The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). See b)(2)a through b)(2)c. |
| d. | OAC rule 3745-31-05(E) | See b)(2)c. |

(2) Additional Terms and Conditions

a. The fuel combusted in this emissions unit shall consist of natural gas, by-product hydrogen gas or a combination of both natural gas and by-product hydrogen.

b. The air pollutant emissions from this emissions unit shall not exceed the limits specified below:

i. 0.05 lb/hr and 0.22 ton/year PE;

ii. 0.71 lb/hr and 3.10 tons/year CO;

iii. 0.84 lb/hr and 3.68 tons/year $NO_X$;

iv. 0.05 lb/hr and 0.22 ton/year of volatile organic compound (VOC); and

v. 100 grams/day, as a weekly average, and 0.040 ton/year Hg.

The hourly CO, $NO_X$ and VOC emission limitations were established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with these short term emission limitations. Based on these hourly potential emission rates, the unrestricted potential to emit CO, $NO_X$ and VOC emissions from this emissions unit, based on 8,760 hours of operation per year, is 3.10 tons/year CO, 3.68 tons/year $NO_X$ and 0.22 ton/year VOC.

c. The maximum mercury content in the hydrogen fuel burned in this emissions unit shall not exceed 0.221 milligram per cubic meter (0.221 mg Hg/$m^3$) of by-product hydrogen, as a weighted, arithmetic average of the analytical results provided by the permittee, as specified in B.8., during each calendar week.

[Authority for term: OAC rule 3745-31-05(E) for OAC rule 3745-31-05(A)(3)]

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-09680, issued on 2/14/96 and modified on 2/28/06: d)(2) through d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall perform weekly checks, when this emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log for each emissions unit:

a. the company identification and Ohio EPA emissions unit identification number;

b. the color of the emissions;

c. whether the emissions are representative of normal operations;

d. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

e. the total duration of any visible emission incident; and

f. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (e) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(A)(3)]

(3) The permittee shall maintain weekly records of the following information for this emissions unit as specified below:

a. the company identification and Ohio EPA emissions unit identification number; and

[Authority for term: PTI 02-09680 and OAC rule 3745-77-07(C)(1)]

b. the mercury content in the hydrogen fuel burned, in mg $Hg/m^3$, as a weekly weighted, arithmetic average of the analytical results of the by-product hydrogen stream, as specified in B.8.

[Authority for term: OAC rule 3745-31-05(E) for OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

(4) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit’s maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified Permit to Install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4)]

e) Reporting Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-09680, issued on 2/14/96 and modified on 2/28/06: e)(2) and e)(3). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permits to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall submit semiannual written reports that identify:

a. the company identification and Ohio EPA emissions unit identification number of this emissions unit;

b. all days during which any visible particulate emissions were observed from any of the stack(s) serving this emissions unit; and

c. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. the company identification and Ohio EPA emissions unit identification number of each emissions unit; and

b. any exceedance of the hydrogen fuel mercury content limitation specified in b)(2)c, and the actual weekly weighted, arithmetic average of the analytical results of the by-product hydrogen stream during any exceedance.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit, A.2.

[Authority for term: OAC rule 3745-15-03(B)(1)(a), OAC rule 3745-15-03(C) and OAC rule 3745-77-07(A)(3)(c)]

f) Testing Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #02-09680, issued on 2/14/96 and modified on 2/28/06: f)(2). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permits to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) Compliance with the allowable emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

Visible PE from any stack serving either of this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible PE observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

[Authority for term: OAC rule 3745-17-03(B)(1)(a)]

b. Emission Limitation:

Mercury emissions shall not exceed 100 grams/day, as a weekly average.

Applicable Compliance Method:

Compliance may be demonstrated according to the following equation:

E(DAY)_Hg = Q x $dsm^3$/35.3145 $dsft^3$ x $C_{Hg}$ x 1 g Hg/1,000 mg Hg x HRS/day

where:

E(DAY)_Hg = the worst case daily Hg emissions, which is 1.3 grams/day;

Q = maximum natural gas fuel inflow rate, which is 8,400 $ft^3$/hr as noted in the application for PTI# 02-09680;

$C_{Hg}$ = the hydrogen fuel mercury content limitation, which is 0.221 mg Hg/$dsm^3$; and

HRS = the maximum daily hours of operation, which is 24 HRS/day.

If required, the following test method(s) shall be employed to demonstrate compliance with the daily allowable mass emissions rate: Method 102, as found in 40 CFR Part 61, Appendix B. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

[Authority for term: OAC rule 3745-77-07(C)(1)]

c. Emission Limitation(s):

Mercury emissions shall not exceed 0.040 ton/year.

Applicable Compliance Method:

Compliance may be demonstrated according to the following equation:

E(YR)_Hg = E(DAY)_Hg x 0.002205 lb Hg/g Hg x ton/2000 lbs x HRS/yr

where:

E(YR)_Hg = the worst case annual mercury emissions rate, which is 0.013 ton;

E(DAY)_Hg] = the worst case daily Hg emissions rate, which is 1.3 grams/day; and

HRS = maximum annual hours of operation, which is 8,760 hours/year.

[Authority for term: OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

PE shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

To determine the maximum PE rate the following equation may be used:

EH_PE = Q x EF_PE

where:

EH_PE = the hourly PE rate, which is 0.016 pound per hour; and

Q = maximum natural gas fuel inflow rate, which is 8,400 $ft^3$/hr as noted in the application for PTI 02-09680.

[Authority for term: OAC rule 3745-77-07(C)(1)]

e. Emission Limitation(s):

VOC emissions shall not exceed 0.05 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated as follows:

EH_ VOC = Q x EF_ VOC

where:

EH_ VOC = the hourly VOC emissions rate, which is 0.046 lb VOC/hr; and

EF_ VOC = emissions factor for VOC, which is 5.5 lbs VOC per 1,000,000 $ft^3$ of natural gas fuel as noted in Table 1.4-2 in AP-42, Chap. 1.4 (7/98).

[Authority for term: OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

CO emissions shall not exceed 0.71 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated as follows:

EH_CO = Q x EF_CO

where:

EH_CO = the hourly CO rate, which is 0.71 lb/hr;

Q = maximum natural gas fuel inflow rate, which is 8,400 $ft^3$/hr as noted in the application for PTI 02-09680; and

EF_CO = emissions factor for CO, which is 84 lbs CO per 1,000,000 $ft^3$ of natural gas fuel as noted in Table 1.4-1 of AP-42 Chap. 1.4 (7/98).

[Authority for term: OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

$NO_X$ emissions shall not exceed 0.84 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated as follows:

$EH_NO_X = Q \times EF_NO_X$

where:

$EH_NO_X$ = the hourly $NO_X$ rate, which is 0.84 lb/hr;

Q = maximum natural gas fuel inflow rate, which is 8,400 $ft^3$/hr as noted in the application for PTI 02-09680; and

$EF_NO_X$ = emissions factor for $NO_X$, which is 100 lbs $NO_X$/1,000,000 $ft^3$ of natural gas as noted in Table 1.4-1 of AP-42 Chap. 1.4 (7/98).

[Authority for term: OAC rule 3745-77-07(C)(1)]

h. Emission Limitations:

CO emissions shall not exceed 3.10 tons/year.

$NO_X$ emissions shall not exceed 3.68 tons/year.

PE rate shall not exceed 0.22 ton/year.

VOC emissions shall not exceed 0.22 ton/year.

Applicable Compliance Method:

Compliance may be demonstrated as follows:

E(YR)_Pollutant = EH_Pollutant x HRS/year x ton/2000 lbs

where:

E(YR)_Pollutant = the annual emissions of the specified pollutant which are: 3.10 tons/year CO, 3.68 tons/year $NO_X$, 0.22 ton/year PE and 0.20 ton/yr VOC;

EH_Pollutant = the maximum, hourly emissions of CO, $NO_X$ and VOC and the PE rate from natural gas combustion, as specified in f)(2)d. through g; and

HRS = maximum annual hours of operation, which is 8,760 hours/year.

[Authority for term: OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) Per 40 CFR 63.8266 a mercury cell chlor-alkali production facility means an affected source consisting of all cell rooms and ancillary operations used in the manufacture product chlorine, product caustic, and by-product hydrogen at a mercury cell chlor-alkali plant. Since by-product hydrogen is not manufactured at either emissions unit, the requirements of 40 CFR 63.8184(a)(1), 40 CFR Part 63 Subpart IIIII, National Emission Standards for Hazardous Air Pollutants for Mercury Emissions from Mercury Cell Chlor-Alkali Plants is not applicable to emissions unit B002.

## 3. P001, Chlor-Alkali Process

**Operations, Property and/or Equipment Description:**

Mercury cell chlor-alkali process: 24 electrolytic cells where the end box air stream and the hydrogen stream are each vented to a separate control system (each comprised of a condenser, chiller, and nonregenerable adsorptive carbon control system) to control mercury emissions; and where chlorine condenser & handling exhausts are vented to one of two caustic scrubbers to control chlorine emissions

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| a. | OAC rule 3745-17-07(A)(1) | Visible particulate emissions (PE) from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. |
| b. | OAC rule 3745-17-11(B)(1) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to 40 CFR Part 63, Subpart IIIII. See b)(2)a. |
| c. | 40 CFR 63.8180 – 63.8266 (40 CFR Part 63, Subpart IIIII) | Mercury emissions shall not exceed 0.076 gram per megagram of chlorine produced ($1.5 \times 10^{-4}$ lb Hg/ton $Cl_2$) from all by-product hydrogen stream(s) and all end box ventilation system vents when both types of emissions points are present. See B.4 through B.27. |
| d. | 40 CFR 63.1 – 63.15 (40 CFR Part 63, Subpart A) | Table 10 to Subpart IIIII of 40 CFR Part 63 – Applicability of General Provisions to Subpart IIIII of 40 CFR Part 63. |

(2) Additional Terms and Conditions

a. The PE is comprised of mercury chloride.

c) Operational Restrictions

(1) None

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated through visible PE observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

[Authority for term: OAC rules 3745-77-07(C)(1) and 3745-17-03(B)(1)(a)]

b. Emission Limitation:

Mercury emissions shall not exceed 0.076 gram per megagram of chlorine produced ($1.5 \times 10^{-4}$ lb Hg/ton $Cl_2$) from all by-product hydrogen stream(s) and all end box ventilation system vents when both types of emissions points are present.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the procedures specified in B.27.a).

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 63.8243]

g) Miscellaneous Requirements

(1) None.

## 4. P004, Chloropicrin Process

**Operations, Property and/or Equipment Description:**

Trichloronitromethane mfg.: intermediate product decanter with a disposable “decanter” carbon absorber system to control OC emissions; an intermediate product stripper, and a product condenser with a "vent" condenser followed by a “wet vent” carbon absorber to control OC emissions

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)a, b)(2)a, b)(2)b and d)(5).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| a. | OAC rule 3745-21-07(M)(3)(a) | This emissions unit is exempt from the organic compound (OC) emissions control requirements specified in paragraph (M)(2) of this rule per paragraph (M)(5)(c). See b)(2)a and b)(2)b. |
| b. | OAC rule 3745-31-05(A)(3) (PTI 02-05971) | The chloropicrin emissions shall not exceed 0.14 lb/hr and 0.60 ton/year. See b)(2)c. |

(2) Additional Terms and Conditions

a. The provisions of OAC rule 3745-21-07(M)(2) shall not apply to the use, in any article, machine, equipment or other contrivance described in paragraph (M)(2), of liquid organic materials which exhibit a boiling point higher than two hundred degrees Fahrenheit at 0.5 millimeter mercury absolute pressure, or having an equivalent vapor pressure, unless such liquid organic material is exposed to temperatures exceeding two hundred twenty degrees Fahrenheit.

b. The requirements of OAC rule 3745-21-07(M)(5)(c) are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

c. All of the OC emissions from this emissions unit shall be vented to the “decanter” carbon absorber and the “wet vent” carbon absorber that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-05971, issued on 10/30/91 and modified on 9/14/06: d)(2) through d)(5). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable temperature of each carbon bed exhaust stream shall not be more than 10 percent above the maximum temperature (in degrees Celsius) measured during the most recent performance test that demonstrated this emissions unit (controlled by the “decanter” carbon absorber and the “wet vent” carbon absorber) was in compliance. Until compliance testing has been conducted, each carbon absorber shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall properly install, operate, and maintain temperature monitors which measure the temperature of each carbon bed exhaust stream when the emissions unit is in operation, including periods of startup and shutdown. Units shall be in degrees Celsius. The accuracy for each thermocouple and monitor shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 3 degrees Celsius, whichever is greater. The temperature monitors shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation on a once per 8-hour shift basis:

a. the temperature of each carbon bed exhaust stream; and

b. a log of the downtime for each capture (collection) system, each carbon absorber, and monitoring equipment when the associated emissions unit was in operation.

These records shall be maintained at the facility for a period of five years.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(4) Whenever either monitored carbon bed exhaust stream temperature deviates from the range/limit established in accordance with this permit, the permittee shall promptly

investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the carbon bed temperature readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

Each carbon bed temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to either permitted carbon bed temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable chloropicrin emissions rate for this emissions unit. In addition, approved revisions to either carbon bed temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(5) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit’s maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be

less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified Permit to Install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4)]

e) Reporting Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-05971, issued on 10/30/91 and modified on 9/14/06: e)(2). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following for this emissions unit:

a. each period of time (start time and date, and end time and date) when the temperature of either the “decanter” carbon absorber or the “wet vent” carbon absorber bed exhaust stream was outside of the range/limit specified by the manufacturer and/or outside of the acceptable range/limit following any required compliance demonstration;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to either carbon absorber;

c. each incident of deviation described in “a” or “b” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” or “b” where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature of either carbon bed exhaust stream into compliance with the acceptable range/limit, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” or “b” where proper records were not maintained for the investigation and/or the corrective action(s).

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit, A.2.

[Authority for term: OAC rule 3745-15-03(B)(1)(a), OAC rule 3745-15-03(C) and OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #02-05971, issued on 10/30/91 and modified on 9/14/06: f)(2). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Chloropicrin emissions shall not exceed 0.14 lb/hr.

Applicable Compliance Method:

Compliance may be demonstrated as follows:

E(HR) = P x EF x (1 – CE)

where:

E(HR) = maximum chloropicrin emissions, which is estimated to be 0.14 lb/hr;

P = maximum production rate, which is 750 lbs/hr as noted in the application for PTI 02-05971;

EF = emissions factor for uncontrolled chloropicrin emissions, which is 0.0184 lbs uncontrolled chloropicrin per lb of chloropicrin produced, based on engineering estimates provided in the application for PTI 02-05971; and

CE = combined control efficiency of carbon absorber systems, which is at most 99% as provided in the application for this Title V operating permit P0084063.

If required, the following test method(s) shall be employed to demonstrate compliance with the hourly allowable mass emissions rate: Methods 1 through 4 and Method 18, 25 or 25A, as found in 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

[Authority for term: PTI 02-05971 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

Chloropicrin emissions shall not exceed 0.60 ton/year.

Applicable Compliance Method:

Compliance shall be demonstrated as follows:

E(YR) = E(HR) x HRS/year x ton chloropicrin/2,000 lbs chloropicrin

where:

E(YR) = annual chloropicrin emissions, which is estimated to be a maximum of 0.60 ton/year;

E(HR) = hourly chloropicrin emissions rate, which is estimated to be 0.14 lb chloropicrin/hr as specified in f)(2)a; and

HRS/year = maximum annual hours of operation, which is 8,760 hours/year.

[Authority for term: PTI 02-05971 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) No photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), are employed at this emissions unit. It is not subject to paragraphs (B) nor (G)(2) of OAC rule 3745-21-07.

**5. P005, Cooling Tower**

**Operations, Property and/or Equipment Description:**

Cooling tower and blower for non-contact cooling within the plant water management system

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| a. | OAC rule 3745-17-07(A)(1) | Visible particulate emissions (PE) from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. See b)(2)a. |
| b. | OAC rule 3745-17-11(B)(1) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). See b)(2)b. |
| c. | OAC rule 3745-31-05(A)(3) (PTI 02-7749) | Mercury emissions shall not exceed 3.0 grams/day as a weekly average, and 2.41 lbs/year. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1). |
| d. | 40 CFR 63.8180 – 63.8266 (40 CFR Part 63, Subpart IIIII) | See B.4 through B.27. |
| e. | 40 CFR 63.1 – 63.15 (40 CFR Part 63, Subpart A) | Table 10 to Subpart IIIII of 40 CFR Part 63 – Applicability of General Provisions to Subpart IIIII of 40 CFR Part 63. |

(2) Additional Terms and Conditions

a. The presence of water vapor in the exhaust plume does not constitute visible emissions.

[Authority for term: OAC rule 3745-17-07(A)(2)]

b. The PE is comprised of mercury chloride.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-7749, issued on 2/16/94: d)(2), d)(3) and d)(4). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The permittee shall perform or have performed chemical analyses on a three times per week basis and maintain records on the composition of the cooling tower outflow which shall contain the following information:

a. the date the sample was taken;

b. the mercury content of the sample, in ppb and in mg/l; and

c. the average mercury emissions of the sample(s), in grams/day.

Each analysis shall be kept in a readily accessible location for a period of not less than 5 years following the receipt of analysis results and shall be made available to the Ohio EPA upon verbal or written request. Any authorized representative of the Ohio EPA may sample or require sampling of any cooling water outflow for periodic detailed chemical analyses through an independent laboratory.

[Authority for term: OAC rule 3745-15-03(A) and OAC rule 3745-77-07(C)(1)]

(4) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified Permit to Install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4)]

e) Reporting Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-7749, issued on 2/16/94: e)(2) and e)(3). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

[Authority for term: OAC rule 3745-77-07(A)(3)(c)]

(3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time when the emissions from this emissions unit exceeded 3.0 grams of mercury per day, and the actual mercury emissions rate for each deviation period;

b. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;

c. each incident of deviation described in "a" where prompt corrective action, that would bring the emissions unit into compliance, was determined to be necessary and was not taken; and

d. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit, A.2.

[Authority for term: OAC rules 3745-15-03(B)(1)(a), 3745-15-03(C) and 3745-77-07(C)(1)]

f) Testing Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #02-7749, issued on 2/16/94: f)(2) and f)(3). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

<u>Applicable Compliance Method:</u>

If required, compliance shall be demonstrated through visible PE observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

[Authority for term: OAC rules OAC rule 3745-77-07(C)(1) and 3745-17-03(B)(1)(a)]

b. <u>Emission Limitation:</u>

Mercury emissions shall not exceed 3.0 grams/day, as a weekly average.

Applicable Compliance Method:

Compliance shall be demonstrated as follows:

E = Q x 3.745 l/gal x 1,440 min/day x Drift x $C_{Hg}$ x 1 gram Hg/1,000 mg Hg

where:

E = mercury emissions, as an average of 3 samples collected and analyzed each week, in grams/day;

Q = maximum water outflow from the cooling tower, which is 8,572 gal/min, based as specified on page 2, section 8 of cooling tower manufacturer manual, Ceramic Cooling Tower Company Specification for Unilite Cooling Tower CCT Project No. ULTI-66-3-FM 12/27/93, Section A rev 2;

3.745 l/gal = factor to convert gallons to liters;

1,440 min/day = maximum daily operation time;

Drift = portion of cooling water that becomes entrained in the cooling air stream and drifts to the ambient air, 0.005% (0.005 $gal_{DRIFT\ WATER\ LOSS}$/100 $gal_{COOLING\ WATER}$), as specified on page 2, section 8 of cooling tower manufacturer manual, Ceramic Cooling Tower Company Specification for Unilite Cooling Tower CCT Project No. ULTI-66-3-FM 12/27/93, Section A rev 2;

$C_{Hg}$ = mercury concentration of cooling tower outflow sample(s), in mg Hg/l, based on the monitoring requirements specified in d)(3) and the testing requirements in f)(3); and

1 gram Hg/1,000 mg Hg = factor to convert milligrams Hg to grams Hg.

[Authority for term: PTI 02-7749 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

Mercury emissions shall not exceed 2.41 lbs/year.

Applicable Compliance Method:

Compliance shall be demonstrated by the summation of the daily mercury emissions based upon the record keeping requirements specified in d)(3), divided by 453.51 g Hg/lb Hg.

[Authority for term: PTI 02-7749 and OAC rule 3745-77-07(C)(1)]

(3) The concentration of mercury in the cooling water outflow shall be analyzed using EPA Method 245.1 – Determination of Mercury in Water by Cold Vapor Atomic Absorption Spectroscopy, Revision 3.0 (1994) as referenced in 40 CFR Part 136.3, Table 1B, or an alternative test protocol approved by the Ohio EPA. For an alternative test protocol request, the permittee shall submit a written request and receive approval from Ohio

EPA before an alternative test method, not listed above, can be used for the mercury content analysis.

[Authority for term: OAC rules 3745-15-04(A) and 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

## 6. P006, Anhydrous Potassium Carbonate

**Operations, Property and/or Equipment Description:**

Anhydrous potassium carbonate plant: fluidized bed reactor, drier, vibrator screen/crusher, a product capture cyclone and truck/rail car loadout that vent to a venturi scrubber to control particulate emissions; and storage silo product load-in that vents to a baghouse to control particulate emissions

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| a. | OAC rule 3745-17-07(A) | Visible particulate emissions (PE) from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule. See b)(2)a. |
| b. | OAC rule 3745-17-11(B)(1) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| c. | OAC rule 3745-31-05(A)(3) (PTI 02-09680) | The PE rate shall not exceed 0.0128 grain per dry standard cubic foot (grain/dsft$^3$) of exhaust gas from the venturi scrubber.<br><br>The PE rate shall not exceed 0.02 grain/dscf of exhaust gas from the bin vent filter baghouse.<br><br>The total PE rate shall not exceed 2.65 lbs/hr and 11.6 tons/year from all stacks.<br><br>The mercury emissions shall not exceed 6.52 grams/day and 0.0026 ton/year from the venturi scrubber stack.<br><br>See b)(2)b through b)(2)e.<br><br>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A). |

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| d. | OAC rule 3745-31-05(E) | See b)(2)e. |
| e. | 40 CFR Part 64 | This emissions unit is subject to the Compliance Assurance Monitoring (CAM) requirements to maintain compliance with the PE rate limits. See b)(2)f, d)(2), d)(3), d)(4) and e)(2). |

(2) Additional Terms and Conditions

a. The presence of water vapor in the venturi scrubber exhaust plume does not constitute visible emissions.

[Authority for term: OAC rule 3745-17-07(A)(2)]

b. The emissions of mercury are excluded from the limit for PE, which is comprised of potassium carbonate.

c. The emissions from this emissions unit shall be vented to the venturi scrubber at all times any of the following equipment are in operation: fluidized bed reactor, drier, vibrator screen/crusher, the product capture cyclone or the truck/rail car loadout process unit(s).

[Authority for term: PTI 02-09680 and OAC rule 3745-77-07(C)(1)]

d. The emissions from this emissions unit shall be vented to the bin vent filter baghouse at all times materials are loaded into the storage silo.

[Authority for term: PTI 02-09680 and OAC rule 3745-77-07(C)(1)]

e. The maximum mercury content in the potassium hydroxide (KOH) solution employed in this emissions unit shall not exceed 0.05 microgram per milliliter or part per million (0.05 µg/ml or 0.05 ppm), as documented by the analytical results provided by the permittee, during each calendar day.

[Authority for term: OAC rule 3745-31-05(E) for OAC rule 3745-31-05(A)(3)]

f. The CAM plan has been developed to assure compliance with the PE limitations. A CAM performance indicator for PE is the opacity of the visible PE from the venturi scrubber stack and from the baghouse stack. The CAM plan requires that Method 9 readings of the visible PE opacity from the venturi scrubber stack and the baghouse stack be performed and recorded weekly when the emissions unit is in operation. Each day that any visible PE are observed, a Method 9 observation shall be performed of the venturi scrubber stack and of the baghouse stack.

Another CAM performance indicator for PE is the recycle liquid flow rate to the venturi scrubber. The scrubber liquid flow rate shall be monitored continuously and recorded hourly.

[Authority for term: 40 CFR Part 64]

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-09680, issued on 2/14/96 and modified on 2/28/06: d)(2) through d)(6). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the venturi scrubber and bin vent filter stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the identification of the exhaust stack (i.e. venture scrubber or bin vent filter);

b. the color of the emissions;

c. Method 9 opacity readings at 15 second intervals for at least two consecutive 6-minute periods, if visible emissions are detected;

d. whether the emissions are representative of normal operations;

e. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

f. the total duration of any visible emission incident; and

g. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations or within the opacity limit specified in b)(1)a, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR 64.3]

(3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable venturi scrubber liquid flow rate shall not be less than 250 gallons per minute.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR 64.3]

(4) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid flow rate (in gallons per minute) during operation of the fluidized bed reactor, drier, vibrator screen/crusher, the product capture cyclone or the truck/rail car loadout process unit(s) associated with this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber liquid's flow rate on an hourly basis.

The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for any parameter deviates from the minimum limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date the corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the flow rate readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This limit for the liquid flow rate is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the limit for the liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 64.3, 40 CFR 64.7(c) and 40 CFR 64.9(b)]

(5) The permittee shall maintain daily records of the following information for the emissions unit:

a. the date of operation; and

b. the actual number of hours that emissions from any of the following process units were exhausted to the venturi scrubber: fluidized bed reactor, drier, vibrator screen/crusher, the product capture cyclone or the truck/rail car loadout process unit.

[Authority for term: PTI 02-09680 and OAC rule 3745-77-07(C)(1)]

(6) The permittee shall collect a sample of the KOH solution input on a once per day basis, if it was produced at either the chlor-alkali process (P001) or the KOH solution concentrator (P007), and maintain records of the following information for each day when the fluidized bed reactor associated with this emissions unit is in operation:

a. an identification of the origin of KOH employed (i.e. P001, P007 or an external supplier) in this emissions unit;

b. the total quantity of KOH solution employed; and

c. the permittee's analysis of each sample of in-house KOH solution input or the external supplier's analysis of the KOH solution input for the mercury content, in ppm.

The analyses for mercury content shall be performed as specified in f)(3).

[Authority for term: OAC rule 3745-31-05(E) for OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-09680, issued on 2/14/96 and modified on 2/28/06: e)(2) and e)(3). The

reporting requirements contained in the above-referenced Permits to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permits to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. the identification of the exhaust stack (i.e. venturi scrubber or bin vent filter) where any visible PE were observed;

b. all days during which any visible PE were observed from any of the stack(s) serving these emissions units, and the actual opacity reading, as a 6-minute average;

c. any corrective actions taken to minimize or eliminate the visible PE;

[Authority for terms e)(2)a through e)(2)c: OAC rule 3745-77-07(A)(3)(c) and 40 CFR 64.3]

d. any period of time (start time and date, and end time and date) when materials were loaded into the storage silo and the process emissions were not vented to the “bin vent filter” baghouse;

e. each period of time (start time and date, and end time and date) when the scrubber liquid flow rate exceeded the applicable limit contained in this permit;

f. any period of time (start time and date, and end time and date) when the fluidized bed reactor, drier, vibrator screen/crusher, the product capture cyclone or the truck/rail car loadout process unit(s) associated emissions unit was in operation and the process emissions were not vented to the scrubber;

g. each incident of deviation described in “d”, “e” or “f” (above) where a prompt investigation was not conducted;

h. each incident of deviation described in “d”, “e” or “f” where prompt corrective action, that would bring the visible PE from either control device into compliance with the opacity limit in b)(1)a., or the scrubber liquid flow rate into compliance with the minimum limit specified in d)(3), was determined to be necessary and was not taken;

i. each incident of deviation described in “d”, “e” or “f” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit; and

[Authority for terms e)(2)d through e)(2)i: OAC rules 3745-15-03(B)(1)(a), 3745-15-03(C) and 3745-77-07(C)(1) and 40 CFR Part 64.9(a)]

j. any exceedance of the KOH solution mercury content limitation specified in b)(2)e and the actual daily analytical results of the KOH solution mercury content during any exceedance.

[Authority for term e)(2)j: OAC rule 3745-31-05(E) for OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

(3) An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the permittee complies with the requirements of OAC rule 3745-15-06 and none of the conditions listed in OAC rule 3745-15-06(C) are applicable to the source (emissions unit).

[Authority for term: OAC rule 3745-17-07(A)(3)(c)]

f) Testing Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #02-09680, issued on 2/14/96 and modified on 2/28/06: f)(2) and f)(3). The testing requirements contained in the above-referenced Permits to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permits to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

<u>Applicable Compliance Method:</u>

If required, compliance shall be demonstrated through visible PE observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

[Authority for term: OAC rule 3745-17-03(B)(1)(a)]

b. <u>Emission Limitation:</u>

PE shall not exceed 0.0128 grain/dsft$^3$ of exhaust gas from the venturi scrubber.

<u>Applicable Compliance Method:</u>

Compliance may be based on the following:

$C_{PE\ SCRBR}$ = the maximum PE grain outlet concentration from the scrubber exhaust, which is 0.0128 grain/dsft$^3$ per manufacturer's guarantee as stated in the application for PTI 02-09860.

If required, a revised PE grain outlet concentration value, determined in accordance with 40 CFR Part 60, AppendixA, Methods 1 through 5 or an approved alternative method, shall be employed as a demonstration of compliance.

[Authority for term: OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

PE shall not exceed 0.02 grain/dsft$^3$ of exhaust gas from the bin vent filter baghouse.

Applicable Compliance Method:

Compliance may be based on the following:

$C_{PE\ BIN\ VENT}$ = the maximum PE grain outlet concentration from the bin vent filter baghouse exhaust, which is 0.02 grain/dsft$^3$ per manufacturer's guarantee as stated in the application for PTI 02-09860.

If required, a revised PE grain outlet concentration value, determined in accordance with 40 CFR Part 60, AppendixA, Methods 1 through 5 or an approved alternative method, shall be employed as a demonstration of compliance.

[Authority for term: OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Total PE shall not exceed 2.65 lbs/hr from all stacks.

Applicable Compliance Method:

Compliance may be based on the following equations:

i. Determination of the PE rate from the fluidized bed reactor, drier, vibrator screen/crusher, the product capture cyclone and the truck/rail car loadout operations:

$EH_PE_{SCRBR} = Q_{SCRBR} \times C_{PE\ SCRBR} \times 1$ lb PE/7,000 grains PE x 60 min/hr

where:

$EH_PE_{SCRBR}$ = the PE rate from the scrubber exhaust, which may be estimated to be 1.87 lbs/hr as noted in the application for PTI 02-09680;

$Q_{SCRBR}$ = the volumetric flow of the scrubber exhaust, which is 27,260 actual ft$^3$/min at 150$^o$F as noted in the application for Title V Permit#

P0084063, and a moisture content of 27.9%, by volume, as stated in the application for PTI 02-09680, and is converted to a standard value of 17,026 dscf/min; and

$C_{PE\ SCRBR}$ = 0.0128 grain/dsft$^3$ or as determined from test results as specified in f)(2)b.

[Authority for term: OAC rule 3745-77-07(C)(1)]

ii. Determination of the PE rate from the silo load-in operation:

$EH_PE_{BIN\ VENT} = Q_{BIN\ VENT} \times C_{PE\ BIN\ VENT} \times 1$ lb PE/7,000 grains PE x 60 min/hr

where:

$EH_PE_{BIN\ VENT}$ = the PE rate from the baghouse exhaust, which may be estimated to be 0.34 lb/hr hr as stated in the application for PTI 02-09680;

$Q_{BIN\ VENT}$ = the volumetric flow of the baghouse exhaust, which is 2,000 actual ft$^3$/min at 70$^o$F as noted in the application for Title V Permit P0084063 with a moisture content of 0.05%, by volume as stated in the application for PTI 02-09680, and is converted to a standard value of 1,991 dsft$^3$/min; and

$C_{PE\ BIN\ VENT}$ = 0.02 grain/dsft$^3$ or as determined from test results as specified in f)(2)c.

iii. Determination of the total PE rate:

$EH_PE = EH_PE_{SCRBR} + EH_PE_{BIN\ VENT}$

where:

EH_PE = total maximum, PE rate, which may be estimated to be 2.21 lbs/hr as stated in the application for PTI 02-09680.

If required, the following test methods shall be employed to demonstrate compliance with the allowable hourly mass emissions rate: Methods 1 - 5, as found in 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

e. <u>Emission Limitation:</u>

Total PE shall not exceed 11.6 tons/year from all stacks.

<u>Applicable Compliance Method:</u>

To determine the maximum PE rate the following equation may be used:

E(YR)_PE = EH_PE x HRS/year x ton/2000 lbs

where:

E_PE = the maximum, annual PE rate, which may be 9.68 tons/year; and

HRS = hours of operation per year, which could be a maximum of 8,760 hrs/year.

f. Emission Limitation:

Mercury emissions shall not exceed 6.52 grams/day from the venturi scrubber stack.

Applicable Compliance Method:

To determine the "worst case" mercury (Hg) emissions rate the following equation may be used:

$ED_Hg = \{(P_KOH_{50} \times C_{Hg_K0H50}/10^6) - [(P_K_2CO_3 \times C_{Hg_K2O3}/10^6) + (P_WW \times C_{Hg_WW}/10^6)]\} \times 453.59$ grams Hg/lbs Hg x HRS/day

where:

ED_Hg = the "worst case" mercury emissions, which may be 5.43 grams/day (Ashta's 2/22/10 engineering estimates are based on a mass balance evaluation which states that the KOH solution feed is the origin of the mercury mass input, which is offset by the combined mercury mass in the solid potassium carbonate product and the scrubber wastewater liquid.);

$P_KOH_{50}$ = the maximum throughput rate of 50%, by weight, potassium hydroxide, which is 11,412 lbs/hr as noted in the application for PTI 02-09680;

$P_K_2O_3$ = maximum throughput rate of potassium carbonate, which is 7,206 lbs/hr as noted in the application for PTI 02-09680;

P_WW = maximum output rate of scrubber wastewater, which is 1,734 lbs/hr as noted in the application PTI 02-09680;

$C_{Hg_K0H50}$ = maximum mercury concentration of the 50% potassium hydroxide, which is 0.050 ppm, by weight, as assumed in Ashta's 2/22/10 engineering estimates;

$C_{Hg_K2O3}$ = maximum mercury concentration of potassium carbonate, which is 0.01 ppm (by weight) as assumed in Ashta's 2/22/10 engineering estimates;

$C_{Hg_WW}$ = maximum mercury concentration of scrubber wastewater, which is 0.004 ppm, by weight, as assumed in Ashta's 2/22/10 engineering estimates; and

HRS/day = daily hours of operation, which could be a maximum of 24.

If required, the following test methods shall be employed to demonstrate compliance with the allowable hourly mass emissions rate: Methods 1 – 4 of 40 CFR Part 60, Appendix A and Method 101 of 40 CFR Part 61, Appendix B.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

g. Emission Limitation:

Mercury emissions shall not exceed 0.0026 ton/year from the venturi scrubber stack.

Applicable Compliance Method:

To determine the "worst case" Hg emissions the following equation may be used:

E(YR)_Hg = ED_Hg x lbs Hg/453.59 grams Hg x DAYS/year x ton/2000 lbs

where:

E(YR)_Hg = the maximum, Hg emissions rate, which may be 0.0022 ton/year; and

DAYS = days of operation per year, which could be a maximum of 365 days.

(3) The mercury content of the KOH solution samples shall be determined using U.S. EPA Method 245.1 – Determination of Mercury in Water by Cold Vapor Atomic Absorption Spectroscopy, Revision 3.0 (1994) as referenced in 40 CFR Part 136.3, Table 1B, or an alternative test protocol approved by the Ohio EPA.

For any alternative test protocol request, the permittee shall submit a written request and receive approval from Ohio EPA before an alternative test method, not listed above, can be used for the mercury content analysis.

[Authority for term: OAC rules 3745-15-04(A) and 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

## 7. P008, Chloropicrin-Telone II Blending Process

**Operations, Property and/or Equipment Description:**

Chloropicrin unloading operations and Telone II (1,3 dichloropropene) unloading with "loading" carbon absorber to control OC emissions; and blending tank(s) with "blending" carbon absorber to control OC emissions

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) b)(1)b, b)(2)c, b)(2)d, d)(4) d)(5), d)(6), d)(7) and e)(2)f.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| a. | OAC rule 3745-21-07(E) | The permittee shall not cause, allow, or permit the loading of more than 40,000 gallons/day of any volatile photochemically reactive material into any tank truck, trailer, or railroad tank car from any loading facility unless all displaced vapors are vented to a vapor collection and control system (such as an adsorber system or condensation system), which is designed and operated to maintain an overall control efficiency of not less than 90 percent, by weight, of all volatile organic carbon (VOC) vapors and gases from the equipment being controlled. See b)(2)a and b)(2)b. |
| b. | OAC rule 3745-21-07(M)(3)(a) | This emissions unit is exempt from the organic compound (OC) emissions control requirements specified in OAC rule 3745-21-07(M)(2) per paragraph (M)(5)(c). See b)(2)c and b)(2)d. |
| c. | OAC rule 3745-31-05(A)(3) (PTI 02-12107) | The OC emissions shall not exceed 6.11 lbs/day and 1.12 tons/year. See b)(2)e and c)(1). |

(2) Additional Terms and Conditions

a. In lieu of employing an adsorber or condensation system to control VOC emissions, the permittee may employ one of the following options:

i. a vapor handling system which directs all vapors to a fuel gas system; or

ii. other equipment or means for purposes of air pollution control as may be acceptable to and approved by the Director.

All loading, from facilities subject to paragraphs (E)(1)(a) and (E)(1)(b) of OAC rule 3745-21-07, shall be accomplished in such a manner that all displaced vapors and gases shall be vented only to the vapor collection system. A means shall be provided to prevent liquid drainage from the loading device when it is not in use or to accomplish complete drainage before the loading device is disconnected.

b. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision: b)(1)a and b)(2)a.

c. The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision: b)(1)b and b)(2)d.

d. The provisions of OAC rule 3745-21-07(M)(2) shall not apply to the use, in any article, machine, equipment or other contrivance described in paragraph (M)(2), of liquid organic materials which exhibit a boiling point higher than two hundred degrees Fahrenheit at 0.5 millimeter mercury absolute pressure, or having an equivalent vapor pressure, unless such liquid organic material is exposed to temperatures exceeding two hundred twenty degrees Fahrenheit.

e. The requirements of OAC rule 3745-21-07(M)(5)(c) are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05(A)(3).

f. All of the OC emissions from this emissions unit shall be vented to the "loading" carbon absorber and the "blending" carbon absorber that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.

c) Operational Restrictions

(1) The temperature of the "loading" carbon absorber and the "blending" carbon absorber shall be no greater than 130 degrees Fahrenheit (54.4 degrees Celcius).

[Authority for term: PTI 02-12107 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #02-12107, issued on 8/26/98: d)(2) through d)(8). The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable temperature of each carbon bed, exhaust stream, shall not be more than 10 percent above the maximum temperature (in degrees Celsius) measured for the most recent performance test that demonstrated this emissions unit (controlled by the "loading" carbon absorber and the "blending" carbon absorber) was in compliance. Until compliance testing has been conducted, each carbon absorber shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder which measures and records the temperature of the carbon bed exhaust stream when the emissions unit is in operation, including periods of startup and shutdown. Units shall be in degrees Celsius. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 3 degrees Celsius, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation on a once per 8-hour shift basis:

a. the temperature of each carbon bed exhaust stream; and

b. a log of the downtime for each capture (collection) system, each carbon absorber, and monitoring equipment when the associated emissions unit was in operation.

These records shall be maintained at the facility for a period of five years.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) Whenever either monitored carbon bed exhaust stream temperature deviates from the range/limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the carbon bed temperature readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

Each carbon bed temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to either permitted carbon bed temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable OC emissions rate for this emissions unit. In addition, approved revisions to either carbon bed temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(4) The Permit to Install (PTI) application for this emissions unit, P008, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "**X**" hours per day and "**Y**" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants or "worst case" toxic contaminant(s):

Toxic Contaminant: 1,3 dichloropropene.

TLV (µg/m3): 4,500.

Maximum Hourly Emission Rate (lbs/hr): 0.317

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m3): 420.4

MAGLC (µg/m3): 450

The permittee, having demonstrated that emissions of 1,3 dichloropropene from emissions unit P008 is estimated to be equal or greater than eighty per cent, but less than 100 per cent of the maximum acceptable ground level concentration (MAGLC), shall not operate the emissions unit(s) at a rate that would exceed the daily emissions rate, as allowed in this permit; and any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A and Engineering Guide #70]

(5) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute", ORC 3704.03(F), will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A and Engineering Guide #70]

(6) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute":

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A and Engineering Guide #70]

(7) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A and Engineering Guide #70]

e) Reporting Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install #02-12107, issued on 8/26/98: e)(2). The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify the following for this emissions unit:

a. each period of time (start time and date, and end time and date) when the temperature of either the "loading" carbon absorber or the "blending" carbon absorber exhaust stream was outside of the range/limit specified by the manufacturer and/or outside of the acceptable range/limit following any required compliance demonstration;

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to either carbon absorber;

c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;

d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature of either carbon bed (after regeneration) into compliance with the acceptable range, was determined to be necessary and was not taken;

e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s); and

[Authority for terms e)(2)a through e)(2)e: OAC rule 3745-15-03(B)(1)(a) and OAC rule 3745-15-03(C); and OAC rule 3745-77-07(C)(1)]

f. any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration; or if no changes to the emissions, emissions unit(s), or the exhaust stack have been made, a statement to this effect.

[Authority for term e)(2)f: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A and Engineering Guide #70]

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit, A.2.

[Authority for term: OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install #02-12107, issued on 8/26/98: f)(2). The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

[Authority for term: OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

OC emissions shall not exceed 6.11 lbs/day.

Applicable Compliance Method:

Compliance may be demonstrated by the following equations:

i. Determination of the maximum daily 1,3 dichloropropene emissions from the surge tank and blending operations may be estimated as:

$E(1,3\ \text{dichloropropene}) = TK/day \times (EF_{1,3\ \text{DICHLOROPROPENE SURGE}} + EF_{1,3\ \text{DICHLOROPROPENE BLEND}}) \times (1 - CE)$

where:

E(1,3 dichloropropene) = maximum, daily controlled 1,3 dichloropropene emissions, which is estimated to be 1.11 lbs/day;

TK/day = maximum number of railroad tank cars that can be loaded and blended, which is 3 tanks/day as noted in the application for PTI #02-12107;

$EF_{1,3\ \text{DICHLOROPROPENE SURGE}}$ = emissions factor for uncontrolled 1,3 dichloropropene emissions from the surge tank, which is 4.66 lbs/tank as noted in the application for PTI #02-12107 and is based on the ideal gas law;

$EF_{1,3\ \text{DICHLOROPROPENE BLEND}}$ = emissions factor for uncontrolled 1,3 dichloropropene emissions from the blend tank, which is 32.37 lbs/tank as noted in the application for PTI #02-12107 and is based on the ideal gas law; and

CE = control efficiency of each carbon absorber system, which is at most 99% as provided in the application for this Title V operating permit P0084063.

ii. Determination of the maximum daily chloropicrin emissions from the blending operations may be estimated as:

$E(\text{chloropicrin}) = TK/day \times EF_{\text{CHLOROPICRIN BLEND}} \times (1 - CE)$

where:

E(chloropicrin) = maximum, daily controlled chloropicrin emissions, which is 0.11 lb/day; and

$EF_{\text{CHLOROPICRIN BLEND}}$ = emissions factor for uncontrolled chloropicrin emissions from the blend tank, which is 3.75 lbs/tank as noted in the application for PTI 02-12107 and is based on the ideal gas law.

iii. Determination of the daily OC emissions from surge and blend tanks may be estimated as:

E(DAY) = E(1,3 dichloropropene) + E(chloropicrin)

where:

E(DAY) = maximum, daily OC emissions from surge and blend tanks, which is 1.22 lbs/day.

If required, the following test methods shall be employed to demonstrate compliance with the hourly allowable mass emissions rate: Methods 1 through 4 and Method 18, 25 or 25A, as found in 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

[Authority for term: PTI 02-12107 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

Chloropicrin emissions shall not exceed 1.12 tons/year.

Applicable Compliance Method:

Compliance shall be demonstrated as follows:

E(YR) = E(DAY) x DAYS/year x ton OC/2,000 lbs OC

where:

E(YR) = annual OC emissions, which is estimated to be a maximum of 0.22 ton/year;

E(DAY) = daily OC emissions rate, which is estimated to be 1.22 lbs/day as specified in f)(2)a; and

DAYS/year = maximum annual days of operation, which is 365 days/year.

[Authority for term: PTI 02-12107 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) 1,3 dichloropropene is employed at this emissions unit and is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5). Chloropicrin is also employed at this emissions unit and is not a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).