



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

5/22/2013

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

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 0204010056
Permit Number: P0112075
Permit Type: Initial Installation
County: Ashtabula

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, The Star Beacon. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171.

Sincerely,


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

Cc: U.S. EPA Region 5 -Via E-Mail Notification
Ohio EPA-NEDO; Pennsylvania; Canada

PUBLIC NOTICE
Issuance of Draft Air Pollution Permit-To-Install
Ashta Chemicals Inc.

Issue Date: 5/22/2013
Permit Number: P0112075
Permit Type: Initial Installation
Permit Description: Installation of (P014) large hydrochloric acid (HCl) synthesis unit with two scrubbers to control HCl emissions; (J001) HCl bulk loading with vapor balance capture and a scrubber to control HCl emissions; and (T014 -T017) tanks to store HCl with vapor balance capture and a scrubber to control HCl emissions.
Facility ID: 0204010056
Facility Location: Ashta Chemicals Inc.
3509 Middle Road, P.O. Box 858
Ashtabula, OH 44004
Facility Description: Alkalies and Chlorine Manufacturing

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: Christine McPhee, Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Road, Twinsburg, OH 44087. Ph: (330)425-9171



DRAFT

**Division of Air Pollution Control
Permit-to-Install
for
Ashta Chemicals Inc.**

Facility ID:	0204010056
Permit Number:	P0112075
Permit Type:	Initial Installation
Issued:	5/22/2013
Effective:	To be entered upon final issuance



Permit Strategy Write-Up

1. Check all that apply: Synthetic Minor Determination Netting Determination

Source (Facility) Description: The facility makes chlorine (Cl₂), caustic potash (KOH) and hydrogen (H₂) from potassium chloride and water within mercury electrolytic cells at the Chlor-alkali process (P001), which along with the cooling tower operations (P005) are subject to 40 CFR 63.8180 – 63.8266 (40 CFR Part 63, Subpart IIIII), the National Emission Standards for Hazardous Air Pollutants: Mercury Emissions from Mercury Cell Chlor-Alkali Plants. H₂ and/or natural gas are combusted at B001 or B002. Chloropicrin (trichloromethane) is made at P004 and can be blended with Telone II (1,3dichloropropene) at (P008) Chloropicrin – Telone II Blending. The anhydrous potassium carbonate process (P006) has not been active for several years. (P009) Hydrochloric acid synthesis: hydrogen and chlorine burner, primary absorber and secondary absorber with a caustic scrubber to control hydrochloric acid and chlorine emissions and (P010) 15,000 gal HCl receiver tank, pump, transfer lines and loading operation with a caustic scrubber to control hydrochloric acid emissions were both determined to be de minimis emissions units.

2. Facility Emissions and Attainment Status: The facility is classified as a Title V source as required by 40 CFR 63.8182(b) in the mercury cell chlor-alkali Maximum Achievable Control Technology (MACT) standard for area and major sources. The facility is a minor source of criteria pollutants as well as hazardous air pollutants (HAPs).

The facility is located in Ashtabula Township, in Ashtabula County, which is in attainment with the criteria pollutant standards, except it has an undesignated status with the 1-hour NO_x standard, the current 8-hour O₃ standard and the 1-hour SO₂ standard. Ashtabula Township may be in non-attainment status with the PM_{2.5} standard of 15.0 µg/m³ as an annual mean.

3. Source (Project) Emissions: The project potential emissions are 0.64 ton HCl/yr, 0.11 ton Cl₂/yr and 0.000113 ton mercury (Hg)/yr and 0.750113 ton HAP_{COMBINED}/yr.

4. Conclusion: The project is not subject to 40 CFR Part 63, Subpart NNNN, the National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production (40 CFR 63.8980 – 63.9075) per the exemption in 40 CFR 63.8985(d) for a chlor-alkali facility.

Issuance as a draft permit is requested so that the use of federally enforceable capture equipment at J001 & the T014-T017 group and the use of control equipment at J001, P014 and the T014-T017 group. The project is a minor HAP addition to a minor HAP facility.

5. Please provide additional notes or comments as necessary: **A rush permit processing request letter** was received on 3/05/2013 and uploaded to the permit detail page on 3/05/2013.

6. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
HCl	0.65
Cl ₂	0.11



Division of Air Pollution Control
Permit-to-Install
for
Ashta Chemicals Inc.

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Draft Permit-to-Install
Ashta Chemicals Inc.
Permit Number: P0112075
Facility ID: 0204010056

Effective Date: To be entered upon final issuance

Authorization

Facility ID: 0204010056
Facility Description: Mercury cell chlor-alkali plant
Application Number(s): A0045081, A0047599
Permit Number: P0112075
Permit Description: Installation of (P014) large hydrochloric acid (HCl) synthesis unit with two scrubbers to control HCl emissions; (J001) HCl bulk loading with vapor balance capture and a scrubber to control HCl emissions; and (T014 -T017) tanks to store HCl with vapor balance capture and a scrubber to control HCl emissions.
Permit Type: Initial Installation
Permit Fee: \$3,000.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 5/22/2013
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

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

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (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 44087
(330)425-9171

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director



Authorization (continued)

Permit Number: P0112075
 Permit Description: Installation of (P014) large hydrochloric acid (HCl) synthesis unit with two scrubbers to control HCl emissions; (J001) HCl bulk loading with vapor balance capture and a scrubber to control HCl emissions; and (T014 -T017) tanks to store HCl with vapor balance capture and a scrubber to control HCl emissions.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID: J001
 Company Equipment ID: HCl Loading Rack
 Superseded Permit Number:
 General Permit Category and Type: Not Applicable

Emissions Unit ID: P014
 Company Equipment ID: 2650-R
 Superseded Permit Number:
 General Permit Category and Type: Not Applicable

Group Name: Tank for HCl storage

Emissions Unit ID:	T014
Company Equipment ID:	45,000 gal HCl Storage Tank (2620A-T)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	T015
Company Equipment ID:	45,000 gal HCl Storage Tank (2620B-T)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	T016
Company Equipment ID:	45,000 gal HCl Storage Tank (2620C-T)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	T017
Company Equipment ID:	45,000 gal HCl Storage Tank (2620D-T)
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Draft Permit-to-Install
Ashta Chemicals Inc.
Permit Number: P0112075
Facility ID: 0204010056
Effective Date: To be entered upon final issuance

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.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they 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 and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. 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 re-issuance, or modification.



- 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, revoked, or revoked and reissued, for cause. 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 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.

4. 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, 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.
- 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, 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.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northeast District Office. The written 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. See A.15. below if no deviations occurred during the quarter.
 - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - (4) This permit is for an emissions unit located at a Title V facility. 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 are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. 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, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northeast District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this 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.



- c) 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 ORC section 3704.08.
 - (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.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast District Office 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.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have



been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northeast District Office. 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.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit 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) by submitting a certification from the authorized 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 authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).



- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit 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). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.



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

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 quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. 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. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to 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"), the permittee shall comply with the requirement to register such a plan.

19. 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.



Draft Permit-to-Install
Ashta Chemicals Inc.
Permit Number: P0112075
Facility ID: 0204010056
Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions



Draft Permit-to-Install

Ashta Chemicals Inc.

Permit Number: P0112075

Facility ID: 0204010056

Effective Date: To be entered upon final issuance

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.



Draft Permit-to-Install
Ashta Chemicals Inc.
Permit Number: P0112075
Facility ID: 0204010056
Effective Date: To be entered upon final issuance

C. Emissions Unit Terms and Conditions



1. J001, HCl Loading Rack

Operations, Property and/or Equipment Description:

Hydrochloric acid (HCl) bulk loading with a vapor balance system to capture HCl emissions from the loading operation, and a packed column scrubber (2625-T) to control uncaptured HCl emissions from the loading operation

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 operation(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 are identified below. 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 3745-31-05(D)(1)(b) to limit the potential hazardous air pollutant (HAP) emissions and retain area source status for HAPs with the use of a federally enforceable capture device and control device.	The emissions of hydrochloric acid (HCl) from this emissions unit shall not exceed 0.11 ton per year from the stack egress and fugitive egress points, combined. See b)(2)a. and b)(2)b.

(2) Additional Terms and Conditions

a. For any transfer of HCl from a loading rack located at the bulk loading operation to a shipping vessel (e.g. tank truck, rail car), the vapors displaced from the shipping vessel shall be processed by a vapor balance system with a vapor tight vapor line from the shipping vessel to the stationary storage tank being unloaded. No HCl transfer shall occur until the vapor line is connected. The vapor balance system shall be designed and operated to route the displaced vapors to a stationary storage tank.

b. The loading operation emissions associated with this emissions unit shall be vented to a packed column scrubber (e.g. scrubber 2625-T) at all times the emissions unit is in operation.

c) Operational Restrictions

(1) The permittee shall maintain the tanks, shipping vessels, and transfer lines associated with this emissions unit using the following operational practices:



- a. The vapor balance system shall be kept in good working order and shall be used at all times during the transfer of HCl.
 - b. The shipping vessel may vent only to the vapor balance system during loading.
 - c. There shall be no leaks in the shipping vessel pressure/vacuum relief valves and hatch covers. The shipping vessel may be loaded via an open hatch only when the loading line is equipped with a shroud or other similar means at the loading point to prevent emissions.
 - d. There shall be no leaks in the vapor and liquid lines during the transfer of HCl.
 - e. The permittee shall not permit HCl to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range or limit for the liquid flow rate and the liquid conductivity shall be based upon the manufacturer's specifications until such time as any modifications deemed necessary by the permittee are made and the appropriate range or limit for each parameter is established to demonstrate compliance.
 - a. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 5 gallons per minute.
 - b. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable conductivity, that shall be maintained in order to demonstrate compliance, shall not be more than 183 millisiemens per centimeter (mS/cm).
 - (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid flow rate (in gallons per minute), and the scrubber liquid conductivity during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber liquid's flow rate and conductivity on once per shift 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 range(s) or minimum limit(s) 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 within the acceptable range(s), or 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:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the scrubber fluidflow rate and conductivity readings immediately after the corrective action was implemented; and
- k. 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.

These range(s) and/or limit(s) for the liquid flow rate and conductivity are 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 permitted range or limit for the liquid flow rate or conductivity based upon information obtained during future performance tests that demonstrate compliance with the allowable HCl emissions rate for this emissions unit. In addition, approved revisions to the range or 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.

- (3) 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 a permittee 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.



e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the loading process emissions were not captured by the vapor balance system;
 - b. each period of time (start time and date, and end time and date) when the liquid flow rate or the liquid conductivity was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;
 - c. 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 the scrubber;
 - d. each incident of deviation described in "a", "b", or "c" (above) where a prompt investigation was not conducted;
 - e. each incident of deviation described in "a", "b", or "c" where prompt corrective action, that would bring the vapor balance system and/or scrubber operation into compliance with the specified requirements, was determined to be necessary and was not taken; and
 - f. each incident of deviation described in "a", "b", or "c" 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.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limit:

The HCl emission rate shall not exceed 0.11 ton/year from the stack and fugitive egress points, combined.

Applicable Compliance Method:

Compliance may be based on the following equation(s):

 - i. Determination of the maximum, controlled, hourly emissions from the loading operation:



Compliance may be based on the following equation:

$$HCl_{LOAD}(HR) = Q \times L_L \times (1 - CAP_{EFF}) \times (1 - CE).$$

Where:

$HCl_{LOAD}(HR)$ = the estimated HCl emissions from loading operations exhausted to the stack egress, which is estimated to be 0.0028 lb/hr.

Q = the maximum loading rate, which is 1868.769 gal/hr, based on a maximum throughput of 18,370lbsHCl/hr divided by the density of 9.83 lbsHCl/gal HCl as specified in the application for this PTIO.

L_L = the factor for uncontrolled loading loss emissions, which is 1.66 lbsHCl per 1000 gal HCl loaded as determined from Equation 1 found in of AP42, Chap. 5.2 (06/2008):

$$L_L = 12.46 \times SPM/T.$$

where:

S = a saturation factor, which is 1.00 for splash loading/submerged loading dedicated vapor balance service as found in Table 5.2-1, AP42 Chap. 5.2 (06/2008).

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia), which is 1.93 psia for 36% HCl.

M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole), which is 36.46lbs/lb-mole.

T = temperature of bulk liquid loaded, °R (°F + 460), which on average (68.1 °F + 460) or 527.8°R.

CAP_{EFF} = Vapor balance system capture efficiency as a decimal fraction, which is an engineering estimate of 0.91 as noted in the application for PTI no. P0112075.

CE = the efficiency of the control device as a decimal fraction, which is 0.99 as noted in the application for this PTIO.

- ii. Determination of the maximum, hourly emissions from fugitive equipment leaks:

$$HCl_{FUGITIVE}(HR) = \{ \sum (F_{Ai} \times WF_{HCl} \times N_i) \text{kg HCl/hour} \} \times \text{lbHCl/kg HCl}.$$

Where:

$HCl_{FUGITIVE}(HR)$ = total fugitive HCl emissions from equipment leaks, which is estimated to be 0.022lbHCl/hr, as determined from the average emission factor approach found in "Protocol for Equipment Leak



Effective Date: To be entered upon final issuance

Estimates” U.S. EPA, Office of Air Quality Planning and Standards, (EPA 453/R-95-017), November 1995, p. 2-11.

F_{Ai} = applicable average emission factor for the equipment type, in kg/hour/source, as found in Table 2-4 of “Protocol for Equipment Leak Estimates”.

WF_{HCl} = average weight fraction of HCl in the exhaust streams, which is 0.36 – 0.559, as noted in the application for this PTIO;

N_i = number of pieces of equipment of the applicable equipment type in the stream.

- iii. Determination of the maximum, controlled, annual emissions from the stack and fugitive egresses, combined:

Compliance may be based on the following equation:

$$HCl_{TOTAL}(YR) = [HCl_{LOAD}(HR) + HCl_{FUGITIVE}(HR)] \times \text{ton HCl}/2,000 \text{ lbsHCl} \times 8760 \text{ hrs/yr.}$$

Where:

$HCl_{TOTAL}(YR)$ = maximum emissions from stack and fugitive egresses, combined, in ton/yr, which is estimated to be 0.11 ton HCl/year.

If required pursuant to OAC rule 3745-15-04(A), the permittee shall demonstrate compliance with this emission limitation through emissions tests performed in accordance with 40 CFR Part 60, Appendix A-4, Methods 1 through 4, and Method 26 or equivalent, alternative method(s), as approved by Ohio EPA.

g) Miscellaneous Requirements

- (1) This emissions unit is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) Hydrochloric Acid Production in 40 CFR Part 63, Subpart NNNNN (40 CFR 63.8980 – 63.9075) per the exemption in 40 CFR 63.8985(d) for a chlor-alkali facility. The ASHTA Chemicals Inc. facility in Ashtabula, Ohio is an area (minor) source of hazardous air pollutant (HAP) emissions.



2. P014, 2650-R

Operations, Property and/or Equipment Description:

Large hydrochloric acid (HCl) synthesis unit: hydrogen & chlorine burner, and wet product absorber with a packed column wet scrubber (2659-T) to control HCl emissions and a condensate tank and a process day tank with a packed column wet scrubber (2625-T) to control HCl 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 operation(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 are identified below. 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 3745-31-05(D)(1)(b) to limit the potential hazardous air pollutant (HAP) emissions and retain area source status for HAPs with the use of federally enforceable control device(s).	The emissions of hydrochloric acid (HCl) from this emissions unit shall not exceed 0.34 ton per year from the stack egress and fugitive egress points, combined. The emissions of chlorine (Cl ₂) from this emissions unit shall not exceed 0.11 ton per year from the stack egress and fugitive egress points, combined. See b)(2)a. and b)(2)b.

(2) Additional Terms and Conditions

a. The hydrogen/chlorine burner and the wet product absorber emissions associated with this emissions unit shall be vented to a packed column scrubber (e.g. scrubber 2659-T) at all times the emissions unit is in operation.

b. The condensate tank and process day tank emissions associated with this emissions unit shall be vented to a packed column scrubber (e.g. scrubber 2625-T) at all times the emissions unit is in operation.

c) Operational Restrictions

(1) None.



d) Monitoring and/or Recordkeeping Requirements

Hydrogen/chlorine burner and wet product absorber scrubber 2659-T

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range or limit for the liquid flow rate and the liquid conductivity shall be based upon the manufacturer's specifications until such time as any modifications deemed necessary by the permittee are made and the appropriate range or limit for each parameter is established to demonstrate compliance.
 - a. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 5 gallons per minute.
 - b. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable conductivity, that shall be maintained in order to demonstrate compliance, shall not be more than 183 millisiemens per centimeter (mS/cm).

Condensate tank and process day tank scrubber 2625-T

- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range or limit for the liquid flow rate and the liquid conductivity shall be based upon the manufacturer's specifications until such time as any modifications deemed necessary by the permittee are made and the appropriate range or limit for each parameter is established to demonstrate compliance.
 - a. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 6 gallons per minute.
 - b. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable conductivity, that shall be maintained in order to demonstrate compliance, shall not be more than 183 millisiemens per centimeter (mS/cm).

Scrubber 2659-T and 2625-T each

- (3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid flow rate (in gallons per minute), and the scrubber liquid conductivity during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber liquid's flow rate and conductivity on once per shift 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 range(s) or minimum limit(s) 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 within the acceptable range(s), or 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:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the scrubber fluidflow rate and conductivity readings immediately after the corrective action was implemented; and
- k. 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.

These range(s) and/or limit(s) for the liquid flow rate and conductivity are 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 permitted range or limit for the liquid flow rate or conductivity based upon information obtained during future performance tests that demonstrate compliance with the allowable HCl emissions rate for this emissions unit. In addition, approved revisions to the range or 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.

- (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 a permittee 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.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. each period of time (start time and date, and end time and date) when the liquid flow rate or the liquid conductivity was/were outside of the appropriate range or exceeded the applicable limit for any scrubber (2659-T and 2625-T) contained in this permit;
 - b. any period of time (start time and date, and end time and date) when the hydrogen/chlorine burner and the wet product absorber emissions associated with this emissions unit were in operation and the process emissions were not vented to scrubber 2659-T;
 - c. any period of time (start time and date, and end time and date) when the process day tank and condensate tank emissions were in operation and the process emissions were not vented to scrubber 2625-T;
 - d. each incident of deviation described in "a", "b", or "c" (above) where a prompt investigation was not conducted;
 - e. each incident of deviation described in "a", "b", or "c" where prompt corrective action, that would bring the vapor balance system and/or scrubber operation into compliance with the specified requirements, was determined to be necessary and was not taken; and
 - f. each incident of deviation described in "a", "b", or "c" 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.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limit:

The HCl emission rate shall not exceed 0.34ton/year from the stack and fugitive egress points, combined.



Applicable Compliance Method:

Compliance may be based on the following equation(s):

- i. Determination of the maximum, controlled, hourly emissions from the hydrogen/chlorine burner and the wet product absorber process equipment, $HCl_{BURNER+ABSORBER}(HR)$:

$$HCl_{BURNER+ABSORBER}(HR) = Q_{BURNER+ABSORBER} \times V_M \times Conc_{.HCl} \times MW_{HCl} \times 60 \text{ min/hr} \times (1 - CE).$$

Where:

$HCl_{BURNER+ABSORBER}(HR)$ = the controlled, hourly emissions from the hydrogen/chlorine burner and wet product absorber, which is estimated to be 0.00951 lbHCl/hr.

$Q_{BURNER+ABSORBER}$ = combined exhaust gas flow from the hydrogen/chlorine burner and wet product absorber, which is 130 standard cubic feet per min (scf/min) as specified by the burner manufacturer.

V_M = molar volume of HCl gas under standard conditions, which is 358.96 scf/lb-mol, which is equivalent to RT/P , derived from the ideal gas law:

Where:

R = Regnault constant or gas law constant, which can be expressed as 1.31443 (scf x atm)/(K x lb-mol).

T = standard temperature, 273.15 K (kelvin).

P = standard pressure, 14.7 psi (pounds per square inch).

$Conc_{.HCl}$ = concentration of HCl in the combined exhaust gas flow, which is 20 ppmvHCl as specified by the burner manufacturer.

MW_{HCl} = molecular weight of HCl, which is 36.46 lbHCl/lb-molHCl.

CE = the efficiency of the control device (scrubber 2659-T) as a decimal fraction, which is 0.40 as noted in the application for this PTIO.

- ii. Determination of the maximum, controlled, hourly emissions from the condensate tank and the process day tank, $HCl_{CONDENSATE + DAY TANKS}(HR)$:

$$HCl_{CONDENSATE + DAY TANKS}(HR) = [HCl_{CONDENSATE UNCTRL}(YR) + HCl_{DAY TANK UNCTRL}(YR)] \times (1 - CE) \times yr/8760 \text{ hrs.}$$



Where:

$HCl_{CONDENSATE + DAY TANKS}(YR)$ = the estimated, controlled HCl emissions from the condensate and day tanks, combined, which is estimated to be 0.021341 lbsHCl/hr.

$HCl_{CONDENSATE UNCTRL}(YR)$ = the uncontrolled HCl emissions from the working operation and the breathing operation from the condensate tank, which is estimated to be 424.59lbs/yr, as determined from TANKS 4.09D software, which is based on the emission estimation procedures from Chapter 7 of EPA's Compilation of Air Pollutant Emission Factors (AP-42).

$HCl_{DAY TANK UNCTRL}(YR)$ = the uncontrolled HCl emissions from the working operation and the breathing operation from the process day tank, which is estimated to be 18,269.96lbs/yr, as determined from TANKS 4.09D software, which is based on the emission estimation procedures from Chapter 7 of EPA's Compilation of Air Pollutant Emission Factors (AP-42).

CE = the efficiency of the control device (scrubber 2625-T) as a decimal fraction, which is 0.99 as noted in the application for this PTIO.

- iii. Determination of the maximum, hourly emissions from fugitive equipment leaks:

$$HCl_{FUGITIVE}(HR) = \{ \sum (F_{Ai} \times WF_{HCl} \times N_i) \text{kg HCl/hour} \} \times \text{lbHCl/kg HCl}.$$

Where:

$HCl_{FUGITIVE}(HR)$ = total fugitive HCl emissions from equipment leaks, which is estimated to be 0.028lbHCl/hr, as determined from the average emission factor approach found in "Protocol for Equipment Leak Estimates" U.S. EPA, Office of Air Quality Planning and Standards, (EPA 453/R-95-017), November 1995, p. 2-11.

F_{Ai} = applicable average emission factor for the equipment type, in kg/hour/source, as found in Table 2-4 of "Protocol for Equipment Leak Estimates".

WF_{HCl} = average weight fraction of HCl in the exhaust streams, which is 0.02 – 1.00, as noted in the application for this PTIO;

N_i = number of pieces of equipment of the applicable equipment type in the stream.

- iv. Determination of the maximum, controlled, annual emissions from the stack and fugitive egresses, combined:



Effective Date: To be entered upon final issuance

Compliance may be based on the following equation:

$$HCl_{TOTAL}(YR) = (HCl_{BURNER+ABSORBER}(HR) + HCl_{CONDENSATE + DAY TANKS}(HR) + HCl_{FUGITIVE}(HR)] \times \text{ton HCl}/2,000 \text{ lbsHCl} \times 8760 \text{ hrs/yr.}$$

Where:

$HCl_{TOTAL}(YR)$ = maximum emissions from stack and fugitive egresses, combined, in ton/yr, which is estimated to be 0.34 ton HCl/year.

If required pursuant to OAC rule 3745-15-04(A), the permittee shall demonstrate compliance with this emission limitation through emissions tests performed in accordance with 40 CFR Part 60, Appendix A-4, Methods 1 through 4, and Method 26 or equivalent, alternative method(s), as approved by Ohio EPA.

b. Emission Limit:

The Cl₂ emission rate shall not exceed 0.11 ton/year from the stack and fugitive egress points, combined.

Applicable Compliance Method:

Compliance may be based on the following equation(s):

i. Determination of the maximum, hourly emissions from the hydrogen/chlorine burner and the wet product absorber process equipment, Cl₂ BURNER+ABSORBER(HR):

$$Cl_2_{BURNER+ABSORBER}(HR) = Q_{BURNER+ABSORBER} \times V_M \times \text{Conc.}_{Cl_2} \times MW_{Cl_2} \times 60 \text{ min/hr.}$$

Where:

Cl₂ BURNER+ABSORBER(HR) = hourly emissions from the hydrogen/chlorine burner and the wet product absorber process equipment, which is estimated to be 0.00154 lb Cl₂/hr.

Conc._{Cl₂} = concentration of Cl₂ in the combined exhaust gas flow, which is 1 ppmvCl₂ as specified by the burner manufacturer.

MW_{Cl₂} = molecular weight of Cl₂, which is 70.906lb Cl₂/lb-mol Cl₂.

i. Determination of the maximum, hourly emissions from fugitive equipment leaks:

$$HCl_{FUGITIVE}(HR) = \{ \sum (F_{Ai} \times WF_{Cl_2} \times N_i) \} \text{kg Cl}_2/\text{hour} \} \times \text{lb Cl}_2/\text{kg Cl}_2.$$



Where:

$Cl_{2FUGITIVE}(HR)$ = total fugitive Cl_2 emissions from equipment leaks, which is estimated to be 0.024 lb Cl_2 /hr, as determined from the average emission factor approach found in "Protocol for Equipment Leak Estimates" U.S. EPA, Office of Air Quality Planning and Standards, (EPA 453/R-95-017), November 1995, p. 2-11.

F_{Ai} = applicable average emission factor for the equipment type, in kg/hour/source, as found in Table 2-4 of "Protocol for Equipment Leak Estimates".

WF_{Cl_2} = average weight fraction of Cl_2 in the exhaust streams, which is 0.99, as noted in the application for this PTIO;

N_i = number of pieces of equipment of the applicable equipment type in the stream.

- ii. Determination of the maximum, controlled, annual emissions from the stack and fugitive egresses, combined:

Compliance may be based on the following equation:

$$Cl_{2\ TOTAL}(YR) = (Cl_{2\ BURNER+ABSORBER}(HR) + Cl_{2\ FUGITIVE}(HR)) \times \text{ton } Cl_2 / 2,000 \text{ lbs } Cl_2 \times 8760 \text{ hrs/yr.}$$

Where:

$Cl_{2\ TOTAL}(YR)$ = maximum emissions from stack and fugitive egresses, combined, in ton/yr, which is estimated to be 0.11 ton Cl_2 /year.

If required pursuant to OAC rule 3745-15-04(A), the permittee shall demonstrate compliance with this emission limitation through emissions tests performed in accordance with 40 CFR Part 60, Appendix A-4, Methods 1 through 4, and Method 26 or equivalent, alternative method(s), as approved by Ohio EPA.

g) Miscellaneous Requirements

- (1) This emissions unit is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) Hydrochloric Acid Production in 40 CFR Part 63, Subpart NNNNN (40 CFR 63.8980 – 63.9075) per the exemption in 40 CFR 63.8985(d) for a chlor-alkali facility. The ASHTA Chemicals Inc. facility in Ashtabula, Ohio is an area (minor) source of hazardous air pollutant (HAP) emissions.



3. Emissions Unit Group -Tank for HCl storage: T014,T015,T016,T017,

EU ID	Operations, Property and/or Equipment Description
T014	45,000 gallon fixed roof tank no. 2620A-T for storage of hydrochloric acid (HCl) with a vapor balance system to collect working loss HCl emissions and a packed column wet scrubber (2625-T) to control working loss and breathing loss HCl emissions
T015	45,000 gallon fixed roof tank no. 2620B-T for storage of hydrochloric acid (HCl) with a vapor balance system to collect working loss HCl emissions and a packed column wet scrubber (2625-T) to control working loss and breathing loss HCl emissions
T016	45,000 gallon fixed roof tank no. 2620C-T for storage of hydrochloric acid (HCl) with a vapor balance system to collect working loss HCl emissions and a packed column wet scrubber (2625-T) to control working loss and breathing loss HCl emissions
T017	45,000 gallon fixed roof tank no. 2620D-T for storage of hydrochloric acid (HCl) with a vapor balance system to collect working loss HCl emissions and a packed column wet scrubber (2625-T) to control working loss and breathing loss HCl 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 operation(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 are identified below. 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 3745-31-05(D)(1)(b) to limit the potential hazardous air pollutant (HAP) emissions and retain area source status for HAPs with the use of a federally enforceable capture device and control device.	The emissions of hydrochloric acid (HCl) from this emissions unit group (T014, T015, T016 and T017) shall not exceed 0.20 ton per year from the stack egress and fugitive egress points, combined. See b)(2)a. and b)(2)b.

(2) Additional Terms and Conditions

a. For any transfer of HCl from and to any equipment, associated with this emissions unit group, the displaced vapors shall be processed by a vapor balance system with a vapor tight vapor line from the respective process and transfer equipment to any stationary storage tank, associated with this emissions unit group. The system shall be designed and operated to route the displaced vapors to any stationary storage tank, associated with this emissions unit group.



- b. The working (HCl input and output) operation emissions associated with this emissions unit group shall be vented to a packed column scrubber (e.g. scrubber 2625-T) at all times any emissions unit in this emissions unit group is in operation.
 - c. The breathing operation emissions associated with this emissions unit group shall be vented to a packed column scrubber (e.g. scrubber 2625-T) at all times there is any liquid or vapor HCl within any emissions unit in this emissions unit group.
- c) Operational Restrictions
- (1) The permittee shall maintain the tanks and transfer lines associated with this emissions unit group using the following operational practices:
 - a. The vapor balance system shall be kept in good working order and shall be used at all times during the transfer of HCl.
 - b. Any hatches shall be closed at all times during the loading of any storage tank within this emissions unit group.
 - c. There shall be no leaks in the hatch covers.
 - d. There shall be no leaks in the vapor and liquid lines during the transfer of HCl.
 - e. The permittee shall not permit HCl to be spilled, discarded into sewers, stored in open containers, or handled in any other manner that would result in evaporation.
- d) Monitoring and/or Recordkeeping Requirements
- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range or limit for the liquid flow rate and the liquid conductivity shall be based upon the manufacturer's specifications until such time as any modifications deemed necessary by the permittee are made and the appropriate range or limit for each parameter is established to demonstrate compliance.
 - a. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 6 gallons per minute.

In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable conductivity, that shall be maintained in order to demonstrate compliance, shall not be more than 183 millisiemens per centimeter (mS/cm).
 - (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the scrubber liquid flow rate (in gallons per minute), and the scrubber liquid conductivity during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the scrubber liquid's flow rate and conductivity on once per shift 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 range(s) or minimum limit(s) 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 within the acceptable range(s), or 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:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the scrubber fluidflow rate and conductivity readings immediately after the corrective action was implemented; and
- k. 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.

These range(s) and/or limit(s) for the liquid flow rate and conductivity are 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 permitted range or limit for the liquid flow rate or conductivity based upon information obtained during future performance tests that demonstrate compliance with the allowable HCl emissions rate for this emissions unit. In addition, approved revisions to the range or 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.



- (3) 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 a permittee 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.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. any period of time (start time and date, and end time and date) when any emissions unit within this emissions unit group was in operation and the working process emissions were not captured by the vapor balance system;
 - b. each period of time (start time and date, and end time and date) when the liquid flow rate or the liquid conductivity was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;
 - c. any period of time (start time and date, and end time and date) when any emissions unit within this emissions unit group was in operation and the working process emissions or the breathing process emissions were not vented to the scrubber;
 - d. each incident of deviation described in "a", "b", or "c" (above) where a prompt investigation was not conducted;
 - e. each incident of deviation described in "a", "b", or "c" where prompt corrective action, that would bring the vapor balance system and/or scrubber operation into compliance with the specified requirements, was determined to be necessary and was not taken; and
 - f. each incident of deviation described in "a", "b", or "c" 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.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:



- a. The HCl emission rate shall not exceed 0.20 ton/year from the stack and fugitive egress points, combined, from this emissions unit group.

Applicable Compliance Method:

Compliance may be based on the following equation(s) or method(s):

- i. Determination of the maximum, controlled, annual emissions from the working operation, $HCl_{WORKING}(YR)$:

$$HCl_{WORKING}(YR)/\text{tank} = HCl_{WORKING UNCTRL}(YR)/\text{tank} \times (1 - CAP_{EFF}) \times (1 - CE).$$

Where:

$HCl_{WORKING}(YR)/\text{tank}$ = the estimated HCl emissions from the working operation exhausted to the stack egress from each one of the storage tanks within this emissions unit group, which is estimated to be 3.4449 lbs/yr.

$HCl_{WORKING UNCTRL}$ = the uncontrolled HCl emissions from the working operation from each one of the storage tanks within this emissions unit group, which is estimated to be 3716.10lbs/yr, as determined from TANKS 4.09D software, which is based on the emission estimation procedures from Chapter 7 of EPA's Compilation of Air Pollutant Emission Factors (AP-42).

CAP_{EFF} = Vapor balance system capture efficiency as a decimal fraction, which is an engineering estimate of 0.91 as noted in the application for PTI no. P0112075.

CE = the efficiency of the control device as a decimal fraction, which is 0.99 as noted in the application for this PTIO.

- ii. Determination of the maximum, controlled, annual emissions from the breathing operation, $HCl_{BREATHING}(YR)$:

$$HCl_{BREATHING}(YR)/\text{tank} = HCl_{BREATHING UNCTRL}(YR)/\text{tank} \times (1 - CE).$$

Where:

$HCl_{BREATHING}(YR)/\text{tank}$ = the estimated HCl emissions from the breathing operation exhausted to the stack egress from each one of the storage tanks within this emissions unit group, which is estimated to be 25.5807lbs/yr.

$HCl_{BREATHING UNCTRL}$ = the uncontrolled HCl emissions from the breathing operation from each one of the storage tanks within this emissions unit group, which is estimated to be 2558.07 lbs/yr, as determined from TANKS 4.09D software, which is based on the emission estimation



procedures from Chapter 7 of EPA's Compilation of Air Pollutant Emission Factors (AP-42).

- iii. Determination of the maximum, annual emissions from fugitive equipment leaks:

$$HCl_{FUGITIVE}(YR) = \{ \sum (F_{Ai} \times WF_{HCl} \times N_i) \text{kg HCl/hour} \} \times \text{lbHCl/kg HCl} \times 8760 \text{ hrs/yr.}$$

Where:

$HCl_{FUGITIVE}(YR)$ = total fugitive HCl emissions from equipment leaks, which is estimated to be 274.08lbsHCl/yr from this emissions unit group, as determined from the average emission factor approach found in "Protocol for Equipment Leak Estimates" U.S. EPA, Office of Air Quality Planning and Standards, (EPA 453/R-95-017), November 1995, p. 2-11.

F_{Ai} = applicable average emission factor for the equipment type, in kg/hour/source, as found in Table 2-4 of "Protocol for Equipment Leak Estimates".

WF_{HCl} = average weight fraction of HCl in the exhaust streams, which is 0.0002 – 0.559, as noted in the application for this PTIO;

N_i = number of pieces of equipment of the applicable equipment type in the stream.

- iv. Determination of the maximum, controlled, annual emissions from the stack and fugitive egresses, combined:

Compliance may be based on the following equation:

$$HCl_{TOTAL}(YR) = \{ [(HCl_{WORKING}(YR)/\text{tank} + HCl_{BREATHING}(YR)/\text{tank}) \times 4 \text{ tanks}] + HCl_{FUGITIVE}(YR) \} \times \text{ton HCl/2,000 lbsHCl.}$$

Where:

$HCl_{TOTAL}(YR)$ = maximum emissions from stack and fugitive egresses, combined, in ton/yr, which is estimated to be 0.1944 ton HCl/year from this emissions unit group.

If required pursuant to OAC rule 3745-15-04(A), the permittee shall demonstrate compliance with this emission limitation through emissions tests performed in accordance with 40 CFR Part 60, Appendix A-4, Methods 1 through 4, and Method 26 or equivalent, alternative method(s), as approved by Ohio EPA.

g) **Miscellaneous Requirements**

- (1) This emissions unit is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) Hydrochloric Acid Production in 40 CFR Part 63, Subpart NNNNN



Draft Permit-to-Install

Ashta Chemicals Inc.

Permit Number: P0112075

Facility ID: 0204010056

Effective Date: To be entered upon final issuance

(40 CFR 63.8980 – 63.9075) per the exemption in 40 CFR 63.8985(d) for a chlor-alkali facility. The ASHTA Chemicals Inc. facility in Ashtabula, Ohio is an area (minor) source of hazardous air pollutant (HAP) emissions.