



5/21/2014

Certified Mail

Mr. Sam Perras
JONES-HAMILTON CO
30354 TRACY ROAD
Northwood, OH 43465

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0387000088
Permit Number: P0116641
Permit Type: OAC Chapter 3745-31 Modification
County: Wood

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO 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 Josh Mandel," 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
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

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. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF 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.

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-NWDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
JONES-HAMILTON CO**

Facility ID:	0387000088
Permit Number:	P0116641
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	5/21/2014
Effective:	5/21/2014
Expiration:	1/14/2019



Division of Air Pollution Control
Permit-to-Install and Operate
for
JONES-HAMILTON CO

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Final Permit-to-Install and Operate
JONES-HAMILTON CO
Permit Number: P0116641
Facility ID: 0387000088
Effective Date: 5/21/2014

Authorization

Facility ID: 0387000088
Application Number(s): A0050520
Permit Number: P0116641
Permit Description: Chapter 31 modification permit to account for increased production for the HCl and sodium bisulfate production lines and associated salt feed system that supplies both lines.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$3,000.00
Issue Date: 5/21/2014
Effective Date: 5/21/2014
Expiration Date: 1/14/2019
Permit Evaluation Report (PER) Annual Date: Apr 1 - Mar 31, Due May 15

This document constitutes issuance to:

JONES-HAMILTON CO
30354 TRACY ROAD
Northwood, OH 43465

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

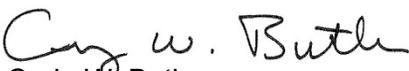
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (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 described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Final Permit-to-Install and Operate
JONES-HAMILTON CO
Permit Number: P0116641
Facility ID: 0387000088
Effective Date: 5/21/2014

Authorization (continued)

Permit Number: P0116641
Permit Description: Chapter 31 modification permit to account for increased production for the HCl and sodium bisulfate production lines and associated salt feed system that supplies both lines.

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

Emissions Unit ID:	P013
Company Equipment ID:	HCl production line
Superseded Permit Number:	P0107911
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P014
Company Equipment ID:	NaHSO ₄ production
Superseded Permit Number:	P0106777
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P901
Company Equipment ID:	Salt receiving, Storage and Feed System
Superseded Permit Number:	P0107118
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
JONES-HAMILTON CO
Permit Number: P0116641
Facility ID: 0387000088
Effective Date: 5/21/2014

A. Standard Terms and Conditions



1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means 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.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.



13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



Final Permit-to-Install and Operate
JONES-HAMILTON CO
Permit Number: P0116641
Facility ID: 0387000088
Effective Date: 5/21/2014

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

JONES-HAMILTON CO

Permit Number: P0116641

Facility ID: 0387000088

Effective Date: 5/21/2014

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.



Final Permit-to-Install and Operate
JONES-HAMILTON CO
Permit Number: P0116641
Facility ID: 0387000088
Effective Date: 5/21/2014

C. Emissions Unit Terms and Conditions



1. P013, HCl production line

Operations, Property and/or Equipment Description:

Hydrochloric Acid production line

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. b)(1)d., d)(2) through d)(5) and e)(1).
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. 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(F)	<p><u>Scrubber S-200 emissions from Plant #1 and Plant #2:</u> 0.0013 pound hydrochloric acid (HCl) per hour; 0.01 ton HCl per year</p> <p><u>Scrubber S-1220 emissions:</u> 0.0046 pound HCl per hour; 0.02 ton HCl per year</p> <p><u>Scrubber S-1500 emissions:</u> 0.42 pound HCl per hour; 1.86 tons HCl per year</p> <p>Visible particulate emissions shall not exceed 0% opacity as a six-minute average from the exhaust of any stack serving this emissions unit.</p> <p>See b)(2)a. and b)(2)b.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c. and b)(2)d.
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)e.
d.	OAC rule 3745-114-01 ORC 3704.03(F)	See d)(2) through d)(5) and e)(1)

(2) Additional Terms and Conditions

- a. This permit establishes the following legally and practically enforceable emission limitations. The legally and practically enforceable emission limitations are voluntary restrictions established under OAC rule 3745-31-05(F) and are based on the operational restrictions contained in c)(1) which require control equipment:
 - i. Scrubber S-200 emissions from Plant #1 and Plant #2: 0.0013 pound HCl per hour and 0.01 ton HCl per year;
 - ii. Scrubber S-1220 emissions: 0.0046 pound HCl per hour and 0.02 ton HCl per year;
 - iii. Scrubber S-1500 emissions: 0.42 pound HCl per hour and 1.86 tons HCl per year; and
 - iv. Visible particulate emissions shall not exceed 0% opacity as a six-minute average from the exhaust of any stack serving this emissions unit.
- b. HCl emissions from the acid production line are considered condensable emissions of PM₁₀. Condensable PM₁₀ is not required to be considered in new source review permitting during a specified transition period as provided in final regulations in the "Federal Register/Vol 73, No. 96/Friday, May 16, 2008/Rules and Regulations".
- c. The Best Available Technology (BAT) requirement under OAC rule 3745-31-05(A)(3), as effective 11/30/01, for the products of natural gas combustion from this emission unit has been determined to be compliance with source design characteristics of 100 lbs nitrogen oxides (NOx)/10⁶ standard cubic feet (scf) and 84 lbs carbon monoxide (CO)/10⁶ scf.

It should be noted that the sulfur dioxide (SO₂), particulate matter less than 10 microns in size (PM₁₀) and volatile organic compounds (VOC) emissions associated with the combustion of natural gas are negligible and therefore will not be addressed in this permit.
- d. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code



(ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

- e. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to NO_x, CO, VOC, SO₂ and PM₁₀ emissions from this air contaminant source since the potential to emit for NO_x, CO, VOC, SO₂ and PM₁₀ emissions is less than ten tons per year.

The potential to emit for the above pollutants was determined by multiplying AP-42 emission factors in lbs/MMscf from Section 1.4 (7/98), a maximum natural gas usage rate of 108 MMscf/yr and dividing by 2000 lbs/ton. The maximum natural gas usage rate is based on a natural gas heating value of 1020 Btu/scf and a maximum operating schedule of 8,760 hours per year.

Pollutant	Potential to emit (tons/yr)
Nitrogen Oxide (NO _x)	5.40
Carbon Monoxide (CO)	4.54
Volatile Organic Compounds (VOC)	0.30
Sulfur Dioxide (SO ₂)	0.03
Filterable particulate matter 10 microns or less in size (PM ₁₀)	0.10

c) Operational Restrictions

- (1) The following operational restriction has been included in this permit for the purpose of establishing legally and practically enforceable requirements [See b)(2)a.]:

- a. use of a HCl process recovery system consisting of three wet scrubbers that recover HCl at a minimum efficiency of 99% for S-200 and S-1500, respectively, and a minimum efficiency of 95% for S-1220.

- (2) The permittee shall burn only natural gas in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.



(2) The PTIO application for this emissions unit, P013, was evaluated based on the actual materials and the design parameters of the emissions unit'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 at over one ton per year 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 air dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: HCl

STEL (mg/m³): 2983

Maximum Hourly Emission Rate (lbs/hr): 0.42



Predicted 1-Hour Maximum Ground-Level Concentration ($\mu\text{g}/\text{m}^3$): 42.42

MAGLC ($\mu\text{g}/\text{m}^3$): 52.4

The permittee, having demonstrated that emissions of hydrochloric acid, from emissions unit P013, is estimated to be equal or greater than eighty per cent, but less than 100 percent of the MAGLC, shall not operate the emissions unit at a rate that would exceed the daily emissions rate, process weight rate, and/or restricted hours of operations, 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).

- (3) Prior to making any physical changes to or changes in the method of operation of the emissions unit, 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 or its 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" 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 PTIO 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.

- (4) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- 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 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 or the materials applied.
- (5) The permittee shall maintain a record of any change made to a parameter or value used in the air 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.
- (6) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the scrubbers, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the Ohio EPA Northwest District Office.
- (7) The permittee shall maintain daily records that document any time periods when the scrubbers were not in service when the emissions unit was in operation, as well as, a record of all operations during which the scrubbers were not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA Northwest District Office upon request.
- e) Reporting Requirements
- (1) The permittee shall submit annual reports that include any changes to any 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 concentration. The report should include:
- a. the original model input;
 - b. the updated model input;
 - c. the reason for the change(s) to the input parameter(s); and



- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit, or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

The report shall be submitted by January 31 of each year and shall cover the previous calendar year.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.

f) Testing Requirements

- (1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted no later than 180 days following the final issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable emission rates for HCl and the control efficiency of each scrubber.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
 - i. The lb HCl/hr shall be determined by using Method 26, as specified in 40 CFR Part 60.
 - ii. The control efficiency shall be determined by measuring the emission rate(s) specified in f)(1)c.i. above at the inlet to, and the outlet from, the control device.
 - d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northwest District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for



review and approval prior to the test(s) may result in the Ohio EPA Northwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northwest District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northwest District Office within 30 days following completion of the test(s).

- (2) 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 Limitation:
0.0013 pound HCl per hour and 0.01 ton HCl per year from Scrubber S-200

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly emission limitation by the performance testing as required in section f)(1).

The annual allowable HCl emission limitation was established by multiplying the potential hourly emissions by a maximum annual operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance with the hourly emission limitation is demonstrated, compliance with the annual limitation shall also be demonstrated.

- b. Emission Limitation:
0.0046 pound HCl per hour and 0.02 ton HCl per year from Scrubber S-1220

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly emission limitation by the performance testing as required in section f)(1).

The annual allowable HCl emission limitation was established by multiplying the potential hourly emissions by a maximum annual operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance with the hourly emission limitation is demonstrated, compliance with the annual limitation shall also be demonstrated.

- c. Emission Limitation:
0.42 pound HCl per hour and 1.86 tons HCl per year from Scrubber S-501

Applicable Compliance Method:

The permittee shall demonstrate compliance with the hourly emission limitation by the performance testing as required in section f)(1).



The annual allowable HCl emission limitation was established by multiplying the potential hourly emissions by a maximum annual operating schedule of 8760 hrs/yr and dividing by 2000 lbs/ton. Therefore, provided compliance with the hourly emission limitation is demonstrated, compliance with the annual limitation shall also be demonstrated.

d. Emission Limitation:

Visible particulate emissions shall not exceed 0% opacity as a six-minute average from the exhaust of any stack serving this emissions unit

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be determined in accordance with the test methods and procedures specified in US EPA Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

(1) The permittee shall develop the following written plans for this emissions unit. The plans shall be submitted to the Ohio EPA, Northwest District Office by the time periods indicated below:

a. an Operation Maintenance Plan (OMP) that ensures the process wet scrubbers are operated and maintained in accordance with the manufacturers recommendations. The OMP shall contain the evaluation of, and adjustment to, manufacturer's specifications of parameters such as weight percent of the HCl in the scrubber liquor, scrubber water supply pressure, scrubber water flow rate, etc. The OMP shall also include a monitoring frequency regarding each of the parameters indicated. The OMP plan shall be submitted to the Ohio EPA, Northwest District Office prior to the submittal of the "Intent to Test" required in section f)(1) above.

b. an equipment leak detection and repair (LDAR) plan that describes, in detail, the measures that will be put in place to control leaks of HCl emissions from process equipment. The LDAR plan shall be submitted to the Ohio EPA, Northwest District Office within 180 days after the installation of this emissions unit.



2. P014, NaHSO₄ production

Operations, Property and/or Equipment Description:

Sodium bisulfate production

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. None.
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. 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(F)	1.70 pounds of particulate matter 10 microns or less in size (PM ₁₀) per hour, 7.45 tons PM ₁₀ per year from the SBS Wet Scrubber (S-1510) that controls the emissions from Spray Tower of Plant #2 0.18 pound PM ₁₀ per hour, 0.80 ton PM ₁₀ per year (for emission units P012 and P014 combined) from SBS Wet Scrubber (S-550) that controls SBS packaging 0.01 grains PM ₁₀ per dry standard cubic foot (gr/dscf), 0.49 ton PM ₁₀ per year from the baghouse (BH-1700) controlling the conveyance operation of Plant #2 Visible particulate emissions shall not exceed 0% opacity as a six-minute



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		average from any associated stack serving this emissions unit See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c. and b)(2)d.
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)e.
d.	OAC rule 3745-17-07(A)	See b)(2)f.
e.	OAC rule 3745-17-11(B)	See b)(2)f.

(2) Additional Terms and Conditions

- a. This permit establishes the following legally and practically enforceable emission limitations. The legally and practically enforceable emission limitations are voluntary restrictions established under OAC rule 3745-31-05(F) and are based on the operational restrictions contained in c)(1) which require control equipment:
 - i. 1.70 pounds of particulate matter 10 microns or less in size (PM₁₀) per hour and 7.45 tons PM₁₀ per year from the SBS Wet Scrubber (S-1510) that controls the emissions from Spray Tower of Plant #2
 - ii. 0.18 pound PM₁₀ per hour and 0.80 ton PM₁₀ per year (for emission units P012 and P014 combined) from SBS Wet Scrubber (S-550) that controls SBS packaging
 - iii. 0.01 grains PM₁₀ per dry standard cubic foot (gr/dscf), 0.49 ton PM₁₀ per year from the baghouse (BH-1700) controlling the conveyance operation of Plant #2; and
 - iv. Visible particulate emissions shall not exceed 0% opacity as a six-minute average from any stack serving this emissions unit.
- b. All emissions of particulate matter emitted from this emissions unit are PM₁₀.
- c. The Best Available Technology (BAT) requirement under OAC rule 3745-31-05(A)(3), as effective 11/30/01, has been determined to be compliance with the control equipment design efficiencies in c)(1).
- d. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State



Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

- e. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM₁₀ emissions from this air contaminant source since the potential to emit for PM₁₀ emissions is less than ten tons per year, taking into account the legally and practically enforceable voluntary restrictions established under OAC rule 3745-31-05(F) in this permit.

- f. The emission limitation established pursuant to this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).

c) **Operational Restrictions**

- (1) The following operational restriction has been included in this permit for the purpose of establishing legally and practically enforceable requirements [See b)(2)a.]:

- a. use of a baghouse (BH-1700) with a maximum outlet concentration of 0.01 gr PM₁₀/dscf to control conveyance operation;
- b. use of a wet scrubber (S-1510) with a 95% control efficiency for particulate matter to control emissions from Spray Tower of Plant #2; and
- c. use of a wet scrubber (S-550) with a 97.5% control efficiency for particulate matter to control emissions from SBS packaging operations.

d) **Monitoring and/or Recordkeeping Requirements**

- (1) The permittee shall properly install, operate and maintain equipment to continuously monitor the following control equipment operating parameters while the emissions unit is in operation:

- a. the scrubber water flow rate for scrubber (S-1510);
- b. the water supply pressure for scrubber (S-1510);
- c. the scrubber water flow rate for scrubber (S-550);
- d. the water supply pressure for scrubber (S-550)

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



- (2) The permittee shall record the following information:
 - a. for scrubbers S-1510 and S-550 the following shall be recorded on a daily basis:
 - i. the, water flow for each scrubber; and
 - ii. the water supply pressure for each scrubber.
- (3) The acceptable operating ranges/values of the operating parameters indicated in d)(1) are specified below:
 - a. the acceptable water flow rate shall be continuously maintained at a value of no less than 300 gallons per minute for scrubber (S-1510);
 - b. the acceptable water supply pressure shall be continuously maintained at a value of no less than 5 pounds per square inch (gauge) for scrubber (S-1510);
 - c. the acceptable water flow rate shall be continuously maintained at a value of no less than 5 gallons per minute for scrubber (S-550);
 - d. the acceptable water supply pressure shall be continuously maintained at a value of no less than 20 pounds per square inch (gauge) for scrubber (S-550).

The acceptable operating ranges/values apply at all times while the emissions unit is in operation.

- (4) The permittee shall measure and record once per day, the weight percent of sodium bisulfate of the scrubber liquor of S-1510 and S-550 by analyzing actual liquor samples utilizing appropriate test methods. The acceptable maximum weight percent of sodium bisulfate in the scrubber liquor for each scrubber shall be maintained at a value not to exceed 29%.
- (5) Whenever the monitored ranges/values for the operating parameters specified in d)(3) and d)(4) deviate from the limit or range 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 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 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 water flow rate and/or the weight percent of sodium bisulfate 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.

This operating parameter ranges/values specified in this permit are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northwest District Office. The permittee may request revisions to the permitted operating parameter ranges/values based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled operations of emissions unit(s). In addition, approved revisions to the range or limit may be incorporated into this permit by means of an administrative modification.

- (6) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving the baghouse (BH-1700) associated with 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. the total duration of any visible emissions incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (2) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.



- (3) The permittee shall identify in the annual permit evaluation report the following information concerning the operation of scrubber S-1510 and scrubber S-550 during the 12-month reporting period for this/these emissions unit(s):
- a. each period of time (start time and date, and end time and date) when the any of the operating parameters specified in d)(3) and d)(4) were outside of the appropriate range or limit contained in this permit;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not controlled by the appropriate control devices;
 - c. each incident of deviation described in e)(3)a. or e)(3)b. where a prompt investigation was not conducted;
 - d. each incident of deviation described in e)(3)a. or e)(3)b. where prompt corrective action, that would bring the operating parameters into compliance with the appropriate range or limit contained in this permit, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in e)(3)a. or e)(3)b. 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.
- (4) The permittee shall identify in the annual permit evaluation report the following information in accordance with the monitoring requirements for visible emissions in term number d)(6) above:
- a. all days during which any visible particulate emissions were observed from the stack serving the baghouse (BH-1700) associated with this emissions unit; and
 - b. any corrective actions taken to eliminate the visible particulate emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective actions to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

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. Emissions Limitation: 0.18 lb PM₁₀ per hour, 0.80 ton PM₁₀ per year (from emissions unit P012 and P014, combined) from the SBS Wet Scrubber (S-550)

Applicable Compliance Method: The permittee has demonstrated compliance with the hourly emission limitation during a stack test conducted on March 15, 2010. If required, compliance with the hourly limitation



shall be determined in accordance with Methods 1 – 4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The tons per year limitation was developed by multiplying the lb/hr allowable mass emissions rate by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

- b. Emissions Limitation: 1.70 pounds PM₁₀ per hour, 7.45 tons PM₁₀ per year from wet scrubber S-1510 controlling Plant #2 Spray Tower

Applicable Compliance Method: The permittee has demonstrated compliance with the hourly emission limitation during a stack test conducted on March 15, 2010. If required, compliance with the hourly limitation shall be determined in accordance with Methods 1 – 4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The tons per year limitation was developed by multiplying the lb/hr allowable mass emissions rate by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance with the annual limitation shall also be demonstrated.

- c. Emissions Limitation: 0.01 gr PM₁₀/dscf, 0.49 ton PM₁₀ per year from baghouse BH-1700

Applicable Compliance Method: The permittee has demonstrated compliance with the hourly concentration limitation by performing stack testing on identical sources, BH-504 and BH-505, on September 12, 2006. If required, compliance with the gr/dscf limitation shall be determined in accordance with Methods 1 – 4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual emission limitation was established by the multiplying the maximum outlet concentration of 0.01 gr PM₁₀/dscf, a maximum volumetric flow rate of 1300 acfm, a conversion factor of 60 minutes/hr, a conversion factor of 1.0 lb/7000 grains, a maximum operating schedule of 8760 hrs/yr, and a conversion factor of 2000 lbs/ton. Therefore, provided compliance is shown with the gr/dscf limitation, compliance with the annual limitation shall also be demonstrated.

- d. Emissions Limitation:
Visible particulate emissions shall not exceed 0% opacity as a six-minute average from any associated stack with this emissions unit



Final Permit-to-Install and Operate
JONES-HAMILTON CO
Permit Number: P0116641
Facility ID: 0387000088
Effective Date: 5/21/2014

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be determined in accordance with the test methods and procedures specified in US EPA Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.



3. P901, Salt receiving, Storage and Feed System

Operations, Property and/or Equipment Description:

Salt Feed System

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. None.
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. 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(F)	Emissions from the baghouse/HEPA filter control system shall not exceed 0.02 grains particulate matter 10 microns or less in size (PM ₁₀) per dscf; 3.24 tons PM ₁₀ per year [see b)(2)a. and b)(2)f.] Visible particulate emissions shall not exceed 0% as a 6-minute average from any stack associated with this emissions unit See b)(2)a., b)(2)b. and b)(2)c.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)d. and b)(2)e.
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)f.
d.	OAC rule 3745-17-11(B)	See b)(2)g.
e.	OAC rule 3745-17-07(A)	See b)(2)g.
f.	OAC rule 3745-17-08(B)	See b)(2)h.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	OAC rule 3745-17-07(B)	See b)(2)i.

(2) Additional Terms and Conditions

- a. This permit establishes the following legally and practically enforceable emission limitations. The legally and practically enforceable emission limitations are voluntary restrictions established under OAC rule 3745-31-05(F) and are based on the operational restrictions contained in c)(1) which require control equipment:
 - i. Emissions from the baghouse/HEPA filter control system shall not exceed 0.02 grains PM₁₀ per dscf and 3.24 tons PM₁₀ per year; and
 - ii. Visible particulate emissions shall not exceed 0% as a 6-minute average from any stack associated with this emissions unit.
- b. The “Best Available Technology (BAT)” requirements under OAC rule 3745-31-05(A)(3)(a) are not applicable to the particulate emissions (PE) emitted from this emissions unit (PE is emitted as a fugitive emission from salt receiving operations). BAT is only applicable to emissions of an air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. Particulate emissions (also referred to as total suspended particulate or particulate matter) is an air contaminant that does not involve an established NAAQS.
- c. All emissions of particulate matter emitted from the control system are PM₁₀.
- d. The Best Available Technology (BAT) requirement under OAC rule 3745-31-05(A)(3), as effective 11/30/01, has been determined to be compliance with the control equipment design efficiencies in c)(1).
- e. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio’s State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.
- f. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.



The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM₁₀ emissions from this air contaminant source since the potential to emit for PM₁₀ emissions is less than ten tons per year, taking into account the legally and practically enforceable voluntary restrictions established under OAC rule 3745-31-05(F) in this permit.

- g. The emission limitation established pursuant to this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
- h. The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- i. This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).

c) **Operational Restrictions**

(1) The following operational restriction has been included in this permit for the purpose of establishing legally and practically enforceable requirements [See b)(2)a.):

- a. use of baghouses and HEPA filters for controlling particulate matter associated with the transferring/conveying and storage of salt for this emissions unit. The baghouses and HEPA filters shall achieve a maximum outlet concentration of 0.02 grains PM₁₀ per dry standard cubic foot (dscf);

(The control system shall consist of two baghouses (BH-400 and BH-401) and four HEPA filters (B-300 through B-303) for particulate matter control associated with the mechanical transferring/conveying and storage of salt in the feed system. Baghouses BH-400 and BH-401 are used for pneumatic conveying and controlling the emissions from salt transfer into reactor vessels. HEPA filters B-300 through B-303 operate individually and control emissions vented from separate pressure vessel bins in the salt feed system.)

d) **Monitoring and/or Recordkeeping Requirements**

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks associated with the HEPA filters (B-300 through B-303) and the stacks associated with the baghouses (BH-400 and BH-401) for 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. the total duration of any visible emission incident; and,
- c. any corrective actions taken to minimize or eliminate the visible emissions.

The above records shall be kept separately for B-300, B-301, B-302, BH-400, and BH-401.



e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (2) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (3) The permittee shall identify in the annual permit evaluation report the following information in accordance with the monitoring requirements for visible emissions from the HEPA filters (B-300 through B-303) and the baghouses (BH-400 and BH-401):
 - a. all days during which any visible particulate emissions were observed from any stack serving the HEPA filters or baghouses associated with this emissions unit; and
 - b. any corrective actions taken to eliminate the visible particulate emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective actions to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

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 Limitation:

0.02 grains PM₁₀/dscf from baghouses/HEPA filter control systems (BH-400, BH-401 and B-300 through B-303)

Applicable Compliance Method:

The emission limitation was established in accordance with the manufacturer's guaranteed outlet grain loading for the baghouses and HEPA filters. If required, compliance with the gr/dscf limitation shall be determined in accordance with Methods 1 – 4 of 40 CFR, Part 60, Appendix A and Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

b. Emission Limitation:

3.24 tons PM₁₀ per year

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the maximum outlet concentration of 0.02 gr PM₁₀/dscf, the total maximum volumetric air flow rate of



2100 acfm (BH-400 and BH-401 = 750 acfm each, B-300 through B-303 = 675 acfm each), 60 minutes/hour, 1 pound/7000 grains, a maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, provided compliance is shown with the maximum outlet concentration, compliance with the annual limitation shall also be demonstrated.

c. Emission Limitation:

Visible particulate emissions shall not exceed 0% as a 6-minute average from any stack associated with this emissions unit

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be determined in accordance with the test methods and procedures specified in US EPA Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.