



6/19/2014

Certified Mail

Emilio Ramos
 NALCO Company Louisville Ohio Facility
 3200 SW Freeway, Suite 2700
 Houston, TX 77027

Yes	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
Yes	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: 1576115007
 Permit Number: P0116399
 Permit Type: Initial Installation
 County: Stark

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 Canton City Health Department at (330)489-3385 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: Canton



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
NALCO Company Louisville Ohio Facility**

Facility ID:	1576115007
Permit Number:	P0116399
Permit Type:	Initial Installation
Issued:	6/19/2014
Effective:	6/19/2014
Expiration:	6/19/2024



Division of Air Pollution Control
Permit-to-Install and Operate
for
NALCO Company Louisville Ohio Facility

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Final Permit-to-Install and Operate
NALCO Company Louisville Ohio Facility
Permit Number: P0116399
Facility ID: 1576115007
Effective Date: 6/19/2014

Authorization

Facility ID: 1576115007
Application Number(s): A0050019, A0051021
Permit Number: P0116399
Permit Description: Installation of a specialty chemical distribution facility
Permit Type: Initial Installation
Permit Fee: \$2,000.00
Issue Date: 6/19/2014
Effective Date: 6/19/2014
Expiration Date: 6/19/2024
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

NALCO Company Louisville Ohio Facility
3934 Jeffries Circle
Louisville, OH 44641

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

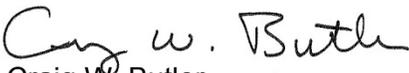
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544
(330)489-3385

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
NALCO Company Louisville Ohio Facility
Permit Number: P0116399
Facility ID: 1576115007
Effective Date: 6/19/2014

Authorization (continued)

Permit Number: P0116399
Permit Description: Installation of a specialty chemical distribution facility

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:	LOAD1
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P801
Company Equipment ID:	Load 2, 3, and 4
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
NALCO Company Louisville Ohio Facility
Permit Number: P0116399
Facility ID: 1576115007
Effective Date: 6/19/2014

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
NALCO Company Louisville Ohio Facility
Permit Number: P0116399
Facility ID: 1576115007
Effective Date: 6/19/2014

B. Facility-Wide Terms and Conditions



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) B.2., C.1.b)(1)d., C.1.d)(1), C.2.b)(1)d., and C.2.d)(1)
 - 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.

2. The following emissions units located at this facility are exempt from permit requirements because they meet the criteria established in Ohio Administrative Code (OAC) rule 3745-31-03(A)(1)(I)(iv):

<u>EU ID</u>	<u>Operations, Property and/or Equipment Description</u>
T001	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill
T002	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill
T003	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill
T004	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill
T005	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill
T006	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill
T007	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill
T008	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill
T009	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill
T010	15,000 gallon horizontal fixed roof steel tank filled with organic liquids andequipped with submerged fill

3. The facility is subject to the following applicable requirements for the following emissions units that generate Toxic Air Contaminant emissions: J001, P801, and T001-T010.



a) Operational Restrictions

- (1) In order to demonstrate compliance with the “Toxic Air Contaminant Statute”, the Director has established, per ORC 3704.03(F)(4)(c), limits for product blends containing ethylene glycol (CAS No. 107-21-1) and operating schedule, included in terms 3.a)(1)a.-c. below, which result in a daily allowable emission rate that shall not exceed 16.06 pounds per day of ethylene glycol. This daily allowable emissions rate was calculated as shown below:

$$\frac{0.2023 \text{ g}}{\text{sec}} * \frac{3,600 \text{ sec}}{\text{hr}} * \frac{10 \text{ hrs}}{\text{day}} * \frac{\text{lb}}{453.59 \text{ g}} = 16.06 \frac{\text{lbs}}{\text{day}} \text{ ethylene glycol}$$

Where:

$\frac{0.2023 \text{ g}}{\text{sec}}$ = the emission rate modeled to determine the ground level concentration based on the maximum loading rate of product blends containing ethylene glycol per PTIO Application #A0050019

$\frac{10 \text{ hrs}}{\text{day}}$ = operating hours of the facility per Application #A0050019

- a. The maximum combined operating rate for tank filling and truck, tote, drum, or pail loading of any product blend shall not exceed 6,000 gallons per hour.
- b. The maximum ethylene glycol content (CAS No. 107-21-1) of any product blend shall not exceed 30% by weight for all emission units.
- c. The permittee shall not operate more than 10 hours per day and 5 days per week.

b) Monitoring and Recordkeeping Requirements

- (1) The permittee shall maintain records of the following information for each emissions unit:
- a. the name and company identification of each organic liquid product loaded;
 - b. identify each organic liquid product loaded that contains a toxic air contaminant, and the weight % of each toxic air contaminant contained in that product, to demonstrate compliance with term 3.a)(1)b.;
 - c. the volume throughput of each product, in gallons per hour, and the volume throughput of each product as a combined total for all emission units, in gallons per hour, to demonstrate compliance with term 3.a)(1)a.;
 - d. the total emission rate for total combined toxic air contaminants, in pounds per day, to demonstrate compliance with term 3.a)(1); and
 - e. the total hours of operation of all the emission units per day and the number of days of operation during each week, to demonstrate compliance with term 3.a)(1)c.



(2) The permit-to-install and operate (PTIO) application for these emissions units, J001, P801, and T001-T010, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units 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 contaminants 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 results 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 emitted from the emissions units, (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 then adjusted to account for the duration of the exposure or the operating hours of the emissions units, i.e., 10 hours per day and 5 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):

$$\frac{TLV}{10} * \frac{8}{10} * \frac{5}{5} = \left(\frac{4 * TLV}{10 * 5} \right) = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: ethylene glycol (CAS No. 107-21-1)

TLV (mg/m³): 73.7 (STEL=C 100 mg/m³)



Maximum Hourly Emission Rate (lbs/hr): 1.61 lbs/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5,470

MAGLC (ug/m3): 5,896

$$\frac{(4 \times 73.7 \frac{mg}{m^3})}{(10 \times 5)} = 5.896 \frac{mg}{m^3} \quad \frac{5.896 \frac{mg}{m^3} * 1,000 \frac{\mu g}{mg}}{m^3} = 5,896 \frac{\mu g}{m^3}$$

The permittee, has demonstrated that emissions of ethylene glycol, from emissions units J001, P801, and T001-T010, is estimated to be equal or greater than eighty percent, but less than 100 percent of the maximum acceptable ground level concentration (MAGLC), shall not operate the emissions units 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 units, 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 units or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute", ORC 3704.03(F), will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final 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":
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (5) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

c) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Canton City Health Department, Air Pollution Control Division by the due date identified in the Authorization section of this permit. The annual PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit. The permittee shall include in the annual PER any exceedance of the daily limitation of 16.06 lbs/day on toxic air emissions or any deviation from a restriction on the process or hours of operation, as established by the Director in term 3.a), in order to maintain any toxic air contaminant below its MAGLC. The permittee shall also include in the PER any changes made, during the calendar year, to a parameter or value entered into the dispersion model that was used to maintain compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

It is recommended that the annual PER be submitted electronically through the Ohio EPA's "e-Business Center: Air Services", although PERs can be submitted via U.S. postal service or can be hand delivered.



Final Permit-to-Install and Operate
NALCO Company Louisville Ohio Facility
Permit Number: P0116399
Facility ID: 1576115007
Effective Date: 6/19/2014

C. Emissions Unit Terms and Conditions



1. J001, LOAD1

Operations, Property and/or Equipment Description:

Treater truck loading rack that utilizes bottom load, fully submerged loading method to load liquid organic compounds with a MxP (molecular weight x vapor pressure) equal to or less than 63.0 lb/lb-mol*psia. Also includes fugitive emissions associated with the loading rack.

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(A)(3), as effective 11/30/01 [BAT for pollutants less than 10 tons per year]	Work practices specified in b)(2)a. and b)(2)d.-j. See b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06 [Less than 10 tons per year BAT exemption]	See b)(2)c.
c.	OAC rule 3745-21-07(M)	See b)(2)k.
d.	ORC 3704.03(F) OAC rule 3745-114	See B.3. above and d)(1) below



- (2) Additional Terms and Conditions
- a. The Best Available Technology (BAT) determination for this emissions unit is the use of work practices listed in terms b)(2)d-j.
 - b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit identified in b)(1)b. above. 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 Standard (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by the U.S. Environmental Protection Agency (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 the emission limitations/control measures in b)(1)b. above no longer apply.
 - c. 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 (SIP):
 - i. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit for VOC is less than 10 tons/yr.
 - d. All materials loaded through this emissions unit shall be accomplished through dedicated normal service and the use of a bottom load, fully submerged filling system.
 - e. All open ended piping lines shall be capped or plugged when not in use.
 - f. All loading lines shall be equipped with fittings which are vapor tight.
 - g. All leaks in liquid lines and vapor lines shall be repaired within fifteen days after identification.
 - h. The delivery vessel hatches shall be closed at all times during the loading of the delivery vessel.
 - i. There shall be no leaks in the delivery vessel pressure/vacuum relief valves and hatch covers.
 - j. The permittee shall not permit organic liquid product to be spilled, discarded in sewers, stored in open containers or handled in any other manner that would result in evaporation.
 - k. There are no applicable requirements for this emission unit in OAC rule 3745-21-07(M).



- c) Operational Restrictions
 - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
 - (1) The permittee shall maintain records for all product blends loaded through this emission unit in accordance with section B.3.b) of this permit.
 - (2) While the organic liquid is being loaded, the permittee shall monitor liquid lines and vapor lines for leaks. If vapor leaks are detected, the permittee shall maintain a record of the following information:
 - a. the date the leak was detected;
 - b. the findings of the inspection for the leak, which shall indicate the location, nature, and severity of the leak;
 - c. the leak detection method;
 - d. the corrective action(s) taken to repair each leak and the date of the final repair;
 - e. the reasons for any repair interval exceeding 15 calendar days (from the time of the detection to the date of the final repair); and
 - f. the inspector's name and signature.
- e) Reporting Requirements
 - (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Canton City Health Department, Air Pollution Control Division by the due date identified in the Authorization section of this permit. The annual PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit. The PER should also identify each day when a leak was detected in the liquid lines or the vapor lines.

It is recommended that the annual PER be submitted electronically through the Ohio EPA's "e-Business Center: Air Services", although PERs can be submitted via U.S. postal service or can be hand delivered.
 - (2) Any leaks in vapor or liquid lines that are not repaired within 15 days after identification [in accordance with term d)(2)] shall be reported to the Canton City Health Department, Air Pollution Control Division within 30 days after the repair is completed.
- 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. None.



g) Miscellaneous Requirements

(1) For informational purposes only:

- a. For informational purposes associated with determining emissions for reports, the VOC emissions were calculated for the purpose of developing this permit by using AP-42, Chapter 5.2 Transportation and Marketing of Petroleum Liquids [07/08] and the following equation:

$$L_L = 12.46 * \frac{(S * P * M)}{T}$$

Where:

L_L = the loading loss, lb/1,000 gal of liquid loaded

S = 0.60, the saturation factor for submerged loading: dedicated normal service, per AP-42 Chapter 5.2 Table 5.2-1

P = the true vapor pressure of liquid loaded, psia. Per PTIO Application #A0050019, 0.63 psia was used as the true vapor pressure of liquid loaded to represent worst-case product to estimate the emission unit's potential to emit.

M = the molecular weight of vapors, lb/(lb-mol). Per PTIO Application #A0050019, 100 lb/lb-mol was used as the highest molecular weight of liquid loaded to represent worst-case product to estimate the emission unit's potential to emit.

T = the temperature of bulk liquid loaded, degrees Rankine ($^{\circ}R = ^{\circ}F + 460$). Per PTIO Application #A0050019, 528 $^{\circ}R$ was used as the maximum liquid temperature of liquid loaded to estimate the emission unit's potential to emit.

The VOC emissions per year were calculated using the following equation:

$$\frac{\text{tons}}{\text{year}} \text{ VOC} = L_{LT} * X * \frac{1 \text{ ton}}{2,000 \text{ lbs}}$$

Where:

L_{LT} = the total VOC loading loss, lb/1,000 gal liquid loaded

X = the annual throughput for emission unit J001, gal/yr. Per Application #A0050019, 11,700,000 gal/yr was used as a maximum annual throughput, which is the anticipated J001 portion of the maximum combined throughput of 15,600,000 gal/yr for emission units requiring emission reporting (J001 and P801). The 15,600,000 gal/yr combined rate is based on a maximum combined throughput of 6,000 gal/hr for all emission units (J001 and P801), and a facility-wide operating schedule of 10 hrs/day and 5 days/week.



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NALCO Company Louisville Ohio Facility
Permit Number: P0116399
Facility ID: 1576115007
Effective Date: 6/19/2014

- b. For informational purposes associated with determining fugitive emission losses for reports, emission factors were obtained from technical literature pertaining to equipment leak emission estimates, and through engineering analysis of the process. The primary source of technical reference was "Protocol for Equipment Leak Emission Estimates" in SOCMI, source from EPA 453/R-95-017.



2. P801, Load 2, 3, and 4

Operations, Property and/or Equipment Description:

Three loading racks in a common area within a building that consists of 330 or 550 gallon tote loading and 55 gallon drum loading that utilizes top load, fully submerged loading method to load liquid organic compounds, 5 gallon pail loading that utilizes top load, splash fill loading method to load liquid organic compounds, and fugitive emission losses based on the facility's equipment and piping component count estimate. All organic liquids loaded will have a maximum MxP (molecular weight x vapor pressure) less than or equal to 63 lb/lb-mol*psia.

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(A)(3), as effective 11/30/01 [BAT for pollutants less than 10 tons per year]	Work practices specified in b)(2)a. and b)(2)d.-j. See b)(2)b.
b.	OAC rule 3745-31-05(A)(3)(a)(ii) , as effective 12/01/06 [Less than 10 tons per year BAT exemption]	See b)(2)c.
c.	OAC rule 3745-21-07(M)	See b)(2)k.
d.	ORC 3704.03(F)	See B.3. above d)(1) below



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-114	

(2) Additional Terms and Conditions

- a. The Best Available Technology (BAT) determination for this emissions unit is the use of work practices listed in terms b)(2)d-j.
- b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit identified in b)(1)b. above. 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 Standard (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by the U.S. Environmental Protection Agency (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 the emission limitations/control measures in b)(1)b. above no longer apply.
- c. 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 (SIP):
 - i. The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit for VOC is less than 10 tons/yr.
- d. All materials loaded through this emissions unit shall be accomplished through dedicated normal service and the following methods:
 - i. all tote loading/filling with a capacity less than or equal to 550 gallons and all drum loading/filling with a capacity less than or equal to 55 gallons shall utilize top load, fully submerged filling method; and
 - ii. all pail loading/filling with a capacity less than or equal to 5 gallons shall utilize gravity top load, splash filling method.
- e. All open ended piping lines shall be capped or plugged when not in use.
- f. All loading lines shall be equipped with fittings which are vapor tight.
- g. All leaks in liquid lines and vapor lines shall be repaired within fifteen days after identification.



It is recommended that the annual PER be submitted electronically through the Ohio EPA's "e-Business Center: Air Services", although PERs can be submitted via U.S. postal service or can be hand delivered.

- (2) Any leaks in vapor or liquid lines that are not repaired within 15 days after identification [in accordance with term d)(2)] shall be reported to the Canton City Health Department, Air Pollution Control Division within 30 days after the repair is completed.

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. None.

g) Miscellaneous Requirements

- (1) For informational purposes only:

- a. For informational purposes associated with determining emissions for reports, the VOC emissions were calculated for the purpose of developing this permit by using AP-42, Chapter 5.2 Transportation and Marketing of Petroleum Liquids [07/08] and the following equations:

The loading loss from the tote loading has been determined using the following equation:

$$L_{LTote} = 12.46 * \frac{(S * P * M)}{T}$$

Where:

- L_{LTote} = the loading loss from tote loading, lb/1,000 gal of liquid loaded
- S = 0.60, the saturation factor for submerged loading: dedicated normal service per AP-42 Chapter 5.2 Table 5.2-1
- P = the true vapor pressure of liquid loaded, psia. Per PTIO Application #A0050019, 0.63 psia was used as the true vapor pressure of liquid loaded to represent worst-case product to estimate the emission unit's potential to emit.
- M = the molecular weight of vapors, lb/(lb-mol). Per PTIO Application #A0050019, 100 lb/lb-mol was used as the highest molecular weight of liquid loaded to represent worst-case product to estimate the emission unit's potential to emit.
- T = the temperature of bulk liquid loaded, degrees Rankine($^{\circ}R = ^{\circ}F + 460$). Per PTIO Application #A0050019, 528 $^{\circ}R$ was used as the maximum liquid temperature of liquid loaded to estimate the emission unit's potential to emit.



The loading loss from the drum loading has been determined using the following equation:

$$L_{LDrum} = 12.46 * \frac{(S * P * M)}{T}$$

Where:

- L_{LDrum} = the loading loss from drum loading, lb/1,000 gal of liquid loaded
- S = 0.60, the saturation factor for submerged loading: dedicated normal service per AP-42 Chapter 5.2 Table 5.2-1
- P = the true vapor pressure of liquid loaded, psia. Per PTIO Application #A0050019, 0.63 psia was used as the true vapor pressure of liquid loaded to represent worst-case product to estimate the emission unit's potential to emit.
- M = the molecular weight of vapors, lb/(lb-mol). Per PTIO Application #A0050019, 100 lb/lb-mol was used as the highest molecular weight of liquid loaded to represent worst-case product to estimate the emission unit's potential to emit.
- T = the temperature of bulk liquid loaded, degrees Rankine($^{\circ}R = ^{\circ}F + 460$). Per PTIO Application #A0050019, 528 $^{\circ}R$ was used as the maximum liquid temperature of liquid loaded to estimate the emission unit's potential to emit.

The loading loss from the pail loading has been determined using the following equation:

$$L_{LPail} = 12.46 * \frac{(S * P * M)}{T}$$

Where:

- L_{LPail} = the loading loss from pail loading, lb/1,000 gal of liquid loaded
- S = 1.45, the saturation factor for splash loading: dedicated normal service per AP-42 Chapter 5.2 Table 5.2-1
- P = the true vapor pressure of liquid loaded, psia. Per PTIO Application #A0050019, 0.63 psia was used as the true vapor pressure of liquid loaded to represent worst-case product to estimate the emission unit's potential to emit.
- M = the molecular weight of vapors, lb/(lb-mol). Per PTIO Application #A0050019, 100 lb/lb-mol was used as the highest molecular weight of liquid loaded to represent worst-case product to estimate the emission unit's potential to emit.
- T = the temperature of bulk liquid loaded, degrees Rankine($^{\circ}R = ^{\circ}F + 460$). Per PTIO Application #A0050019, 528 $^{\circ}R$ was used as the maximum



liquid temperature of liquid loaded to estimate the emission unit's potential to emit.

Therefore, the total VOC loading loss ($L_{LTototal}$) has been determined by adding the tote loading loss, the drum loading loss, and the pail loading loss.

$$L_{LTote} + L_{LDrum} + L_{LPail} = L_{LTototal}$$

The VOC emissions per year were determined by calculating the annual VOC emissions from each loading operation and then adding together the annual VOC emissions from the tote loading, the annual VOC emissions from the drum loading, and the annual VOC emissions from the pail loading.

The annual VOC emissions from tote loading were calculated using the following equation:

$$Y_{Tote} = L_{LTote} * X_{Tote} * \frac{1 \text{ ton}}{2,000 \text{ lbs}}$$

Where:

- Y_{Tote} = the annual VOC emissions from tote loading, tons/yr
- L_{LTote} = the loading loss from tote loading, lb/1,000 gal of liquid loaded
- X_{Tote} = the annual throughput for tote loading, gal/yr. Per Application #A0050019, 3,120,000 gal/yr was used as a maximum annual throughput, which is the anticipated tote loading portion of the maximum combined throughput of 15,600,000 gal/yr for emission units requiring emission reporting (J001 and P801). The 15,600,000 gal/yr combined rate is based on a maximum combined throughput of 6,000 gal/hr for all emission units (J001 and P801), and a facility-wide operating schedule of 10 hrs/day and 5 days/week.

The annual VOC emissions from the drum loading were calculated using the following equation:

$$Y_{Drum} = L_{LDrum} * X_{Drum} * \frac{1 \text{ ton}}{2,000 \text{ lbs}}$$

Where:

- Y_{Drum} = the annual VOC emissions from drum loading, tons/yr
- L_{LDrum} = the loading loss from drum loading, lb/1,000 gal of liquid loaded
- X_{Drum} = the maximum annual throughput for drum loading, gal/yr. Per Application #A0050019, 468,000 gal/yr was used as a maximum annual throughput, which is the anticipated drum loading portion of the maximum combined throughput of 15,600,000 gal/yr for emission units requiring emission reporting (J001 and P801). The 15,600,000



gal/yr combined rate is based on a maximum combined throughput of 6,000 gal/hr for all emission units (J001 and P801), and a facility-wide operating schedule of 10 hrs/day and 5 days/week.

The annual VOC emissions from the pail loading were recalculated using the following equation:

$$Y_{Pail} = L_{Pail} * X_{Pail} * \frac{1 \text{ ton}}{2,000 \text{ lbs}}$$

Where:

- Y_{Pail} = the annual VOC emissions from pail loading, tons/yr
- L_{LPail} = the loading loss from pail loading, lb/1,000 gal of liquid loaded
- X_{Pail} = the maximum annual throughput for pail loading, gal/yr. Per Application #A0050019, 312,000 gal/yr was used as a maximum annual throughput for pail loading which is based on a facility-wide operating schedule of 10 hrs/day and 5 days/week.

Therefore, the total annual VOC emissions were recalculated by adding the annual tote VOC emissions, the annual drum VOC emissions, and the annual pail VOC emissions.

$$Y_{Tote} + Y_{Drum} + Y_{Pail} = Y_{Total}$$

- b. For informational purposes associated with determining fugitive emission losses for reports, emission factors were obtained from technical literature pertaining to equipment leak emission estimates, and through engineering analysis of the process. The primary source of technical reference was "Protocol for Equipment Leak Emission Estimates" in SOCFI, source from EPA 453/R-95-017.