

Synthetic Minor Determination and/or **Netting Determination**
Permit To Install **01-12024**

A. Source Description

Kaiser Aluminum and Chemical Corporation operates a aluminum production facility in Heath, Licking County, non-attainment for ozone. The facility is currently operating under a Title V Permit. The facility is also currently a Synthetic Minor Stationary Source to avoid 40 CFR Part 63, Subpart RRR major source requirements for HAPs. Kaiser Aluminum (Ohio EPA Facility ID: 01-45-01-0093) currently operates four (4) aluminum melting furnaces and numerous homogenization furnaces at their facility. Kaiser Aluminum is requesting a permit for the installation of one (1) aluminum melting/holding furnace (P027) and one (1) aluminum homogenization furnace (P028). Kaiser Aluminum proposes to limit chlorine gas fluxing at emission units P005, P006, P007, P020, and P027 in order to limit HAP emissions and remain a non-major source for HAPs. Kaiser Aluminum further purpose to limit chlorine gas fluxing at P027 to limit HAP emissions to less then 1 TPY in order to avoid triggering modeling requirements.

B. Facility Emissions and Attainment Status

Kaiser Aluminum and Chemical Corporation is currently classified as a Title V Stationary Source for criteria pollutants and as a Synthetic Minor Stationary Source for HAPs. Licking County is in attainment for all criteria pollutants except ozone.

C. Source Emissions

Potential emissions of HCl, single HAP, from all emissions units after the installation of P027 and P028 and without any federally enforceable restrictions are 5.78 tons/year. Limiting the mass of chlorine used in gas fluxing at emissions units P005, P006, P007, P020, and P027 will limit HCl emissions from P027 to .99 tons/year and HCl emissions from the facility to 9.9 tons/year. There are no other significant HAP contributing emission units at this facility.

Potential emissions of combined HAPs (HCl, HF, Cl₂, and HAP metals) from all emissions units after the new units are installed and without any federally enforceable restrictions are 10.02 tons/year. Limiting the mass of chorine used in gas fluxing at emissions units P005, P006, P007, P020, and P027 will limit combined HAPs to 24.99 tons/yr.

D. Conclusion

Kaiser Aluminum will remain a Title V facility and avoid 40 CFR Part 63, Subpart RRR HAP major source requirements by limiting the mass of chlorine used in gas fluxing at P005, P006, P007, P020, and P027. Facility-wide emission limitations are listed in Part II, Section A of this permit and were adopted from Kaiser Aluminum's existing Title V permit.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL
LICKING COUNTY**

CERTIFIED MAIL

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov.
Center

Application No: 01-12024

Fac ID: 0145010093

DATE: 7/6/2006

Kaiser Aluminum and Chemical Corp
David Paul
20 Oakwood Avenue
Lebanon, OH 45036

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$1650** will be due. Please do not submit any payment now.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

CDO

PUBLIC NOTICE

ISSUANCE OF DRAFT PERMIT TO INSTALL **01-12024** FOR AN AIR CONTAMINANT SOURCE FOR
Kaiser Aluminum and Chemical Corp

On 7/6/2006 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Kaiser Aluminum and Chemical Corp**, located at **1459 Hebron Rd, Heath, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 01-12024:

Number 7 aluminum melting/holding furnace and associated processes.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Isaac Robinson, Ohio EPA, Central District Office, 3232 Alum Creek Drive, Columbus, OH 43207-3417
[(614)728-3778]



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 01-12024

Application Number: 01-12024
Facility ID: 0145010093
Permit Fee: **To be entered upon final issuance**
Name of Facility: Kaiser Aluminum and Chemical Corp
Person to Contact: David Paul
Address: 20 Oakwood Avenue
Lebanon, OH 45036

Location of proposed air contaminant source(s) [emissions unit(s)]:

**1459 Hebron Rd
Heath, Ohio**

Description of proposed emissions unit(s):

Number 7 aluminum melting/holding furnace and associated processes.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written

reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
 - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain,

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the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The

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permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

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8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of

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the Ohio EPA. Progress reports shall contain the following:

- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
- ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit-To-Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in

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this permit.

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B. State Only Enforceable Permit-To-Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

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

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of

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installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

5. Construction of New Sources(s)

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

6. Public Disclosure

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

7. Applicability

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

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) that the facility has been constructed in accordance with the permit-to-install application and the terms and conditions of the permit-to-install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

Kaiser Aluminum and Chemical Corp**Facility ID: 0145010093****PTI Application: 01-12024****Issued: To be entered upon final issuance****C. Permit-To-Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|---|
| HCl | 9.9 |
| HAP | 24.9 |
| PM | 15.97 |
| D/F | 15 ug of D/F TEQ per Mg of Feed/Charge |
| SO ₂ | 24.22 |
| VOC | 9.25 |
| CO | 13.57 |
| NO _x | 28.27 |

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforcable Section

1. The Secondary Aluminum Processing Unit (SAPU) at this facility is comprised of the individual Group 1 furnaces identified as emissions units P005, P006, P007, P020, and P027. Emissions units P005, P006, P007, P020, and P027 are subject to 40CFR63, Subpart RRR - National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production. The permittee has requested to limit the facility-wide potential to emit (PTE) for Hazardous Air Pollutants (HAPs) to avoid the major source requirements specified in Subpart RRR. The facility-wide PTE for HAPs, with the restrictions in this permit*, is less than the major source threshold of 10 tons/year for a single HAP and 25 tons/year for the combination of all HAPs, as rolling, 12-month summations.

*As described in Section A.1.a, HAP emissions of hydrogen chloride, hydrogen fluoride, and chlorine are limited by restricting annual chlorine usage (based on an emission factor for hydrogen chloride established through emission testing under worst-case conditions**). 40CFR63.1503 defines hydrogen chloride (HCl) to mean emissions of hydrogen chloride that serve as a surrogate measure of the total emissions of the HAPs hydrogen chloride, hydrogen fluoride, and chlorine. The hydrogen chloride and hydrogen fluoride emission rates from emissions unit P020, based on the results of the July 27 and 28, 1999 emission tests, were 0.26 lb/hr and 0.10 lb/hr (1.14 tons HCl and 0.44 ton HF at 8760 hrs/yr of operation), respectively. Particulate matter (PM) testing was also conducted under worst-case conditions**. 40CFR63.1503 defines PM as emissions of particulate matter that serve as a measure of total particulate emissions and as a surrogate for metal HAPs contained in the particulates, including but not limited to: antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium. Based on Table 1 of 65 FR15704, HAP metals represent 0.68% of the total PM emissions. The PM emission rate from emissions unit P020, based on the results of the July 27 and 28, 1999 emission tests, was 2.44 lbs/hr (10.69 tons PM at 8760 hrs/yr of operation).

**Emissions unit P020 was operating at or near its maximum capacity during the emission tests witnessed by the Ohio EPA, Central District Office on July 27 and 28, 1999. This was necessary to establish the emission factors for hydrogen chloride and hydrogen fluoride under worst-case conditions. Emissions units P005, P006, P007, and P020 use identical feed/charge and flux materials in the same proportions, are subject to the same work practices, and are of the same or similar design. Therefore, the emission factor for hydrogen chloride and hydrogen fluoride applies to emissions units P005, P006, and P007. The worst-case PM emission rate from emissions unit P020 (2.44 lbs/hr) also represent the worst-case PM emission rate from emissions units P005, P006, and P007.

Potential HAP metals emissions from P005, P006, P007, and P020 are:

$(0.0068) \times (10.69 \text{ tons/yr}) \times 4 = 0.29 \text{ ton HAP metals/yr.}$

Estimated potential HAP metals emissions from P027 are:

$(0.0068) \times (9.25 \text{ tons/yr}) = 0.063 \text{ ton HAP metals/yr.}$

Therefore, facility-wide*** HAP emissions (hydrogen chloride, hydrogen fluoride, chlorine, and HAP metals) are limited to less than the major source threshold of 10 tons/year for each HAP and 25 tons/year for the combination of all HAPs.

***The HAP emissions from emissions units B019, B020, and P028 (natural gas-fired furnace) and the insignificant emissions units located at this facility are expected to be minimal.

1.a HCl Emission Limitation and Chlorine Usage Limitation:

- i. The total HCl emissions from emissions units P005, P006, P007, P020, and P027 combined shall not exceed 9.9 tons per rolling, 12-month period.
- ii. The maximum annual chlorine usage (as reactive flux) for emissions units P005, P006, P007, P020, and P027 combined shall not exceed 12.86 tons*, based upon a rolling, 12-month summation of the monthly chlorine usage rates.

To ensure enforceability during the first 12 calendar months of operation after the issuance of this permit, the permittee shall not exceed the chlorine usage levels (for emissions units P005, P006, P007, P020, and P027 combined) specified in the following table:

| <u>Months</u> | <u>Monthly Cumulative Chlorine Usage (tons)</u> |
|---------------|---|
| 1 | 1.07 |
| 1-2 | 2.14 |
| 1-3 | 3.21 |
| 1-4 | 4.28 |
| 1-5 | 5.35 |
| 1-6 | 6.42 |
| 1-7 | 7.50 |
| 1-8 | 8.57 |
| 1-9 | 9.63 |
| 1-10 | 10.70 |
| 1-11 | 11.77 |
| 1-12 | 12.86 |

After the first 12 calendar months of operation after the issuance of this permit, compliance with annual usage limitation shall be based upon a rolling, 12-month summation of the monthly chlorine usage rates.

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PTI A****Issued: To be entered upon final issuance**

* The annual chlorine usage limitation of 12.86 tons for emissions units P005, P006, P007, P020, and P027 combined was established as follows:

$$[9.9 \text{ tons HCl/yr}]/[0.77] = 12.86 \text{ tons chlorine usage/yr;}$$

where:

0.77 is the emission factor established based on the results of the July 27 and 28, 1999 emission tests in units of lb HCl/lb chlorine used.

- 1.b** The permittee must not discharge to the atmosphere any 3-day, 24-hour rolling average emissions of dioxans/furans (D/F) in excess of Equation 3 of 40CFR63.1505(k)(3); or the permittee may demonstrate compliance with the emission limitations of 40CFR63.1505(k)(3) by demonstrating that each emissions unit (P005, P006, P007, P020, and P027) is in compliance with the emission limitation of 15.0 ug of D/F TEQ per Mg (2.1E-04 gr of D/F TEQ per ton) of feed/charge as specified in 40CFR63.1505(i)(3).

NOTE: In accordance with 40CFR63.1500(c)(4), the melting furnaces associated with emissions units P005, P006, P007, P020, and P027 do not process clean charge, and, therefore, are subject to the operating, monitoring, record keeping, and reporting requirements of 40CFR63, Subpart RRR pertaining to D/F emissions. No gaseous or liquid reactive flux materials are added to the melting furnaces and only non-chlorine containing solid reactive fluxes are utilized. The holding furnaces associated with emissions units P005, P006, P007, P020, and P027, only process molten aluminum from the melting furnaces, which is considered clean charge and are not subject to the operating, monitoring, record keeping and reporting requirements of 40CFR63, Subpart RRR pertaining to D/F emissions. Also, the PM and HCl emission limitations specified in 40CFR63.1505(i)(1) and 40CFR63.1505(i)(4), respectively, do not apply because emissions units P005, P006, P007, P020, and P027 are not subject to the major source requirements specified in Subpart RRR.

D/F means dioxins and furans. Dioxins and furans means tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans. TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA-625/3-89-016), available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, NTIS no. PB 90-145756.

- 1.c** Pursuant to 40CFR63.1506(a), on and after the date on which the initial performance

test is conducted or required to be conducted, whichever date is earlier, the permittee must operate all new and existing affected sources and control equipment according to the requirements of 40CFR63.1506. The completion of the initial performance tests for SAPUs shall be considered to be the date of approval of the OM&M plan by the Director (Central District Office).

- 2.** Operation, Maintenance and Monitoring Plan (OM&M)
Pursuant to 40CFR63.1510(b), the permittee must prepare and implement for each new or existing affected source and emissions unit, a written operation, maintenance, and monitoring (OM&M) plan. The permittee must submit the plan to the Director (Central District Office) for review and approval. Any subsequent changes to the plan must be submitted to the Director (Central District Office) for review and approval. Pending approval by the Director (Central District Office) of an initial or amended plan, the permittee must comply with the provisions of the submitted plan.
- 2.a** For each new or existing affected source and emissions unit, the plan must contain the following information:
 - i. Process parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process.
 - ii. A monitoring schedule for each affected source and emissions unit.
 - iii. Procedures for the proper operation and maintenance of each process unit used to meet the applicable emission limitations or standards in 40CFR63.1505.
 - iv. Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (a) calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and
 - (b) procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in Subpart A of 40CFR63.
 - v. Procedures for monitoring the process, including the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
 - vi. Corrective actions to be taken when process or operating parameters deviate from the value or range established in paragraph (b)(1) of 40CFR63.1510, including:
 - (a) procedures to determine and record the cause of an deviation or

- excursion, and the time the deviation or excursion began and ended; and
- (b) procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- vii. A maintenance schedule for each process that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- viii. Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limitations and a site-specific monitoring plan as required in 40CFR63.1510(o) for emissions units P005, P006, P007, P020, and P027.

2.b Site-Specific Requirements for SAPUs (40CFR63.1510(s))

- i. Within the OM&M plan prepared in accordance with 40CFR63.1510(b), the following information must be contained in the plan:
 - (a) the identification of each emissions unit in the SAPU (defined in 40CFR63.1503);
 - (b) the specific control technology or pollution prevention measure to be used for each emissions unit in the SAPU and the date of its installation or application;
 - (c) the emission limitation calculated for each SAPU and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limitation;
 - (d) information and data demonstrating compliance for each emissions unit with all applicable design, equipment, work practice or operational standards of 40CFR63, Subpart RRR; and
 - (e) the monitoring requirements applicable to each emissions unit in a SAPU and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40CFR63.1510(t).
- ii. The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions:
 - (a) any averaging among emissions of differing pollutants;
 - (b) the inclusion of any affected sources other than emissions units in a SAPU;

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- (c) the inclusion of any emissions unit while it is shutdown; or
- (d) the inclusion of any periods of startup, shutdown, or malfunction in emission calculations.

To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the permittee must submit a request to the Director (Central District Office) containing the information required by 40CFR63.1510(s) and obtain approval of the Director (Central District Office) prior to implementing any revisions.

3. Monitoring Requirements

- i. Pursuant to 40CFR63.1510(t), the permittee must calculate and record the 3-day, 24-hour rolling average emissions of D/F for each SAPU on a daily basis. To calculate the 3-day, 24-hour rolling average, the permittee must:
 - (a) Calculate and record the total weight of material charged to each emissions unit in the SAPU for each 24-hour day of operation using the feed/charge weight information required in 40CFR63.1510(e). If the permittee chooses to comply on the basis of weight of aluminum produced by the emissions unit, rather than weight of material charged to the emissions unit, all performance test emission results and all calculations must be conducted on the aluminum production weight basis.
 - (b) Multiply the total feed/charge weight to the emissions unit, or the weight of aluminum produced by the emissions unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emissions unit (as determined during the performance test) to provide emissions for each emissions unit for the 24-hour period, in pounds.
 - (c) Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.
 - (d) Compute the 24-hour daily emission rate using Equation 4 of 40CFR63.1510(t).
 - (e) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the

3 most recent consecutive days and dividing by 3.

- ii. Pursuant to 40CFR63.1510(u), as an alternative to the procedures of 40CFR63.1510(t), an permittee may demonstrate, through performance tests, that each individual emissions unit within the SAPU is in compliance with the applicable emission limitations for the emissions unit.
- iii. Pursuant to 40CFR63.1510(w), a permittee may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40CFR63.1510, subject to the following provisions:
 - (a) The Administrator will not approve averaging periods other than those specified in this section.
 - (b) The permittee must continue to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure.
 - (c) The permittee shall submit the application for approval of alternate monitoring methods no later than the notification of the performance test. The application must contain the information specified below:
 - (i) data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;
 - (ii) a description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limitation is to be calculated; and
 - (iii) data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s).
 - (d) The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard(s). Before disapproving any alternate monitoring application, the Administrator will provide:
 - (i) notice of the information and findings upon which the intended disapproval is based; and
 - (ii) notice of opportunity for the permittee to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the permittee to provide additional supporting information.

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- (e) The permittee is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application nor the Administrator's failure to approve or disapprove the application relieves the permittee of the responsibility to comply with any provisions of 40CFR63,Subpart RRR.
- (f) The Administrator may decide at any time, on a case-by-case basis, that additional or alternative operating limitations, or alternative approaches to establishing operating limitations, are necessary to demonstrate compliance with the emission standards of 40CFR63,Subpart RRR.

4. Site-Specific Test Plan (40CFR63.1511(a))

Prior to conducting a performance test required by 40CFR63,Subpart RRR, the permittee must prepare and submit a site-specific test plan meeting the requirements of 40CFR63.7(c).

5. Performance Test Requirements (40CFR63.1511)**5.a Initial Performance Test**

Following approval of the site-specific test plan, the permittee must demonstrate initial compliance with the D/F emission limitation and all equipment, work practice, or operational standard associated with this standard for each affected source and emissions unit, and report the results in the notification of compliance status report as described in 40CFR63.1515(b). The permittee must conduct each performance test according to the requirements of Subpart A of 40CFR63 and 40CFR63,Subpart RRR. Following are the applicable testing requirements of 40CFR63,Subpart RRR:

- i. the permittee must conduct each test while the affected source or emissions unit is operating at the highest production level with charge materials representative of the range of materials processed by the unit and, if applicable, at the highest reactive fluxing rate;
- ii. each performance test for a batch process must consist of 3 separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle; and
- iii. initial compliance with the D/F emission limitation or standard is demonstrated if the average of 3 runs conducted during the performance test is less than or equal to the applicable emission limitation or standard.

5.b Test Methods

The permittee must use the following methods in Appendix A of 40CFR60 to determine compliance with the D/F emission limitation or standard:

- i. Method 1 for sample and velocity traverses;
- ii. Method 2 for velocity and volumetric flow rate;
- iii. Method 3 for gas analysis;
- iv. Method 4 for moisture content of the stack gas; and
- v. Method 23 for the concentration of D/F.

The permittee may use alternative test methods, subject to approval by the Administrator.

5.c Testing of Representative Emissions Units

With the approval of the Director (Central District Office), a single representative or similar group 1 furnace may be tested to determine the emission rate of all like affected sources at a facility provided that:

- i. the tested emissions unit must use identical feed/charge and flux materials in the same proportions as the emissions units that it represents;
- ii. the tested emissions unit is subject to the same work practices and the emissions units that it represents;
- iii. the tested emissions unit is of the same design as the emissions units that it represents;
- iv. the tested emissions unit is tested under the highest load or capacity reasonably expected to occur for any of the emissions units that it represents; and
- v. at least one of each different style of emissions unit at the facility is tested.

5.d Establishment of Monitoring and Operating Parameter Values

The permittee of new or existing affected sources and emissions units must establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40CFR63.1510 that ensures compliance with the applicable emission limitation or standard. To establish the minimum or maximum value or range, the permittee must use the appropriate

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procedures in 40CFR63, Subpart RRR and submit the information required by 40CFR63.1515(b)(4) in the notification of compliance status report. The permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met to the satisfaction of the Director (Central District Office):

- i. The complete emission test report(s) used as the basis of the parameter(s) is submitted.
- ii. The same test methods and procedures as required by 40CFR63, Subpart RRR were used in the test.
- iii. The permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report.
- iv. All process and control equipment operating parameters required to be monitored were monitored as required in 40CFR63, Subpart RRR and documented in the test report.

6. Initial Notification

The permittee must submit initial notifications to the Director (Central District Office) as described in paragraphs (a)(1) through (a)(7) of 40CFR63.1515.

7. Records**7.a** Pursuant to 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by 40CFR63 and 40CFR63, Subpart RRR.

- i. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.
- ii. The permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche.
- iii. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer

software.

- 7.b** In addition to the general records required by 40CFR63.10(b), the permittee of a new or existing affected source (including an emissions unit in a SAPU) must maintain records of:
- i. Each group 1 furnace (emissions units P005, P006, P007, P020, and P027) shall only use solid reactive flux materials and shall keep records on the weight of the solid reactive flux added to each batch charge (including records of the identity and composition of the flux material), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.
 - ii. For each affected source and emissions unit subject to an emission standard in kg/Mg (lb/ton) of feed/charge, records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.
 - iii. Approved site-specific monitoring plan for a group 1 furnace without add-on air pollution control devices with records documenting conformance with the plan.
 - iv. Records of monthly inspections for proper unit labeling for each affected source and emissions unit subject to labeling requirements.
 - v. Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (a) startup, shutdown, and malfunction plan; and
 - (b) site-specific SAPU emission plan (if applicable).
 - vi. For each SAPU, records of total charge weight, or if the permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.
- 7.c** The permittee shall maintain monthly records of the following information for emissions units P005, P006, P007, P020, and P027 combined:
- i. The chlorine usage for each month, in tons.
 - ii. During the first 12 calendar months of operation following the issuance of this permit, the cumulative chlorine usage for each calendar month.
 - iii. Beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the chlorine usage rates.

8. Reporting

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PTI A****Issued: To be entered upon final issuance****8.a Startup, Shutdown, and Malfunction Plan/Reports**

The permittee must develop and implement a written plan as described in 40CFR63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The permittee shall also keep records of each event as required by 40CFR63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40CFR63.6(e)(3). In addition to the information required in 40CFR63.6(e)(3), the plan must include:

- i. procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
- ii. corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.

8.b Excess Emissions/Summary Report

Pursuant to 40CFR63.10(e)(3), the permittee must submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40CFR63.10(c). When no deviations of parameters have occurred, the permittee must submit a report stating that no excess emissions occurred during the reporting period.

- i. A report must be submitted if any of these conditions occur during a 6-month reporting period:
 - (a) An excursion of a compliant process or operating parameter value or range (e.g., total reactive chlorine flux injection rate, definition of acceptable scrap, or other approved operating parameter).
 - (b) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40CFR63.6(e)(3).
 - (c) An affected source (including an emissions unit in a SAPU) was not operated according to the requirements of 40CFR63, Subpart RRR.

- (d) A deviation from the 3-day, 24-hour rolling average emission limitation for a SAPU.
- ii. The permittee must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

8.c Annual Compliance Certifications

For the purpose of annual certifications of compliance required by this permit, the permittee must certify continuing compliance based upon, but not limited to, the following conditions:

- i. any period of excess emissions, as defined in 40CFR63.1516(b)(1), that occurred during the year were reported as required by 40CFR63.1516; and
- ii. all monitoring, record keeping, and reporting requirements were met during the year.

9. MACT Equations for Determining Compliance

The permittee shall use the procedure in paragraphs (e)(3) or (e)(4) of 40CFR63.1513 to determine compliance with the D/F emission limitations for the SAPU.

- 10.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month chlorine usage limitation and, for the first 12 calendar months after the issuance of this permit, all exceedances of the maximum allowable cumulative chlorine usage levels. These reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii of this permit.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | |
|---|--------------------------------------|---|
| P027 - Aluminum Melting Furnace No. 7 - a SECO/WARWICK (70,000 lb capacity per charge) tilting furnace with one pair of sidewall mounted natural gas (regenerative) burners with a maximum heat input rating of 14.6 MMBtu/hr capable of melting 12,000 lbs of Al/hr. | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-07(A) OAC rule 3745-17-11(B) |
| | | 40 CFR Part 63.1505(i)(3) |
| | | OAC 3745-31-05(C) (To avoid being subject to a MACT) |

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| <u>Applicable Emissions Limitations/Control Measures</u> | |
|---|--|
| Visible particulate emissions shall not exceed 5% opacity as a 6-minute average except as provided by rule. | The requirements of this rule also include compliance with the requirements of 40 CFR Part 63.1505(i)(3) and OAC 3745-31-05(C). |
| Particulate emissions shall not exceed 3.65 pound per hour and 15.97 tons per year. | The emission limitations specified in these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3). |
| Sulfur dioxide emissions shall not exceed 5.53 pound per hour and 24.22 ton per year. | Dioxan/furan (D/F) emissions shall not exceed 15.0 ug of D/F TEQ per Mg(2.1E-04 gr of D/F TEQ per ton) of feed/charge See A.I.2.b below. |
| Nitrogen oxides emissions shall not exceed 5.34 pounds per hour and 23.37 tons per year. | HCl emissions shall not exceed 0.99 tons/per rolling, 12-month summation. |
| Volatile organic compound emissions shall not exceed 2.11 pound per hour and 9.25 ton per year. | HCl missions from emission units P005, P006, P007, P020, and P027 shall not exceed 24.9 tons/per rolling, 12-month summation. See A.II.8 below. |
| Carbon monoxide emissions shall not exceed 1.2 pounds per hour and 5.27 tons per year. | |

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2. Additional Terms and Conditions

- 2.a This emissions unit must comply with the requirements of 40 CFR 63, Subpart RRR.
- 2.b D/F means dioxins and furans. Dioxins and furans means tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans. TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA-625/3-89-016), available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, NTIS no. PB 90-145756.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.
2. The permittee shall not employ gaseous or liquid flux materials in the aluminum melting furnace of P027.
3. Pursuant to 40CFR63.1506(b), the permittee must provide and maintain easily visible labels posted at the emissions unit that identifies the applicable emission limitations and means of compliance, including the type of affected source or emissions unit (e.g. group 1 furnace), the applicable operational standard(s) and control method(s) such as the type of charge to be used for a furnace, flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.
4. Pursuant to 40CFR63.1506(d), the permittee of this emissions unit must either:
 - a. install and operate a device that measures and records or otherwise determines the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan; or
 - b. measure and record the aluminum production weight from an affected source or emissions unit rather than feed/charge weight to an affected source or emissions unit, provided that:
 - i. the aluminum production weight, rather than feed/charge weight is measured and recorded for all emissions units (P005, P006, P007, P020, and P027); and
 - ii. all calculations to demonstrate compliance with the emission limitations for all emissions units (P005, P006, P007, P020, and P027) are based on

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aluminum production weight rather than feed/charge weight.

5. The permittee shall maintain the weight of solid reactive flux materials added to each batch charge of aluminum melted in P027 at or below the weight levels established during the most recent performance test that demonstrated that the emissions unit was in compliance.
6. Pursuant to 40CFR63.1506(n)(2), the permittee must operate this emissions unit in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan.
7. Pursuant to 40CFR63.1506(p), when a process parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the permittee must initiate corrective action. Corrective action must restore operation of the emissions unit (including the process) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.
8. The maximum annual chlorine usage for this emissions unit shall not exceed 1.28 tons, based upon a rolling, 12-month summation of the chlorine usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the chlorine usage levels specified in the following table:

| <u>Month(s)</u> | <u>Maximum Allowable Cumulative Chlorine Usage</u> |
|-----------------|--|
| 1 | 0.15 tons |
| 2 | 0.30 tons |
| 3 | 0.45 tons |
| 4 | 0.60 tons |
| 5 | 0.75 tons |
| 6 | 0.90 tons |
| 7 | 1.05 tons |
| 8 | 1.20 tons |
| 9 | 1.28 tons |
| 10 | 1.28 tons |
| 11 | 1.28 tons |

12

1.28 tons

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual chlorine usage limitation shall be based upon a rolling, 12-month summation of the chlorine usage figures.

III. Monitoring and/or Record Keeping 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. For each day during which the permittee employs gaseous or liquid flux materials in the aluminum melting furnace of P027, the permittee shall maintain a record of the type and quantity of gaseous or liquid flux materials employed in this emissions unit.
3. The permittee shall inspect the labels for this emissions unit at least once per calendar month to confirm that posted labels as required by the operational standard in 40CFR63.1506(c) are intact and legible.
4. Feed/Charge Weight (40CFR63.1510(e)) The permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, this emissions unit over the same operating cycle or time period used in the performance test; as an alternative to a measurement device, the permittee may use a procedure acceptable to the Director (Central District Office) to determine the total weight of feed/charge or aluminum production to this emissions unit. The weight measurement device or procedure must comply with the following:
 - a. The accuracy of the weight measurement device or procedure must be +/- 1 percent of the weight being measured. The permittee may apply to the Director (Central District Office) for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the permittee provides assurance through data and information that the affected source will meet the relevant emission standard.
 - b. The permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
5. Total Reactive Flux Injection Rate (40CFR63.1510(j)) To comply with the applicable sections of 40CFR63.1510(j), the permittee shall:
 - a. calculate and record the solid reactive flux injection rate (lb/ton) for each operating cycle or time period used in the performance test using the procedure

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in 40CFR63.1512(o);

- b. record, for each time period used in the performance test during which reactive fluxing occurs, the time, weight, and the addition of solid reactive flux;
- c. calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test using the procedure in 40CFR63.1512(o); and
- d. the permittee may apply to the Administrator for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the permittee provides assurance through data and information that the affected source will meet the relevant emission standard(s) on a continuous basis.

6. Site-Specific Monitoring Plan (40CFR63.1510(o))

- a. The permittee shall develop, in consultation with the Director (Central District Office), a written site-specific monitoring plan. The site-specific monitoring plan must be part of the OM&M plan that addresses monitoring and compliance requirements for D/F emissions from this emissions unit. The permittee shall:
 - i. Submit the site-specific monitoring plan to the Director (Central District Office) for review within 6 months of issuance of this permit.
 - ii. The Director (Central District Office) will review and approve or disapprove a proposed plan, or request changes to a plan, based on whether the plan contains sufficient provisions to ensure continuing compliance with applicable emission limitations and demonstrates, based on documented test results, the relationship between emissions of D/F and the proposed monitoring parameters for the pollutant. Test data must establish the highest level of D/F that will be emitted from this emissions unit. Subject to the Director's (Central District office) approval of the OM&M plan, this may be determined by conducting performance tests and monitoring operating parameters while charging this emissions unit with feed/charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate.

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- b. The site-specific monitoring plan for this emissions unit must document each work practice, equipment/design practice, pollution prevention practice, or other measure used to meet the applicable emission standards.
 - c. The site-specific monitoring plan for this emissions unit must include provisions for unit labeling as required in 40CFR63.1510(c), feed/charge weight measurement (or production weight measurement) as required in 40CFR63.1510(e) and flux weight measurement as required in 40CFR63.1510(j).
 - d. If a continuous emission monitoring system is included in a site-specific monitoring plan, the plan must include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of the general provisions in Subpart A of 40CFR63.
 - e. If a site-specific monitoring plan includes a scrap inspection program for monitoring the scrap contaminant level of furnace feed/charge materials, the plan must include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in 40CFR63.1510(p).
 - f. If a site-specific monitoring plan includes a calculation method for monitoring the scrap contaminant level of furnace feed/charge materials, the plan must include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in 40CFR63.1510(q).
- 7.** Scrap Inspection Program (40CFR63.1510(p)) A scrap inspection program must include:
- a. a proven method for collecting representative samples and measuring the oil and coatings content of scrap samples;
 - b. a scrap inspector training program;
 - c. an established correlation between visual inspection and physical measurement of oil and coatings content of scrap samples;
 - d. periodic physical measurements of oil and coatings content of randomly-selected scrap samples and comparison with visual inspection results;
 - e. a system for assuring that only acceptable scrap is charged to this emissions unit; and
 - f. record keeping requirements to document conformance with plan requirements.
- 8.** Pursuant to 40CFR63.1510(q), if this emissions unit is dedicated to processing a

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distinct type of furnace feed/charge composed of scrap with a uniform composition (such as rejected product from a manufacturing process for which the coating-to-scrap ratio can be documented), the permittee may include a program in the site-specific monitoring plan for determining, monitoring, and certifying the scrap contaminant level using a calculation method rather than a scrap inspection program. A scrap contaminant monitoring program using a calculation method must include:

- a. Procedures for the characterization and documentation of the contaminant level of the scrap prior to the performance test.
 - b. Limitations on the furnace feed/charge to scrap of the same composition as that used in the performance test. If the performance test was conducted with a mixture of scrap and clean charge, limitations on the proportion of scrap in the furnace feed/charge to no greater than the proportion used during the performance test.
 - c. Operating, monitoring, record keeping, and reporting requirements to ensure that no scrap with a contaminant level higher than that used in the performance test is charged to the furnace.
9. The permittee shall maintain monthly records of the following information for emissions unit P027:
- a. The chlorine usage for each month, in tons.
 - b. During the first 12 calendar months of operation following the issuance of this permit, the cumulative chlorine usage for each calendar month.
 - c. Beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the chlorine usage rates.
 - d. The rolling, 12-month summation of the monthly HCL emissions emitted.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify each day when a gaseous or liquid flux material is employed in the aluminum melting furnace of P027.

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Each report shall be submitted within 30 days after the deviation occurs.

3. The permittee shall submit quarterly deviation (excursion) reports which identify each month in which chlorine usage exceeds the rolling, 12-month usage limitation.
4. The permittee shall submit quarterly deviation (excursion) reports which identify each month in which HCL emissions for this emissions unit exceeds the rolling, 12-month HCL emissions limitation.
5. These quarterly deviation (excursion) reports listed above shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation -

Visible particulate emissions from any stack shall not exceed 5% opacity as a 6-minute average, except as provided by rule.

Applicable Compliance Method -

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation -

Particulate emissions shall not exceed 3.65 pounds per hour.

Applicable Compliance Method -

Compliance with this emission limitation may be demonstrated by summing the emissions from smelting, fluxing, hot dross processing and natural gas combustion. Emissions from natural gas combustion are determined by multiplying the maximum hourly gas burning capacity of the emissions unit (0.014 mmcf/hr) by the AP-42 particulate emission factor for natural gas (7.6 lbs total particulate matter/mmcf) from Section 1.4, Table 1.4-2, 7/98. Emissions from smelting are determined by multiplying the maximum aluminum production capacity of the emissions unit (6 tons/hour) by 0.352 lbs PE/ton of Aluminum production (from 10/99 stack test). Emissions from fluxing are determined by multiplying the maximum aluminum production capacity of the emissions unit (6 tons/hour) by 0.0175 lbs particulate/ton of aluminum production (from 10/99 stack test). Emissions from hot dross processing are determined by multiplying the maximum aluminum production capacity of the emissions unit (6 tons/hour) by 0.22 lbs particulate/ton of aluminum production (Starship Database E-Factors).

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- c. Emission Limitation -
Sulfur dioxide emissions shall not exceed 5.53 pounds per hour.
- Applicable Compliance Method -
Compliance with this emission limitation may be demonstrated by summing the emissions from smelting, pouring/casting, and natural gas combustion. Emissions from natural gas combustion are determined by multiplying the maximum hourly gas burning capacity of the emissions unit (0.014 mmcf/hr) by the AP-42 particulate emission factor for natural gas (0.6 lbs sulfur dioxide/mmcf) from Section 1.4, Table 1.4-2, 7/98. Emissions from smelting are determined by multiplying the maximum aluminum production capacity of the emissions unit (6 tons/hour) by 0.9 lbs sulfur dioxide/ton of aluminum production (Starship Database E-Factors). Emissions from pouring/casting are determined by multiplying the maximum aluminum production capacity of the emissions unit (6 tons/hour) by 0.02 lbs sulfur dioxide/ton of aluminum production (Starship Database E-Factors).
- d. Emission Limitation -
Nitrogen dioxides emissions shall not exceed 5.34 pounds per hour.
- Applicable Compliance Method -
Compliance with this emission limitation may be demonstrated by summing the emissions from smelting, pouring/casting, and natural gas combustion. Emissions from natural gas combustion are determined by multiplying the maximum hourly gas burning capacity of the emissions unit (0.014 mmcf/hr) by the AP-42 particulate emission factor for natural gas (50 lbs nitrogen oxides/mmcf) from Section 1.4, Table 1.4-2, 7/98. Emissions from smelting are determined by multiplying the maximum aluminum production capacity of the emissions unit (6 tons/hour) by 0.76 lbs nitrogen oxides/ton of aluminum production (Starship Database E-Factors). Emissions from pouring/casting are determined by multiplying the maximum aluminum production capacity of the emissions unit (6 tons/hour) by 0.01 lbs nitrogen oxides/ton of aluminum production (Starship Database E-Factors).
- e. Emission Limitation -
Volatile organic compound emissions shall not exceed 2.11 pounds per hour.
- Applicable Compliance Method -
Compliance with this emission limitation may be demonstrated by summing the emissions from smelting, pouring/casting, and natural gas combustion.

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Emissions from natural gas combustion are determined by multiplying the maximum hourly gas burning capacity of the emissions unit (0.014 mmcf/hr) by the AP-42 particulate emission factor for natural gas (5 lbs volatile organic compounds/mmcf) from Section 1.4, Table 1.4-2, 7/98. Emissions from smelting are determined by multiplying the maximum aluminum production capacity of the emissions unit (6 tons/hour) by 0.2 lbs volatile organic compounds/ton of aluminum production (Starship Database E-Factors). Emissions from pouring/casting are determined by multiplying the maximum aluminum production capacity of the emissions unit (6 tons/hour) by 0.014 lbs volatile organic compounds/ton of aluminum production (Starship Database E-Factors).

- f. Emission Limitation -
Carbon monoxide emissions shall not exceed 1.20 pounds per hour.

Applicable Compliance Method -

Compliance with this emission limitation may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (0.014 mmcf/hr) by the AP-42 particulate emission factor for natural gas (84 lbs carbon monoxide/mmcf) from Section 1.4, Table 1.4-2, 7/98.

- g. Emission Limitation -
HCl emissions shall not exceed 0.99 tons/year.

Applicable Compliance Method -

Compliance with the HCl emission limitation shall be determined through record keeping and use of the 0.77 lbs HCl/ lb of chlorine usage emission factor derived from the October 1999 emission testing.

- h. Emission Limitations -
Particulate emissions shall not exceed 16.0 tons per year, sulfur dioxide emissions shall not exceed 24.2 tons per year, nitrogen oxides emissions shall not exceed 23.4 tons per year, volatile organic compound emissions shall not exceed 9.2 tons per year, and carbon monoxide emissions shall not exceed 5.3 tons per year.

Applicable Compliance Method -

These allowable emission limitations were established to reflect the potential to emit for particulate, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide emissions for this emissions unit. Compliance with the short-term emission limitations for particulates, sulfur dioxide, nitrogen oxides, volatile organic compounds, and carbon monoxide will ensure compliance with these emission limitations.

2. Performance Test Requirements

- a. In the site-specific monitoring plan required by 40CFR63.1510(o), the permittee

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of a group 1 furnace (including a melting/holding furnaces) without add-on air pollution control devices shall include data and information demonstrating compliance with the applicable emission limitations - if the group 1 furnace processes other than clean charge material, the permittee must conduct emission tests to measure emissions of D/F at the furnace exhaust outlet.

- b. The permittee shall conduct performance tests as described in 40CFR63.1512(j)(2). The results of the performance tests are used to establish emission rates in micrograms TEQ/Mg of feed/charge for D/F emissions from this emissions unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40CFR63.1510(t).
- c. During the emission test(s) conducted to determine compliance with emission limitations in a kg/Mg (lb/ton) format, the permittee of this emissions unit, subject to an emission limitation in a kg/Mg (lb/ton) of feed/charge format, must measure (or otherwise determine) and record the total weight of feed/charge to this emissions unit for each of the 3 test runs and calculate and record the total weight. A permittee that chooses to demonstrate compliance on the basis of the aluminum production weight must measure the weight of aluminum produced by the emissions units instead of the feed/charge weight.
- d. The permittee shall use the following procedures to establish an operating parameter value or range for the total weight of solid reactive flux added to each charge of aluminum melted in the melting furnace:
 - i. record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs; and
 - ii. if a solid reactive flux other than magnesium chloride is used, the permittee shall derive the appropriate proportion factor subject to approval by the Director (Central District Office).
- e. The permittee of each group 1 furnace shall submit the information described in 40CFR63.1515(b)(3) as part of the notification of compliance status report to document conformance with the operational standard in 40CFR63.1506(b).

VI. Miscellaneous Requirements

- 1. MACT Equations for Determining Compliance

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- 1.a** Pursuant to 40CFR63.1513(b), compliance with the D/F standard shall be demonstrated using Equation 7 of 40CFR63.1513.
- 1.b** To convert D/F measurements to TEQ units, the permittee must use the procedures and equations in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA-625/3-89-016), incorporated by reference in 40CFR63.1502, available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia, NTIS no. PB 90-145756.

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| P027 - Aluminum Melting Furnace No. 7 - a SECO/WARWICK (70,000 lb capacity per charge) tilting furnace with one pair of sidewall mounted natural gas (regenerative) burners with a maximum heat input rating of 14.6 MMBtu/hr capable of melting 12,000 lbs of Al/hr. | None | None |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

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None

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V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|--|
| P028 - SECO/WARWICK Traveling Log Aluminum Homogenization Furnace. The unit contains six natural gas burner units with a maximum heat input rating of 23 MMBtu/hr | OAC rule 3745-31-05(A)(3) | Nitrogen oxides emissions shall not exceed 1.13 pounds per hour and 4.9 tons per year. Carbon monoxide emissions shall not exceed 1.89 pounds per hour and 8.3 tons per year. |
| | OAC rules 3745-17-07(B) and 3745-17-08(B) | This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rules 3745-17-07 and 3745-17-08 do not apply to this fugitive emissions unit. |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

- 1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

- 1. For each day during which the permittee burns a fuel other than natural gas, the

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permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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Issued: To be entered upon final issuance**IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation -
Nitrogen oxides emissions shall not exceed 1.13 pounds per hour.

Applicable Compliance Method -

Compliance with this emission limitation may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (0.022 mmcf/hr) by the AP-42 nitrogen oxides emission factor for natural gas (50 lbs of nitrogen oxides/mmcf) from Section 1.4, Table 1.4-1, 7/98.

- b. Emission Limitation -
Carbon monoxide emissions shall not exceed 1.89 pounds per hour.

Applicable Compliance Method -

Compliance with this emission limitation may be demonstrated by multiplying the maximum hourly gas burning capacity of the emissions unit (0.022 mmcf/hr) by the AP-42 carbon monoxide emission factor for natural gas (84 lbs of carbon monoxide/mmcf) from Section 1.4, Table 1.4-1, 7/98.

- c. Emission Limitations -
Nitrogen oxides emissions shall not exceed 4.9 tons per year and carbon monoxide emissions shall not exceed 8.3 tons per year.

Applicable Compliance Method -

These allowable emission limitations were established to reflect the potential to emit for particulate, sulfur dioxide, volatile organic compounds, nitrogen oxides and carbon monoxide emissions for this emissions unit. Compliance with the short-term emission limitations for particulates, sulfur dioxide, volatile organic compounds, nitrogen oxides and carbon monoxide will ensure compliance with these emission limitations.

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VI. Miscellaneous Requirements

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None

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|--------------------------------------|--|
| P028 - SECO/WARWICK Traveling Log Aluminum Homogenization Furnace. The unit contains six natural gas burner units with a maximum heat input rating of 23 MMBtu/hr | None | None |

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

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VI. Miscellaneous Requirements

None