Facility Name: **SHOWA ALUMINUM CORPORATION OF AMERICA**
Application Number: **01-7358**
Date: **August 12, 1998**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. 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.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCE(S)

The proposed source(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Ohio Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code

(OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install 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 prove to be inadequate or cannot meet applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 15 days of the effective date of this permit to install.

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.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

NINETY DAY OPERATING PERIOD

The facility will be permitted to operate during a 90-day period in accordance with OAC Rule 3745-35-02(C)(4)(b). The purpose of this period of operation is to fulfill the performance tests conditions used in the determination of compliance with the provisions of this Permit to Install or other applicable Ohio EPA rules.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This 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.

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
AIR EMISSION SUMMARY				
The air contaminant emissions units listed below comprise the Permit to Install for **Showa Aluminum Corporation of America** located in **Madison** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.				

Ohio EPA Source Number	Source Identification Number	Source Identification Description	
L007 (Modi-fica-tion)	P032	Conveyorized vapor degreaser with drying tunnel (increase in use of Trichloro-thylene from 2,500 gallon/year to 7,884 total gallon/year	Thermal deoilers with afterburner (natural gas)
P030	P031	Brazing furnace (electric) with dryoff oven (exempt)	

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
		percent control efficiency; compliance with Toxics Policy	Compliance with permitted limits and applicable rules; use of afterburner with 90 percent control efficiency; use of only non-photochemically reactive oils	
Thermal deoilers with afterburner (natural gas)	BAT Determination Compliance with permitted limits and applicable rules; use of no more than 5,711 net gallons of trichloroethylene/ year; use of drying tunnel; reclamation of solvent using distillation column	Compliance with permitted limits and applicable rules; use of afterburner with 90 percent control efficiency; use of only non-photochemically reactive oils		Applicable Federal & OAC Rules 3745-31-05 3745-21-09 (O)(4) and (O)(5) 40 CFR 63 Subpart T 3745-31-05 3745-17-11 (A)(2) and (4)
	Compliance with permitted limits and applicable rules; use of alumina adsorber for HF with 95			3745-17-07

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
	Permit Allowable Mass Emissions and/or Control/Usage Requirements	Visible particulate emissions shall not exceed 20 percent opacity, as a 6 minute average, except as provided by rule.		
3745-31-05	9.04 pounds VOC/hour, 35.04 tons VOC/year; 5,711 net gallons trichloro-thylene per year	0.28 pound NO_x/hour, 1.20 tons NO_x/year; 0.30 pound VOC/hour, 1.30 tons VOC/year; 0.20 pound of PM/100 pounds of oil charged to afterburner		
3745-17-09		0.13 ton of PM/year from combustion of cooling oils		
3745-31-05	0.09 pound PM/hour, 0.39 ton PM/year; 0.73 pound NO_x/hour, 3.20 tons NO_x/year; 0.02 pound HF/hour, 0.09 ton HF/year; 0.39 pound HCl/hour, 1.73 tons HCl/year;	0.28 pound NO_x/hour, 1.20 tons NO_x/year 0.30 pound VOC/hour, 1.30 tons VOC/year; 0.20 pound of PM/100 pounds of oil charged to afterburner. 0.13 ton of PM/year from combustion of cooling oil.		
3745-17-09				

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Ohio EPA Source Number	Source Identification Number	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons/Year
PM	0.65
VOC	37.64
NO_x	5.60
HF	0.09
HCl	1.73

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Ohio EPA, Central District Office, 3232 Alum Creek Drive, Columbus, OH 43216-3669.**

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Ohio EPA, Central District Office, 3232 Alum Creek Drive, Columbus, OH 43216-3669.**

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

BAT FOR CONVEYORIZED DEGREASERS

In accordance with OAC Rule 3745-21-09(0)(4), each owner or operator of a conveyorized degreaser shall:

a. install one of the following devices on all conveyorized degreasers having an air/solvent interface greater than 22 square feet;

   1. refrigerated chiller;

   2. carbon adsorption system, with ventilation greater than or equal to 50 cubic feet per minute per square foot of air/solvent interface (when downtime covers are open), and exhausting less than 25 parts per million (ppm) of solvent by volume averaged over a complete adsorption cycle; or

   3. a system demonstrated to have a control efficiency equivalent to or greater than Paragraph (0)(4)(a)(i) or (0)(4)(a)(ii) of this Rule, and approved by the Director;

b. equip the conveyorized degreaser with equipment (such as a drying tunnel or rotating (tumbling basket) sufficient to prevent cleaned parts from carrying out solvent liquid or vapor;

c. install one of the following safety switches, if the solvent is heated to its boiling point:

   1. a condenser flow switch and thermostat or any other device which shuts off the sump heat if the condenser coolant is either not circulating or too warm;

   2. a spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle; and

   3. a vapor level control thermostat or any other device

which shuts off the sump heat when the vapor level rises too high;

d. equip the conveyorized degreaser with covers for closing off the entrance and exit when not in use; and

e. operate and maintain the conveyorized degreaser in a manner which is consistent with good engineering practice and which minimizes solvent evaporation from the unit.

CONSTRUCTION COMPLIANCE CERTIFICATION

The applicant shall provide Ohio EPA with a written certification (see enclosed form) 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.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

A. Design Requirements for Degreaser (L007)

1. The permittee shall ensure that the solvent cleaning machine conforms to the following design requirements and is operated with the following control equipment and operational requirements:

   a. the solvent cleaning machine shall have a primary condenser and the permittee shall ensure that the chilled air blanket temperature (in degrees Fahrenheit), measured at the center of the air blanket, is no greater than 30 percent of the solvent's boiling point, or 56 degrees Fahrenheit;

   b. the permittee shall maintain a freeboard ratio equal to 1.0 or greater;

   c. the permittee shall maintain and ensure reduced freeboard area draft or restricted movement within the in-line solvent cleaning machine using the following methods:

      i. ensure that the flow or movement of air

within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time, measured using the procedures described in the "Monitoring and Recordkeeping Requirements" section of this permit; and,

ii. establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less as described in the "Monitoring and Recordkeeping Requirements" section of this permit.

d. the solvent cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per
minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts;

e. the solvent cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils;

f. the solvent cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser;

g. the conveyorized degreaser shall be equipped with a condenser flow switch and thermostat or any other device which shuts off sump heat if the condenser coolant is either not circulating or is too warm;

h. the conveyorized degreaser shall employ a drying tunnel sufficient to prevent cleaned parts from carrying out solvent liquid or vapor; and,

i. the conveyorized degreaser will be constructed so as to minimize openings during operation, so that

entrances and exits silhouette workloads with an average clearance between the parts and the edge of the degreaser opening of less than 10 percent of the width of the opening.

B. Operational Restrictions for Degreaser

1. The permittee shall meet all of the following required work and operational practices:

   a. air disturbances shall be controlled within the solvent cleaning machine and around the opening(s) by maintaining the windspeed as required in Section A and shall be demonstrated through monitoring, as required in the "Monitoring and Recordkeeping Requirements" sections of this permit;

   b. parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes must be tipped or rotated before being removed from the solvent cleaning machine unless an equally effective approach has been approved by the Director (Ohio EPA, Central District Office);

   c. parts baskets or parts shall not be removed from the solvent cleaning machine until dripping has stopped;

   d. during startup of the solvent cleaning machine, the primary condensers shall be turned on before the sump heater;

   e. during shutdown of the solvent cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off;

   f. when solvent is added or drained from the solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings and the end-of-the-pipe in the solvent sump shall be located beneath the liquid solvent surface. * See Compliance Schedule in Section Q;

g. the solvent cleaning machine and its associated controls shall be maintained as recommended by the manufacturers of the equipment, or maintained using alternative maintenance practices only if it has been demonstrated to the satisfaction of the Administrator of the U.S.EPA that they achieve the same or better results as those recommended by the manufacturer;

h. operators of the degreaser shall complete and pass the applicable sections of the test on solvent cleaning operating procedures in 40 CFR Part 63, Appendix B if requested during an inspection by the Director (Ohio EPA, Central District Office);

i. waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but must not allow liquid solvent to drain from the container;

j. this source shall not be used to clean porous or absorbent materials; sponges, fabric, wood, and paper products shall not be cleaned;

k. the solvent cleaner to the conveyorized degreaser shall be operated such that water cannot be visually detected in solvent exiting the water separator;

l. downtime covers shall be placed over entrances and exits of the in-line conveyorized degreaser at any time in which the conveyors and exhausts are not being operated; and,

m. any solvent leaks detected shall be repaired immediately, or the degreaser shall be shut down

C. <u>Monitoring and Recordkeeping Requirements for Degreaser</u>

1. The permittee shall monitor the hoist speed as described below:

a. the permittee shall determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters divided by the time in minutes (meters per minute);

b. the permittee shall conduct monthly monitoring of the hoist speed. If after the first year, no exceedances of the hoist speed are measured, the permittee may begin monitoring the hoist speed quarterly;

c. if an exceedance of the hoist speed occurs during quarterly monitoring, the permittee shall return to a monthly monitoring frequency until another year of compliance without an exceedance is demonstrated; and,

d. if the permittee can demonstrate to the satisfaction of the Director (Ohio EPA, Central District Office), in the initial compliance report, that the hoist speed cannot exceed a speed of 3.4 meters per minute (11 feet per minute), the required monitoring frequency shall be quarterly, including during the first year of compliance.

2. To ensure compliance with the reduced air movement required in Section A.3, the permittee shall conduct an initial test, and monthly monitoring tests thereafter, of the wind speed within the enclosure of the in-line solvent cleaning machine as follows:

a. determine the direction of the wind current in the enclosure by slowly rotating a velometer or similar device inside the entrance to the enclosure until the maximum speed is located; and,

b. record the maximum wind speed.

3. The permittee shall conduct a monthly visual inspection of the in-line vapor solvent cleaning machine enclosure to determine it is free of cracks, holes, and other defects.

4. On a weekly basis the permittee shall monitor and

record the freeboard temperature maintained by the freeboard refrigeration device using a thermometer or thermocouple to measure the temperature at the center of the air blanket during the idling mode.

5. The permittee shall maintain the following records in written or electronic form for the lifetime of the solvent cleaning machine:

   a. owner's manuals, or if not available, written maintenance and operating procedures for the solvent cleaning machine and control equipment;

   b. the date of installation for the solvent cleaning machine and all of its control devices; if the exact date for the installation is not known, a letter certifying that the cleaning machine and its control devices were installed prior to (or on) November 29, 1993, or after November 29, 1993, may be substituted; and,

   c. records of the trichloroethylene content for the solvent used in the solvent cleaning machine.

6. The permittee shall maintain the following records in written or electronic form for a period of five years for the solvent cleaning machine:

   a. the results of control device monitoring and maintenance and visual inspections, as required in this permit;

   b. information on the actions taken to comply with 40 CFR 63.463 (e) and (f), including records of written or verbal orders for replacement parts, a description of the repair made, and additional monitoring conducted to demonstrate that monitored parameters have returned to acceptable levels;

   c. estimates of annual trichloroethylene consumption for the solvent cleaning machine;

   d. the estimated annual amount of trichloroethylene recovered for disposal and/or recovery offsite (a concentration of 53 percent shall be used unless

more accurate data is later provided); and

e. any results of emissions testing conducted on the degreaser.

If any of the parameters above are not met or an excursion or exceedance has been detected, adjustments or repairs shall be made to the solvent cleaning system or control device to reestablish the required operating restrictions; parameters shall then be remeasured to demonstrate compliance with the required design and

operating requirements. Exceedances and excursions shall be reported as described it the "Reporting Requirements" section of this permit.

Records required by this permit to install shall be retained on file for a period of not less than five (5) years unless otherwise indicated by the Ohio Environmental Protection Agency. All records shall be made available to the Director, or any representative of the Director, for review during normal business hours.

D. <u>Reporting Requirements for Degreaser</u>

1. The permittee shall submit an initial statement of compliance no later than 60 days after the issuance of this permit. Each initial statement of compliance shall contain the following:

   a. the name and address of the permittee;

   b. the address (i.e., physical location) of the solvent cleaning machine;

   c. a list of the control equipment used to achieve compliance; and,

   d. a list of the parameters that are monitored and the values of these parameters measured on or during the first month after the compliance date for each piece of control equipment required to be monitored.

2. The permittee shall submit an annual report by February 1 of each year for the preceding year. Each annual report shall contain the following:

   a. a signed statement from the facility owner or their designee stating that, "All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required pursuant to 40 CFR 60.463 (d) (10)"; and,

   b. an estimate of solvent consumption during the reporting period (this shall include the amount collected for disposal/recycle).

3. On a semiannual basis, the permittee shall submit an exceedance report containing the following information:

   a. any occasion in which the temperature of the chilled air blanket, measured at the center of the air blanket, was greater than 30 percent of the solvent's boiling point, 56.7 degrees Fahrenheit, and no correction was made within 15 days of detection; and,

   b. if no operation conditions were established under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) and/or if the flow of air across the top of the freeboard area of the cleaning machine or within the solvent cleaning machine enclosure exceeded 15.2 meters/minute and no correction was made within 15 days of detection.

   Once an exceedance has occurred, the permittee shall begin to submit a quarterly report until such time that the permittee requests and receives approval of a less frequent reporting frequency from the Director (Ohio EPA, Central District Office). The permittee may receive approval of less frequent reporting if the following conditions are met:

   c. the emissions unit has demonstrated a full year of

compliance without an exceedance;

d. the permittee continues to comply with all relevant recordkeeping and monitoring requirements specified in 40 CFR 63.1, General Provisions; and,

e. the Director (Ohio EPA, Central District Office) does not object to a reduced frequency of reporting for the emissions unit, L007, as provided in paragraph (e) (3) (iii) of Subpart A, 40 CFR 63.1, General Provisions.

Each exceedance report shall be delivered or post marked by the 30th day following the reporting period. Each exceedance report shall contain the following:

f. the reason and a description of the exceedance and action(s) taken to comply with 40 CFR 63.463 (e) and (f) including written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to acceptable levels; and,

g. if no exceedance has occurred, a statement to that effect shall be submitted.

E. Testing Requirements for Degreaser

1. The permittee shall determine the facility's potential to emit (PTE) from all solvent cleaning operations. A facility's total PTE is the sum of the HAP emissions from all solvent cleaning operations plus all HAP emissions from other emissions units from within the facility. The potential to emit shall be determined in accordance with the following procedures:

   a. determine the potential to emit for each individual solvent cleaning machine using the following equation:

      PTEi = Hi X Wi X SAIi

Where:

PTEi = the potential to emit for solvent cleaning machine i (kilograms solvent per year).

Hi = hours of operation for solvent cleaning machine i (hours per year).

= 8,760 hours per year, unless otherwise restricted by a federally enforceable requirement.

Wi = the working mode uncontrolled emission rate (kilograms per square meter per hour).

=1.95 kilograms per square meter per hour for batch vapor and cold cleaning machines.

=1.12 kilograms per square meter per hour for in-line cleaning machines.

SAIi= solvent/air interface area of solvent cleaning machine i (square meters). Section 63.461 defines the solvent/air interface area for those machines that have a solvent /air interface. Cleaning machines that do not have a solvent area interface shall calculate a solvent/air interface area using the procedure in paragraph (b) below.

b. cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using the following equation:

SAI = 2.2 * (Vol)^0.6

Where:

SAI = the solvent/air interface area (square meters).

Vol = the cleaning capacity of the solvent cleaning machine (cubic meters).

c. sum the PTEi for all solvent cleaning operations to obtain the total potential to emit for solvent cleaning operations at the facility.

2. Compliance with the emission limitations contained in this permit shall be determined in accordance with the following methods:

a. Emission Limit

9.04 lbs. VOC/hr.
35.04 tons VOC/yr.

Applicable Compliance Method

VOC emissions shall be calculated using the difference between the amount of trichloroethylene used in the degreaser less the amount of trichlorethylene collected for disposal. One hundred percent of the trichloroethylene (TCE) content shall be calculated as VOC emissions, less the collected amount. Until testing provides a more accurate concentration, 53 percent of the recovered waste solvent shall be considered TCE and credited for recovery. Calculations shall be documented as follows:

VOC emissions/hr.= 0.9 gal./hr. x 12.272 lbs/gal - (gal. recovered/hr. x 12.272 lbs/gal x 53 percent)

Annual VOC emission= 7,884 gal/yr. x 12.272 lbs/gal - (gal. recovered/yr x 12.272 lbs/gal x 53 percent)

The true annual trichloroethylene throughput shall be substituted for the above annual usage at the end of each year and emissions reported in the Annual Fee Emission report. Since these limits represent the maximum capacity of the equipment, no additional compliance determination is required.

b. Emission Limitation

5,711 net gallons of trichloroethylene per year

Applicable Compliance Method

Compliance with the annual net gallon usage limit shall be determined through daily recordkeeping of trichloroethylene usage (TCE added to the degreaser) and the amount of materials collected for recycle and/or disposal at an outside facility. Materials that are tightly covered and collected for recycle and/or disposal at an outside facility shall be recorded and subtracted from the total gallon usage record. Until more recent test data provides a more accurate concentration, a maximum of 53 percent TCE shall be used to calculate the recovered credit material. The net trichloroethylene shall be calculated as follows:

Net TCE usage (gal.) = total TCE purchased or added per year - (recovered TCE x 53 percent)

F. Restriction on Type of Oil Processed Through AD Deoiler Furnaces

1. Only non-photochemically reactive oils, as defined in OAC rule 3745-21-01(C)(5) or materials exempt under 3745-21-07(G), can be used as cooling oil and dried and burned-off in these sources.

G. Afterburner Operational Restriction

1. The average combustion temperature within the afterburner, for any 3-hour blocks of time when the emission units were in operation, shall not be less than 1,350 degrees Fahrenheit.

2. The permittee shall operate and maintain continuous temperature monitors and recorders which measure and record the combustion temperature within the afterburners when the emission units were in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitors and recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

H. Monitoring and Recordkeeping Requirements for the AD Deoiler Furnaces and Afterburners

1. The permittee shall collect and record the following information each day:

   a. all 3-hour blocks of time during which the average combustion temperature within the afterburners (thermal oxidizers), when the emission units were in operation, was less than 1,350 degrees Fahrenheit; and,

   b. a log of the downtime for the capture (collection) systems, control devices, and monitoring equipment, when the associated emission units were in operation.

2. The permittee shall maintain records of the amount of cooling oil used in these processes through recordkeeping of cooling oil usage/addition and/or through purchase order records.

   Each record of any monitoring data, testing data, and support information required for this source, 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, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

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I. Reporting Requirements for the Deoiler AD Furnaces

1. Reports of any required monitoring and/or recordkeeping or records of deviations shall be submitted to the Ohio EPA, Central District Office.

   a. Except as otherwise provided in the terms and conditions of this permit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA, Central District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., 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.) Deviation (excursion) reports for these sources (P031 and P032) shall include any of the following records:

      i. an identification of each day and duration of time during which a photochemically reactive material was used as cooling oil in the production of heat exchanger cores;

      ii. an identification of the photochemically reactive material used, the amount used, and it's composition;

      iii. an identification of each day and duration of time during which the afterburners were not operated while the heat exchanger cores were being run through the AD deoiler furnaces;

      iv. an identification of any calculated annual

organic compound emissions from these sources that exceed the annual emission limit of 1.31 tons per year (each); and,

v. an identification of all 3-hour blocks of time during which the average combustion temperature within the afterburners do not comply with the temperature limitation specified above.

b. the permittee shall also submit an annual report of the total emissions from these emission units for the previous calendar year. This report shall be satisfied by including these sources in the submission of the annual Fee Emission Report.

J. Testing Requirements for the Deoiler AD Furnaces

1. Emission Limitation from Cooling Oils

3.0 lbs. oil/hr. (each)
0.3 lb. VOC/hr. (each)
1.31 tons VOC/yr. (each)

Applicable Compliance Method

Compliance with these limits shall be determined through recordkeeping of cooling oil usage/addition and/or purchase order records. Formulation data from the manufacturer or U.S.EPA Method 24 shall be used to determine the organic compound content of the oils, to be used in the calculation of emissions. If required, the permittee shall demonstrate compliance with the emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 25 or 25A.

The total annual oil usage shall be used to calculate annual organic compound emissions from these source stacks; these emissions shall assume a total control efficiency of 90 percent for the afterburners. Emissions shall be calculated as follows:

VOC/hr.= 3 lbs. oil/hr.* x (1-CE)

VOC/yr.= 3 lbs. oil/hr.* x 8760 hrs/yr. x (1-CE)

CE = Control Efficiency 90 percent

* For the purpose of maintaining a conservative estimate in this calculation, 100 percent of the oil remaining on the heat exchangers is shown to be emitted as VOCs, prior to control.

Since these limits represent the maximum capacity of the conveyor carrying the heat exchanger cores through the AD furnaces, a one-time calculation of the hourly VOC emissions shall be documented and no additional compliance determination shall be required. Annual emissions shall be calculated from the annual oil usage records and results submitted in the annual Fee Emission Report.

2. Emission limitation for PM from oil

0.20 lb. PM/100 lbs. of oil charged to afterburner from drying parts
0.13 ton PM/yr. from combustion of cooling oil

Applicable Compliance Method

Emissions calculated at the maximum capacity of the equipment equal 0.10 lb.PM per hour. Since these limits represent the maximum capacity of the system, a one-time calculation of the hourly PM emissions shall be documented and no additional compliance determination shall be required. Annual PM emissions from the combustion of cooling oil in this source shall be calculated from the annual oil usage records and results submitted in the annual Fee Emission Report.

3. Emission limitation for the Afterburners using Natural Gas

0.28 lb. NOx/hr. (each)
1.2 tons NOx/yr. (each)

Applicable Compliance Method

These limits represent the maximum capacity of the

natural gas afterburners. These emission limitations were determined by multiplying the natural gas usage (2,000 ft3/hr.) by the AP-42 emission factor of the significant pollutant (lbs./MM ft3). Since these limits represent the maximum capacity of the equipment, no additional compliance determination is required.

4. Emission limitation

20 percent 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).

K. Brazing Operational Requirements

1. The AD Brazing Furnace shall be vented to an alumina scrubber and shall not be operated at any time without this control. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubber while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. The permittee shall operate the scrubber at all times in accordance with the following parameters:

   a. the pressure drop across the scrubber shall be continuously maintained at a value of not less than 1.5 inches of water at all times while the emissions unit is in operation; and,

   b. the permittee shall operate and maintain, in good working condition, systems to monitor scrubber inlet pressure at all times the source is in operation.

3. In order to ensure 95 percent operating efficiency of the alumina packed bed tower, Showa Aluminum shall add this alumina adsorber to the existing "Preventive Maintenance and Malfunction Abatement Plan". This plan shall be maintained in accordance with Ohio EPA's "Operation and Maintenance Guidelines for Air Pollution Control Equipment", dated February 1993 and OAC 3745-15-06 rule "Malfunction of equipment; scheduled maintenance; reporting". This Operation and Maintenance Manual shall contain, at a minimum, the following:

   a. a weekly inspection form to include: date, alumina tower identification, alumina pack condition, quantity of alumina pack removed/replaced, inspection of duct work for corrosion and leaks, and inspector's name;

   b. an equipment problem and trouble shooting guide; and,

   c. procedures for inspection of tower bed conditions and for replacing alumina packing.

   The alumina scrubber and the AD brazing furnace shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

   Except as provided by OAC rule 3745-15-06(A)(3), scheduled maintenance of alumina adsorber/scrubber, that requires the shutdown or bypassing of this device, must be accompanied by the shutdown of the brazing furnace.

L. Brazing Monitoring and Recordkeeping Requirements

1. Showa Aluminum shall maintain monthly records of the amount of potassium aluminum fluoride added to the flux machine.

2. The permittee shall collect and record the following information each day:

a. the pressure drop across the scrubber, in inches of water, once per shift; and,

b. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

Following the testing of this source, a one time calculation of emissions (with actual maximum flow rate and emission results) shall be retained on file, so as to document the maximum emissions from this source. Until testing provides more appropriate factors, testing results from a similar source shall be used as an estimate of the emissions from this source. The emissions from this source shall be calculated as follows:

Emissions of HF and HCl/hr.= Highest concentration of pollutant (from stack test) x maximum scrubber exhaust flow rate per hour

Emissions of HF and HCl/yr.= Highest concentration of pollutant (from stack test) x maximum scrubber exhaust flow rate per hour x 8760 hrs./yr. x 1 ton/2000 lbs.

This calculation shall remain on record as documentation of the maximum emissions from this source. Emissions for particulate and nitrogen oxide have been documented with calculations submitted with the permit application; since these limits represent the maximum capacity of the equipment, no additional compliance determination is required.

Each record of any monitoring data, testing data, and support information required for this source, 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, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

M. Reporting Requirements for the Brazing Operations

1. Reports of any required monitoring and/or recordkeeping or records of deviations shall be submitted to the Ohio EPA, Central District Office. The following reports shall be submitted as follows:

   a. except as otherwise provided in the terms and conditions of this permit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA, Central District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., 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.) deviation reports for this source (P030) shall include all periods of time during which the static pressure drop across the scrubber was not maintained at or above 1.5 inches of water; and,

   b. the permittee shall also submit an annual report of the total emissions from this emission unit for the previous calendar year. This report shall be satisfied by including this source in the submission of the annual Fee Emission Report.

N. Testing Requirements for the Brazing Operation

1. Compliance with the emission limitations for hydrogen fluoride (HF) and hydrogen chloride (HCl) from the brazing process shall be determined in accordance with the following method(s):

a. Emission Limitation

0.02 lb. HF/hr.
0.09 ton HF/yr.
0.39 lb. HCl/hr.
1.73 tons HCl/yr.
0.09 lb. PM/hr.
0.39 ton PM/yr.
0.73 lb. NOx/hr.
3.20 tons NOx/yr.

Applicable Compliance Method

The permittee shall conduct, or have conducted, emission testing for this emissions unit (P030) in accordance with the following requirements:

i. the emission testing shall be conducted within 3 months after issuance of the permit, or, if requested, a later date may be scheduled if approved by the Ohio EPA, Central District Office;

ii. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for hydrogen fluoride (HF) and hydrogen chloride (HCl);

iii. Method 26, or Method 26A in 40 CFR Part 60, Appendix A shall be employed to demonstrate compliance with the allowable mass emission rate and overall control efficiency limitation for hydrogen fluoride and hydrogen chloride. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA;

iv. the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined by measuring the hydrogen fluoride and hydrogen chloride concentration simultaneously before (or at)

the inlet and at the outlet of the scrubber. The test methods and procedures selected shall be based on a consideration of the diversity of the organic/inorganic species present and their total concentration, and on a consideration of the potential presence of interfering gases;

v. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Central District Office;

vi. not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s);

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

viii. a comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible

for the tests and submitted to the Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office; and,

ix. annual emissions shall be calculated using an emission factor developed from the results of the testing above. Factors from a stack test for a similar source (submitted with the permit application) shall be used to estimate emissions of HF and HCl until such a factor is developed.

O. Toxics Policy Requirements

1. This permit allows the use of the brazing materials, cleaning solvent, and cooling oil specified by the permittee in the application for the Permit to Install numbered 01-7358. In conjunction with the best available technology requirements of OAC rule 3745-31-05, the trichloroethylene, hydrogen fluoride, and hydrogen chloride emission limitations specified in this permit were established in accordance with the Ohio EPA's "Air Toxics Policy" and are based on material use, material formulation data, and the design parameters of each of the emissions unit's exhaust systems, as specified in the application. Compliance with the Ohio EPA's "Air Toxics Policy" was demonstrated for each pollutant based on the Screen 2C model and a comparison of the predicted 1 hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

   Pollutant: Trichloroethylene

   TLV: 269 mg/m3 or 269,000 ug/m3
   Maximum Hourly Emission Rate (lbs/hr): 10.27 lbs./hr.
   Predicted 1 Hour Maximum Ground-Level Concentration (ug/m3): 2,784 ug/m3
   Maximum Acceptable Ground-Level Concentration (MAGLC)

(ug/m3): 6,405 ug/m3

Pollutant: Hydrogen Fluoride

TLV: 2.3 mg/m3 or 2,300 ug/m3
Maximum Hourly Emission Rate (lbs/hr): 0.02 lb. HF/hr.
Predicted 1 Hour Maximum Ground-Level Concentration (ug/m3): 3.266 ug/m3
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 54.76 ug/m3

Pollutant: Hydrogen Chloride

TLV: 7.5 mg/m3 or 7,500 ug/m3
Maximum Hourly Emission Rate (lbs/hr): 0.39 lb. HCl/hr.
Predicted 1 Hour Maximum Ground-Level Concentration (ug/m3): 63.50 ug/m3
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 178.57 ug/m3

Any of the following changes may be deemed a "modification" to the emissions unit and, as such, prior notification to and approval from the Ohio EPA, Central District Office are required, including the possible issuance of modifications to PTI number 01-7358 and the Title V Operating Permit:

a. any changes in the composition of the brazing materials, cleaning solvent, and/or cooling oil or the use of new brazing materials, cleaning solvent, and/or cooling oil, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value specified in the above table;

b. any change to the emissions unit or its exhaust parameters (e.g., increased emission rate, reduction of exhaust gas flow rate, and decreased stack height) that would result in an exceedance of any MAGLC specified in the above table;

c. any change to the emissions unit or its method of operation that would either require an increase in the emission limitation(s) established by this permit or

would otherwise be considered a "modification" as defined in OAC rule 3745-31-01;

d. any change in the composition of the brazing materials, cleaning solvent, and/or cooling oil, or use of new brazing materials, cleaning solvent, and/or cooling oil, that would result in the emission of any of the exempted organic compounds included in the definition of "VOC" [OAC rule 3745-21-01(B)(6)]; and,

e. any change in the composition of the brazing materials, cleaning solvent, and/or cooling oil, or use of new brazing materials, cleaning solvent, and/or cooling oil, that would result in an increase in emissions of any "Hazardous Air Pollutants" (HAPS) as defined in OAC rule 3745-77-01(V).

P. Additional Term for Title V Facility

1. The term entitled "Permit to Operate Application" will be satisfied by adding these sources, through an update, to the Title V application which has already been submitted.

Q. Installation Schedule and Notification Requirements

1. Compliance with the term in Section B.1.f., Operational Restrictions, specifically "the end-of-the-pipe in the solvent sump shall be located beneath the liquid solvent surface" shall be achieved through the installation of a pipe reaching to the bottom of the sump according to the following schedule:

Milestone	Date
Order Equipment	6/98
Commence Construction	7/98
Initial Startup and Performance Testing	8/98

Showa Aluminum shall notify the Ohio EPA, Central District

Office of the completion of each milestone within 30 days after the date it is completed. If for any reason the above schedule cannot be met, Showa Aluminum shall notify the Ohio EPA, Central District Office of the problem before the first day of the month in which the milestone was to be completed.