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Facility Name: **ARC Process, Inc**

Application Number: **03-0407**

Date: **January 6, 1999**

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 SOURCES

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 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

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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 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 30 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.

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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.

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 and regulations.

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
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AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **ARC Process, Inc** located in **Ottawa** 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.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	
				3745-17-11
				3745-17-07
P001	Plasma melt furnace for the melting of asbestos	Use of a baghouse followed by a HEPA filter and compliance with the terms and conditions of this permit	3745-31-05	

NESHAPS 40 CFR
Part 61,
Subpart M

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
	drawn (see Additional Special Terms and Conditions)			
Permit Allowable Mass Emissions and/or Control/Usage Requirements	Operational, monitoring and reporting restrictions (see Additional Special Terms and Conditions)			
1.85 pounds/hour		*		
NO _x		*		
8.10 TPY NO _x		*		
0.10 pound/hour Particulate Emissions (PE),				
0.44 TPY PE; opacity restrictions;				
0.01 fibers asbestos/cc of air				

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- * Applicable requirements established by these OAC rules are less stringent than requirements established by OAC rule 3745-31-05.

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
PE	0.44*
NO _x	8.10

- * The PE ton per year limit includes any asbestos emissions.

NESHAP REQUIREMENTS

The following source(s) are subject to the applicable provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) as promulgated by the United States Environmental Protection Agency under 40 CFR Part 61.

<u>Source Number</u>	<u>Source Description</u>	<u>NESHAP Regulation (Subpart)</u>
P001	Asbestos plasma melt furnace	40 CFR Part 60, Subpart M

The application and enforcement of these standards are delegated to Ohio EPA. The requirements of 40 CFR Part 61 are also federally enforceable.

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Pursuant to the NESHAP, the source owner/operator is required to report the following milestones:

- a. date of commencement of construction (no later than 30 days after such date);
- b. anticipated date of initial start-up (not more than 60 days or less than 30 days prior to such date);
- c. actual date of initial start-up (within 15 days after such date); and
- d. date of performance testing (at least 30 days prior to testing).

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Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, OH 43216-3669

and **Ohio EPA, Northwest District Office**
347 North Dunbridge Road
Bowling Green, OH 43402

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Ohio EPA, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402.**

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, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402.**

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

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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.

NOTICE OF INTENT TO RELOCATE

Pursuant to OAC Rule 3745-31-03(A)(1)(n), the owner or operator of the portable or mobile source identified within this Permit to Install may relocate within the state of Ohio without first obtaining a Permit to Install providing the following criteria are met:

- a. the source is equipped with the Best Available Control Technology for such source;
- b. the source is operating pursuant to a currently effective Permit to Operate;
- c. the applicant has provided proper notice of intent to relocate the source to the Director within a minimum of 30 days prior to the scheduled relocation; and
- d. in the Director's judgement, the proposed site is acceptable under Rule 3745-15-07 of the Administrative Code.

In order for the Director to determine compliance with all of the above criteria, the owner or operator of the portable or mobile source must file a "Notice of Intent to Relocate" at least 30 days prior to relocation of the source with the **Ohio EPA, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402**. Upon receipt of the notice, the Director, or the Director's authorized representative, will evaluate the request in accordance with the above criteria.

Failure to submit said notification and to receive Ohio Environmental Protection Agency approval prior to relocation of the source may result in fines and civil penalties.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

Introduction

The purpose of this permit is to allow the installation of a portable plasma melt furnace.

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This emissions unit, P001, is subject to the requirements of NESHAP 40 CFR Part 61, subpart M section 61.155.

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A. Applicable Emission Limitations and/or Control Requirements

1. The emissions unit, P001, shall discharge no visible fugitive emissions, to the outside air, from any part of the operation.
2. Visible emissions from the HEPA filter stack shall not exceed 0 percent opacity as a six minute average.
3. The permittee shall not operate the plasma melt furnace, emissions unit P001, if the control system for the unit is not operational.
4. All asbestos associated operations shall be enclosed under negative pressure of no less than 0.02 inch water as measured by a constant read out calibrated magnehelic gauge or nanometer and vented to a baghouse followed by a HEPA air filter. The baghouse and HEPA filter shall meet the design and operating criteria specified in 40 CFR Part 61, section 61.152. If negative pressure cannot be maintained, all operations shall cease until such time that negative pressure can be maintained.
5. There shall be no asbestos emissions above 0.01 fibers asbestos/cc of air drawn from the baghouse/HEPA filter exhaust associated with emissions unit P001. If the exhaust stack sample is positive for asbestos, another sample must be taken from the furnace stack. (See Additional Special Term and Condition C.3 and C.4 below).

B. Operational Restrictions

1. Emissions unit P001, and the associated control devices, shall be operated in accordance with the manufacturers' specifications.
2. The pressure drop across the baghouse shall be maintained within the range of 0.015 to 0.035 inch of water while the emissions unit is in operation.
3. The pressure drop across the HEPA filter shall be maintained within the range of 0.25 to 0.65 inch of water while the emissions unit is in operation.
4. The maximum process weight rate, i.e. charge rate of asbestos, for emissions unit P001 shall not exceed 600 lbs/hr dry weight plus surface water content of the asbestos.

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5. This permit only allows for the vitrification and subsequent disposal of 100 percent raw amosite asbestos. The use of this emissions unit for any other purpose requires prior notification to and approval from the Ohio EPA.

C. Monitoring and/or Recordkeeping Requirements

1. During the initial ninety (90) days of operation, the permittee shall:
 - a. continuously monitor and record the operating parameters, identified in the start-up performance tests, that are intended to ensure the production of nonasbestos output material;
 - b. monitor input materials to ensure that they are consistent with the test feed used during start-up performance tests, (as outlined in B(5) above);
 - c. collect and analyze samples (one 200-gram (7-ounce) sample collected every 8 hours of operation) of output material for the presence of asbestos. Composite samples may be representative of fewer than 10 days of operation. Output material shall be analyzed using transmission electron microscopy (TEM) for the presence of asbestos. All output materials produced during this period shall be stored on site until analysis shows the material to be asbestos-free or shall be disposed of as an asbestos-containing waste material according to 40 CFR Part 61, subpart M, section 61.150.
2. After the initial 90 days of operation the permittee shall:
 - a. continuously monitor and record the operating parameters identified during start-up performance testing and any subsequent performance testing. Any output produced during a period of deviation from the range of operating conditions established in B(1)- B(5) shall be:
 - i. disposed of as an asbestos- containing waste material according to 40 CFR Part 61, subpart M, section 61.150; or,
 - ii. recycled as waste feed during process operation within the

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established range of operating conditions; or,

- iii. stored temporarily on-site, in a leak-tight container, until analyzed for asbestos content. Any product material that is not asbestos-free shall be either disposed of as asbestos-containing waste material or recycled as waste feed to the process.

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- b. collect and analyze monthly composite samples (one 200-gram (7-ounce) sample collected every 8 hours of operation) of the output material. The output material sample shall be analyzed using transmission electron microscopy (TEM) for the presence of asbestos.
3. The permittee shall collect and analyze or have analyzed, bulk samples of the material collected in the baghouse/HEPA filter in the following manner:

One 100-gram (3.5-ounce) bulk sample shall be collected every 24 hours of operation. This sample shall be analyzed using polarized light microscopy (PLM) for the presence of asbestos within 24 hours of the sample being taken. If the analysis is positive for asbestos the permittee shall immediately begin monitoring the HEPA exhaust in accordance with the procedure specified in Additional Special Term and Condition C.4 below.

- 4. The permittee shall begin daily monitoring of the HEPA filter exhaust using the National Institute for Occupational Safety and Health (NIOSH) Method 7400 entitled "Fibers" whenever the sample analysis required by Additional Special Term and Condition C.3 above is positive for asbestos. The permittee shall obtain the results of the Method 7400 analysis within 24 hours of the sample being taken. If the results are above 0.01 fibers asbestos/cc of air drawn, the permittee shall immediately cease all operations and notify the Ohio EPA, Northwest District Office of the situation and the permittee's plan to correct the problem.

If the results are <0.01 fibers asbestos/cc of air drawn, the permittee shall continue daily monitoring of the HEPA filter exhaust using the National Institute for Occupational Safety and Health (NIOSH) Method 7400 entitled "Fibers", until such time as the results of the sampling and analysis required in condition C.3 above are negative for asbestos.

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 5. The permittee shall maintain records on site that contain the following information:
 - a. results of start-up performance testing and all subsequent performance testing, including operating parameters, feed characteristic, and analyses of output materials;

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- b. results of the composite analyses required during the initial 90 days of operation as outlined in C.1.c.;
 - c. results of the monthly composite analyses required in C.2.b.;
 - d. results of the daily bulk analyses required in C.3.;
 - e. the days and the results, where NIOSH Method 7400 was used;
 - f. results of continuous monitoring and logs of process operating parameters required by C.1.a and C.2.a.;
 - g. the information on waste shipments as required in 40 CFR Part 61, Subpart M, section 61.154(e); and,
 - h. the name and location of the purchaser or disposal site to which the output materials, where no analyses were performed to determine the presence of asbestos, were sold or deposited and the date of the sale or disposal.
6. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the enclosure, the baghouse and HEPA filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drops on a hourly basis when the unit is in operation.
7. The permittee shall maintain daily records of the hours of operation and hourly records of the process weight rate (charge rate) for emissions unit P001.
8. The permittee shall maintain 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 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 reports may be maintained in computerized form.

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D. Reporting Requirements

1. Quarterly written reports of 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, the probable cause of such deviations, the duration of the deviations, and any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA, Northwest 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. In accordance with the above, the permittee shall submit the following reports to the Ohio EPA, Northwest District Office. 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).
 - a. A report of each analysis of product composite samples performed during the initial 90 days of operation.
 - b. A quarterly report, including the following information concerning activities during each consecutive 3-month period:
 - i. results of analyses of monthly product composite samples;
 - ii. disposition of any product produced during a period of deviation, including whether it was recycled, disposed of as asbestos-containing waste material, or stored temporarily on-site until analyzed for asbestos content; and,
 - iii. the information on waste disposal activities as required in 40 CFR Part 61, subpart M, section 61.154(f).
2. Weekly reports of the results of the data acquired in section C.3 and C.4 above shall be submitted (faxed) to the Ohio EPA, Northwest District Office by Friday afternoon and shall cover the previous calendar week.

E. Compliance Methods/testing Requirements

1. The permittee shall conduct a start-up performance test of emissions unit P001 within 45 days of each relocation. The test results shall include the following:
 - a. a detailed description of the types and quantities of asbestos

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material, nonasbestos material, regulated asbestos-containing material (RACM), and asbestos-containing material processed. The test

feed is to include all types of material that will be encountered in actual operation of the process;

- b. the results of analyses that document the asbestos content of the material to be processed. This analysis shall be conducted using polarized light microscopy;
- c. the results of analyses that document that the emission unit output is free of asbestos. This analysis shall be conducted using transmission electron microscopy (TEM). Samples for analysis are to be collected as 8-hour composite samples (one 200-gram (7-ounce) sample per hour). The sample shall be collected beginning with the initial introduction of RACM or asbestos-containing waste material and continuing until the end of the performance test;
- d. a description of operating parameters, such as temperature and residence time, defining the full range over which the process is expected to operate to produce nonasbestos (asbestos-free) materials. The limits of each operating parameter necessary to produce nonasbestos materials shall be specified; and,
- e. the length of the test.

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

2. Compliance Methods Requirements

Compliance with the emission limitation(s) in section A of these terms and

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conditions shall be determined in accordance with the following method(s):

a. Emission Limitation

no visible fugitive emissions

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Applicable Compliance Method

visible emissions readings performed using Method 22 of 40 CFR Part 60, Appendix A.

b. Emission Limitation

0 percent opacity as a six minute average from the HEPA filter stack

Applicable Compliance Method

visible emissions readings performed using Method 9 of 40 CFR Part 60, Appendix A.

c. Emission Limitation

0.01 lb PE/hr and 0.44 TPY PE.

Applicable Compliance Method

Compliance with the PE emission limitation shall be determined by calculating the hourly and annual PE emission rates through use of the most recent stack test information. If required by Ohio EPA, compliance shall be determined in accordance with Method 5 of 40 CFR Part 60, Appendix A.

d. Emission Limitation

asbestos emissions for emissions unit P001 - 0.01 fibers asbestos/cc air drawn.

Applicable Compliance Method

Compliance with the asbestos emission limitation shall be determined by use of PCM and methods outlined in C.3 and C.4 of the Additional Special Terms and Conditions.

e. Emission Limitation

NO_x emissions for emissions unit P001 - 8.10 TPY.

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Applicable Compliance Method

Compliance with the NO_x emission limitation shall be determined by calculating the hourly and annual NO_x emission rates through use of the most recent stack test information. If required by Ohio EPA, compliance shall be determined in accordance with Method 7 of 40 CFR Part 60, Appendix A.

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F. Miscellaneous Requirements

1. Non asbestos (asbestos-free) output material is not subject to any of the provisions of 40 CFR Part 61, subpart M. Output materials in which asbestos is detected, or output materials produced when the operating parameters deviated from those established during the start-up performance testing, unless shown by PCM analysis to be asbestos-free, shall be considered to be asbestos-containing waste and shall be handled and disposed of according to 40 CFR Part 61, subpart M, sections 61.150 and 61.154 or reprocessed while all of the established operating parameters are being met.
2. The permittee shall submit a "Notice of Intent to Relocate a Portable or Mobile Source" 30 days prior to any planned relocation of this emissions unit, in accordance with OAC rule 3745-31-03(A)(1)(p).