INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant

DATE: December 17, 2007

RE: Airtek (Catco) / 089-25366-00531

FROM: Matthew Stuckey, Deputy Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FN-REGIS.dot12/3/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(317) 232-8603
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Burton Andrews, Project Specialist
Airtek (CATCO)
4410 West 37th Avenue, Bldg F
Hobart, IN 46342

December 17, 2007

Re: Registered Construction and Operation Status, R089-25366-00532

Dear Burton Andrews:

The application from Airtek (CATCO), received on October 1, 2007, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following stationary substrate coating and ceramic substrate cutting source located at 4410 West 37th Avenue, Hobart, IN 46342 is classified as registered:

(a) Thirty one (31) Metal Inert Gas (MIG) welding stations, identified as Welding Units, constructed from January 1991 to December 1995, with a combined maximum electrode usage of 814,680 pounds per year.

(b) Natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu/hr, consisting of the following:

(1) One (1) natural gas-fired space heater, identified as A1, rated at 0.10 MMBTU/hr maximum heat input capacity;

(2) One (1) natural gas-fired space heater, identified as A2, rated at 0.20 MMBTU/hr maximum heat input capacity;

(3) One (1) natural gas-fired space heater, identified as A3, rated at 0.21 MMBTU/hr maximum heat input capacity;

(4) Three (3) natural gas-fired space heaters, identified as B1 through B3, each rated at 0.17 MMBTU/hr maximum heat input capacity;

(5) Five (5) natural gas-fired space heaters, identified as C1, C3, and E2 through E4, each rated at 0.22 MMBTU/hr maximum heat input capacity;

(6) One (1) natural gas-fired space heater, identified as C2, rated at 0.20 MMBTU/hr maximum heat input capacity; and

(7) Two (2) natural gas-fired space heaters, identified as D1 and E1, each rated at 0.11 MMBTU/hr maximum heat input capacity.

The following conditions shall be applicable:

1. This substrate coating and ceramic substrate cutting source consists of a source with an on-site contractor*:*

   (a) Aristo, Inc., the primary operation, is located at 4410 West 37th Avenue, Hobart, IN 46342; and

   (b) Airtek (CATCO), the supporting operation, is also located at 4410 West 37th Avenue, Hobart, IN 46342.

   Since Aristo, Inc. and Airtek (CATCO) are located on contiguous properties, have the same SIC codes, and are under the common control of Aristo, Inc., they will be considered one source, as defined by 326 IAC 2-7-1(22), based on this contractual control. Therefore, the term "source" in the Registration(s) refers to both Aristo, Inc. and Airtek (CATCO) as one source.

2. 326 IAC 5-1 (Opacity Limitations)
   Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

   (a) Opacity shall not exceed an average of twenty percent (20%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

   (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

3. 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
   The particulate matter (PM) from the welding operations shall not exceed 4.44 pounds per hour when operating at a process weight rate of 1.125 tons per hour.

   The pound per hour limitation was calculated with the following equation:

   Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

   $E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
   P = process weight rate in tons per hour

   Based on calculations, a control device is not needed to comply with this limit.

4. 326 IAC 6-4 (Fugitive Dust Emissions)
   The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

This registration is the first approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source. If you have any questions on this matter, please contact Hannah Desrosiers, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-234-5374 or at 1-800-451-6027 (ext 45374).

Original signed by,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

IC/hld

cc: File - Lake County
Lake County Health Department
Air Compliance Section - Rick Massoels
IDEM Northwest Regional Office
Permit Tracking
Compliance Data Section
Permits Administrative and Development
Billing, Licensing, and Training Section – Dan Stamatkin

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	Airtek (CATCO)
Address:	4410 West 37th Avenue, Bldg F, Hobart, IN 46342
Phone #:	(219) 963-2288
Registration #:	R089-25366-00532

Certification by the Authorized Individual

I hereby certify that Airtek (CATCO) is still in operation and is in compliance with the requirements of Registration R089-25366-00532.

Name (typed):
Title:
Signature:
Phone Number:
Date:

Note: Airtek (CATCO) (089-00532) is considered as one source with Aristo, Inc. (089-00531).

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a New Source Review and Registration

Source Description and Location

Source Name(s):	Aristo, Inc. Airtek (CATCO)
Source Location:	4410 West 37th Avenue, Hobart, IN46342
County:	Lake
SIC Code:	3714
Registration No.(s):	R 089-25365-00531 for Aristo, Inc. R 089-25366-00532 for Airtek (CATCO)
Permit Reviewer:	Hannah L. Desrosiers

The Office of Air Quality (OAQ) has reviewed applications from Aristo, Inc. and Airtek (CATCO) relating to the operation of a stationary substrate coating and ceramic substrate cutting facility.

Source Definition

This substrate coating and ceramic substrate cutting source consists of a source with an on-site contractor*:*

(a) Aristo, Inc., the primary operation, is located at 4410 West 37th Avenue, Hobart, IN 46342; and

(b) Airtek (CATCO), the supporting operation, is also located at 4410 West 37th Avenue, Hobart, IN 46342.

IDEM has determined that Aristo, Inc. and Airtek (CATCO) are located on contiguous properties, have the same SIC codes and are under the common control of Aristo, Inc., therefore, will be considered one source, as defined by 326 IAC 2-7-1(22), based on this contractual control. Therefore, the term “source” in the Registration(s) refers to both Aristo, Inc. and Airtek (CATCO) as one source.

Separate Registrations will be issued to Aristo, Inc. and Airtek (CATCO) solely for administrative purposes.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM10	Attainment/ unclassifiable
PM2.5	Nonattainment
SO_2	Attainment
NO_2	Attainment/ unclassifiable
8-hour Ozone	Moderate nonattainment
1-hour Ozone	Severe nonattainment
CO	Attainment/ unclassifiable

On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

(a) U.S.EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Lake County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Nonattainment New Source Review requirements. See the State Rule Applicability – Entire Source section.

(b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone standards. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.

(c) Lake County has been classified as attainment or unclassifiable in Indiana for CO, Pb, NO_x, SO_2, and PM10. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability-Entire Source section.

(d) Fugitive emissions are not counted toward determination of PSD or Emission Offset applicability since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980.

Existing Approvals

There have been no previous approvals issued to this source.

Source Status

New Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	2.42
PM-10	2.62
SO_2	0.02
NO_x	3.37
VOC	11.38
CO	2.83
Single HAP	0.20
Combination HAPs	0.27

This existing source is not a major stationary source under 326 IAC 2-2 (PSD) or 326 IAC 2-3 (Emission Offset), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3, the PSD and Emission Offset requirements do not apply.

Unpermitted Emission Units and Pollution Control Equipment

The source consists of the following unpermitted emission units and pollution control device(s):

ARISTO

(a) One (1) Grieve Corp, 7 Zone Conveyor Type Curing Oven, identified as CO2, constructed in May 2002, with a maximum heat input rate of 0.9 million British thermal units per hour, firing natural gas only, uncontrolled and exhausting through stacks S1-S4.

(b) One (1) JL Becker Co., 7 Zone Conveyor Type Curing Oven, identified as CO3, constructed in December 2004, with a maximum heat input rate of 3.30 million British thermal units per hour, firing natural gas only, uncontrolled and exhausting through stacks S5-S8.

(c) One (1) masonry sawing operation, constructed in 1999, with a process weight rate equal to 1.125 tons of ceramic substrate pre-manufactured brick per hour and particulate matter emissions controlled by integral dust collection system (DC1) and consisting of:

(1) Three (3) masonry saws, identified as SAW; and

(2) One (1) Filter Type Dust Collector, identified as DC1.

(d) One (1) Washcoat Batching Process, constructed in October 2000, with a maximum throughput rate of 558 tons per year, controlled by dust collection system (DC2) and exhausting back into the hopper system; consisting of the following:

(1) Two (2) Enclosed Gravity Feed Hoppers, identified as HOP1 and HOP2, with enclosed screw conveyors for transporting dry coating powders to the two (2) Mixers;

(2) Two (2) Covered Mixers, identified as AT1 and AT2, with attached dust collector DC2; and

(3) One (1) Filter Type Dust Collector, identified as DC2.

(e) One (1) Surface Coating Unit used to apply a rare earth oxides solution containing 50% solids to ceramic substrate pre-manufactured brick using a flow coating process, identified as Flow-coater, constructed in October 1998, with a maximum production rate of 685 bricks per hour and a maximum application rate of 0.06 gallons per brick;

(f) One (1) Surface Coating Unit used to apply a precious metals solution to ceramic substrate pre-manufactured brick using a dip coating process, identified as Dipping Coater, constructed in October 1998, with a maximum production rate of 685 bricks per hour and a maximum application rate of 0.04 gallons per brick;

(g) Natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu/hr, firing natural gas only, consisting of the following:

(1) Three (3) natural gas-fired space heaters, identified as F1 through F3, each rated at 0.18 MMBTU/hr maximum heat input capacity;

(2) Two (2) natural gas-fired space heaters, identified as F4 and F5, each rated at 0.09 MMBTU/hr maximum heat input capacity; and

(3) Three (3) natural gas-fired space heaters, identified as F6 through F8, each rated at 0.08 MMBTU/hr maximum heat input capacity;

AIRTEK (CATCO)

(a) Thirty one (31) Metal Inert Gas (MIG) welding stations, identified as Welding Units, constructed from January 1991 to December 1995, with a combined maximum electrode usage of 814,680 pounds per year.

(b) Natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu/hr, consisting of the following:

(1) One (1) natural gas-fired space heater, identified as A1, rated at 0.10 MMBTU/hr maximum heat input capacity;

(2) One (1) natural gas-fired space heater, identified as A2, rated at 0.20 MMBTU/hr maximum heat input capacity;

(3) One (1) natural gas-fired space heater, identified as A3, rated at 0.21 MMBTU/hr maximum heat input capacity;

(4) Three (3) natural gas-fired space heaters, identified as B1 through B3, each rated at 0.17 MMBTU/hr maximum heat input capacity;

(5) Five (5) natural gas-fired space heaters, identified as C1, C3, and E2 through E4, each rated at 0.22 MMBTU/hr maximum heat input capacity;

(6) One (1) natural gas-fired space heater, identified as C2, rated at 0.20 MMBTU/hr maximum heat input capacity; and

(7) Two (2) natural gas-fired space heaters, identified as D1 and E1, each rated at 0.11 MMBTU/hr maximum heat input capacity.

"Integral Part of the Process" Determination

Aristo, Inc has submitted the following information to justify why the Filter Type Dust Collector identified as DC1 should be considered an integral part of the ceramic substrate pre-manufactured brick sawing operations:

(a) The sawing process involves sawing ceramic substrates to a finished overall length using masonry type sawing equipment. Sawing is performed after the finish coat of precious metals has been applied to the substrates. The particulate emissions from this process (i.e., chips/dust) includes precious metals, including; Rhodium and Palladium.

(b) The original purchase price for the equipment was $18,356, with an estimated installation cost of $3,500 parts and labor.

(c) The recycle value for collected chips/dust material during 2006 was $0.25 per pound.

(d) The 2006 production level was approximately 25 percent of the potential annual 8760 hour capacity.

(e) The weight of collected chips/dust material during 2006 was 21,325 lbs resulting in recovery of $5,331.00.

(f) Not considering maintenance costs, the return on the equipment cost at the 2006 production level and reclaim material value is 4.1 years.

(g) Annual maintenance costs are estimated at $700.00 per year.

(h) As of February 2007, $18,500 has already been received for reclaimed material.

IDEM, OAQ has evaluated the information submitted and agrees that the Filter Type Dust

Collector identified as DC1 should be considered an integral part of the ceramic substrate pre-manufactured brick sawing operations. Therefore, the permitting level will be determined using the potential to emit after the Filter Type Dust Collector identified as DC1. Operating conditions in the proposed permit will specify that this Filter Type Dust Collector identified as DC1 shall operate at all times when the ceramic substrate pre-manufactured brick sawing operation is in operation.

Enforcement Issues

In October 1998, the existing source constructed the Dipping Coater, which caused the source-wide potential to emit VOC to be within the ranges listed for a Registration in 326 IAC 2-5.5-1(b)(1). Therefore, pursuant to 326 IAC 2-5.5-2(c), the source was required to apply for a Registration by December 1999. On October 1, 2007, IDEM, OAQ received a Registration application from Aristo, Inc.

IDEM is reviewing this matter and will take appropriate action. This proposed approval is intended to satisfy the requirements of 326 IAC 2-5.5 (Registrations).

Stack Summary

ARISTO

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
S1	Curing Oven (CO2)	30	1.5	4000	120
S2	Curing Oven (CO2)	30	1.0	4000	220
S3	Curing Oven (CO2) cooling out	30	3.0	26,000	***
S4	Curing Oven (CO2) cooling in	30	3.0	***	***
S5	Curing Oven (CO3)	30	1.25	4000	140
S6	Curing Oven (CO3) cooling out	30	1.25	4000	220
S7	Curing Oven (CO3) cooling in	30	3.5	26000	***
S8	Curing Oven (CO3)	30	3.5	***	***
S10	Space Heater vent	28	0.5	***	***
S11	Space Heater vent	28	0.5	***	***
S12	Space Heater vent	28	0.5	***	***
S23	Lab Hood vent	26	0.33	***	***

*** Information not provided

AIRTEK (CATCO)

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
S13	Heating Furnace, GFA, vent	21	0.5	***	***
S19	Lab Hood vent	26	1	***	***
S20	Lab Hood vent	26	1	***	***
S22	Lab Hood vent	26	1	***	***
VS1	Water Heater vent	6	0.33	***	***
VS2	Water Heater vent	6	0.33	***	***
VS3	Heating Furnace, GFA, vent	14	0.75 X 0.75	***	***
VS6	Heating Furnace, GFA, vent	6	3.5	***	***
VS8	Heating Furnace,	6	0.5	***	***

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
	GFA, vent				

*** Information not provided

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Permit Level Determination

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as " the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

The following table reflects the PTE of the entire source potential before controls, except where the control has been determined to be integral. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit:

Pollutant	Potential to Emit (tons/year)
PM	2.42
PM10	2.62
SO_2	0.02
VOC	3.37
CO	11.38
NO_x	2.83

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are less than 25 tons per year, but the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM and PM10 are each greater than 5 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.

HAPs	Potential to Emit (tons/year)
Manganese	0.20
Combination HAPs	0.27

(b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(c) Fugitive Emissions are not counted toward determination of PSD and Emission Offset applicability since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3, and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980.

(d) The potential to emit for this collocated source equals the total combined potential to emit of Aristo, Inc. and Airtek (CATCO).

Federal Rule Applicability Determination

The following federal rules are applicable to the source:

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit.

(b) The requirements of 40 CFR 63, Subpart T (63.460 through 63.470), NESHAP for Halogenated Solvent Cleaning and 326 IAC 20-6, are not included in this revision because this operation does not use a degreasing solvent that contains any of the halogenated compounds listed in 40 CFR 63.460(a).

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

326 IAC 2-3 (Emission Offset)
This source is located in Lake County, which is designated as nonattainment for Ozone under the 8-hour standard. The potential to emit of VOC from this source is less than 25 tons per year. Therefore, the provisions of 326 IAC 2-3 (Emission Offset) do not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
This source will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is located in Lake County, it has potential to emit of NOx and VOC of less than twenty-five (25) tons per year, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of twenty percent (20%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)
The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source is located in Lake County. Pursuant to 326 IAC 6-5-1(a), this source is not subject to the requirements of 326 IAC 6-5. Therefore, the requirements of 326 IAC 6-5 are not applicable.

326 IAC 6.8 (Particulate Matter Emission Limitations for Lake County)
Although this source is located in Lake County, it is not one of the sources listed under 326

IAC 6.8-2-1, and it has potential PM/PM_{10} emissions of less than one hundred (100) tons per year and actual PM/PM_{10} emissions of less than ten (10) tons per year. Therefore, 326 IAC 6.8 does not apply.

State Rule Applicability - Surface Coating Operations

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The washcoat and flowcoat operations will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(a), the washcoat and flowcoat operations are exempt from the requirements of 326 IAC 6-3, because each process is on the specifically exempted list.

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)
The requirements of 326 IAC 8-1-6 are not applicable to solvent usage in the the washcoat and flowcoat operations, since it does not have the potential to emit greater than twenty-five (25) tons of VOCs per year.

State Rule Applicability – Masonry Sawing Operations

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the masonry sawing operations are exempt from the requirements of 326 IAC 6-3, because each have potential particulate emissions that are less than five hundred fifty-one thousandths (0.551) pound per hour.

The integral dust collection system (DC1) shall be in operation at all times the masonry sawing is in operation, in order to comply with this limit.

State Rule Applicability - Welding Operations

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the welding operations shall not exceed 4.44 pounds per hour when operating at a process weight rate of 1.125 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Based on calculations, a control device is not needed to comply with this limit.

State Rule Applicability - Natural Gas Combustion

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
Each of the natural gas-fired curing ovens (CO2 and CO3), and natural gas-fired forced air space heaters (F1 through F8) at Aristo, Inc., and each of the natural gas-fired forced air space heaters (A1 through A3, B1 through B3, C1 through C3, D1, and E1 through E4) at Airtek (CATCO), are exempt from the requirements of 326 IAC 6-2, as they are each not sources of indirect heating.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Each of the natural gas-fired curing ovens (CO2 and CO3), and natural gas-fired forced air space heaters (F1 through F8) at Aristo, Inc., and each of the natural gas-fired forced air space heaters (A1 through A3, B1 through B3, C1 through C3, D1, and E1 through E4) at Airtek (CATCO), are exempt from the requirements of 326 IAC 6-3, since they are each not a "manufacturing process" as defined by 326 IAC 6-3-1.5.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

Each of the natural gas-fired curing ovens (CO2 and CO3), and natural gas-fired forced air space heaters (F1 through F8) at Aristo, Inc., and each of the natural gas-fired forced air space heaters (A1 through A3, B1 through B3, C1 through C3, D1, and E1 through E4) at Airtek (CATCO), are exempt from the requirements of 326 IAC 7-1, because the potential and the actual emissions of each are less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

Conclusion and Recommendation

The continued operation of this colocated, stationary substrate coating and ceramic substrate cutting source shall be subject to the conditions of the attached Registrations: Aristo, Inc. 089-25365-00531 / Airtec (CATCO) 089-25366-00532.

IDEM Contact

Questions regarding this proposed permit can be directed to Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53, IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.

Appendix A: Emissions Calculations
Emission Summary

Company Name: Aristo, Inc. & Airtek (Catco)
Address City IN Zip: 4410 West 37th Avenue, Hobart, IN 46342
Permit No(s).: R089-25365-00531 / R089-25366-00532
Reviewer: Hannah L. Desrosiers
Date Submitted: 10/1/2007

	Uncontrolled Potential Emissions (tons/year)						
	Emissions Generating Activity						
		ARISTO Emission Units			AIRTEK (CATCO) Emission Units		
Category	Pollutant	Natural Gas Combustion	Surface Coating (incl: Flow Coat and Dip Coat)	Sawing	Natural Gas Combustion	MIG Welding	**TOTAL**
Criteria Pollutants	PM	0.04	0.00	0.12	0.02	2.24	2.42
	PM10	0.17	0.00	0.12	0.08	2.24	2.62
	SO2	0.01	0	0	0.01	0	0.02
	NOx	2.26	0	0	1.11	0	3.37
	VOC	0.12	11.19	0	0.06	0	11.38
	CO	1.90	0	0	0.93	0	2.83
Hazardous Air Pollutants	Benzene	4.75E-05	0	0	2.34E-05	0	7.08E-05
	Dichlorobenzene	2.71E-05	0	0	1.34E-05	0	4.05E-05
	Formaldehyde	1.70E-03	0	0	8.34E-04	0	2.53E-03
	Hexane	0.04	0	0	0.02	0	0.06
	Toluene	7.68E-05	0	0	3.78E-05	0	1.15E-04
	Cadmium	2.49E-05	0	0	1.22E-05	0	3.71E-05
	Chromium	2.49E-05	0	0	1.56E-05	0.00	4.04E-05
	Lead	1.13E-05	0	0	5.56E-06	0	1.69E-05
	Manganese	8.59E-06	0	0	4.23E-06	0.20	0.20
	Nickel	4.75E-05	0	0	2.34E-05	0.00	7.08E-05
	Totals	**0.043**	**0.000**	**0.000**	**0.021**	**0.204**	**0.267**
						Worse Case HAP	**0.204**

Total emissions based on rated capacity at 8,760 hours/year.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Aristo, Inc.
Address City IN Zip: 4410 West 37th Avenue, Hobart, IN 46342
Permit No.: R089-25365-00531
Reviewer: Hannah L. Desrosiers
Date Submitted: 10/1/2007

Emission Unit Listing

Natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu/hr, firing natural gas only, consisting of the following:

Unit Type	Unit ID(s)	Number of Units	Maximum Capacity of each (MMBtu/hr)	Total Max Capacity (MMBtu/hr)
Curing Oven	CO2	1	0.90	0.90
Curing Oven	CO3	1	3.30	3.30
Space Heaters	F1, F2, F3	3	0.18	0.54
Space Heaters	F4, F5	2	0.09	0.18
Space Heaters	F6, F7, F8	3	0.08	0.24
Totals		**10**	**4.55**	**5.16**

Emissions Calculations

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
5.2	45.2

	Pollutant					
Emission Factor in lb/MMCF	PM* 1.9 Manganese	PM10* 7.6	SO2 0.6	NOx 100.0 **see below	VOC 5.5	CO 84.0
Potential Emission in tons/yr	0.04	0.17	0.01	2.26	0.12	1.90

	HAPs - Organics				
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	4.746E-05	2.712E-05	1.695E-03	0.041	7.684E-05

	HAPs - Metals				
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.130E-05	2.486E-05	3.164E-05	8.588E-06	4.746E-05

Total HAPs	**0.0427**	**tpy**

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Aristo, Inc.
Address City IN Zip: 4410 West 37th Avenue, Hobart, IN 46342
Permit No.: R089-25365-00531
Reviewer: Hannah L. Desrosiers
Date Submitted: 10/1/2007

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Prescious Metal Dip Coat	8.8	87.73%	86.7%	1.1%	0.0%	0.00%	0.04	685.000	0.09	0.09	2.56	61.34	11.19	0.00	0.00	100%
Wash Flow Coating	15.4	12.33%	12.3%	0.0%	0.0%	0.00%	0.06	685.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
State Potential Emissions			**Add worst case coating to all solvents**								2.56	61.34	**11.19**	**0.00**		

METHODOLOGY

The precious metals and wash coatings are applied using a dip and/or flow coating application, with transfer efficiency of 100%
The coatings listed above do not contain HAPS per manufacturer MSDSs
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emissions Calculations
Potential to Emit from Sawing

Company Name: Aristo, Inc.
Address City IN Zip: 4410 West 37th Avenue, Hobart, IN 46342
Permit No.: R089-25365-00531
Reviewer: Hannah L. Desrosiers
Date Submitted: 10/1/2007

weight loss @ max raw weight with loading (lb/yr):	23,926.18
Uncontrolled Potential to Emit PM (tons/yr):	11.96
Control Efficiency of integral control:	99%
Potenital Emissions PM after integral dust collector (DC1) (tons/yr):	0.12

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Airtek (Catco)
Address City IN Zip: 4410 West 37th Avenue, Hobart, IN 46342
Permit Number: R089-25366-00532
Reviewer: Hannah L. Desrosiers
Date Submitted: 10/1/2007

Emission Unit Listing
Natural gas-fired combustion sources with heat input equal to or less than ten (10) MMBtu/hr,

Unit Type	Unit ID(s)	Number of Units	Maximum Capacity of each (MMBtu/hr)	Total Max Capacity (MMBtu/hr)
Space Heaters	A1	1	0.10	0.10
Space Heaters	A2	1	0.20	0.20
Space Heaters	A3	1	0.21	0.21
Space Heaters	B1, B2, B3	3	0.17	0.51
Space Heaters	C1, C3, E2, E3, E4	5	0.22	1.10
Space Heaters	C2	1	0.20	0.20
Space Heaters	D1, E1	2	0.11	0.22
Totals		**14**	**1.21**	**2.54**

Emissions Calculations

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
2.5	22.3

	Manganese					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.02	0.08	0.01	1.11	0.06	0.93

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.336E-05	1.335E-05	8.344E-04	0.020	3.783E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	5.563E-06	1.224E-05	1.558E-05	4.228E-06	2.336E-05

Total HAPs	**0.0210**	**tpy**

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Welding

Company Name: Airtek (Catco)
Address City IN Zip: 4410 West 37th Avenue, Hobart, IN 46342
Permit Number: R089-25366-00532
Reviewer: Hannah L. Desrosiers
Date: 10/1/2007

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
WELDING			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Metal Inert Gas (MIG)(carbon steel)	31	3	0.0055	0.0005			0.512	0.047	0.000	0	0.047
EMISSION TOTALS		Manganese									
Potential Emissions lbs/hr							0.51	0.05	0.00	0.00	0.05
Potential Emissions lbs/day							12.28	1.12	0.00	0.00	1.12
Potential Emissions tons/year							2.24	0.20	0.00	0.00	0.20

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculting the emissions.

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.