



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL CERTIFIED MAIL
MORROW COUNTY**

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 01-08905

Fac ID: 0159000140

DATE: 12/16/2004

Cardington Yutaka Technologies Inc
Karen Landacre
PO Box 39 575 West Main Street
Cardington, OH 433150039

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

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

CC: USEPA

CDO



**Permit To Install
Terms and Conditions**

**Issue Date: 12/16/2004
Effective Date: 12/16/2004**

FINAL PERMIT TO INSTALL 01-08905

Application Number: 01-08905
Facility ID: 0159000140
Permit Fee: **\$200**
Name of Facility: Cardington Yutaka Technologies Inc
Person to Contact: Karen Landacre
Address: PO Box 39 575 West Main Street
Cardington, OH 433150039

Location of proposed air contaminant source(s) [emissions unit(s)]:
**575 West Main Street
Cardington, Ohio**

Description of proposed emissions unit(s):
Catalytic converter test stand.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted 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.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

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

7. Air Pollution Nuisance

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

8. Termination of Permit to Install

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

9. Construction of New Sources(s)

The proposed emissions unit(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 cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(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 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 cannot meet the requirements of this permit or cannot meet applicable standards.

10. 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.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. 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.

13. Source Operation and Operating Permit Requirements 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. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

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 Issued: 12/16/2004

Facility ID: 0159000140

14. 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.

15. Fees

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

B. Permit to Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
CO	15.2
OC	0.6
NO _x	9.8
PE	0.6
SO _x	0.5

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B003- 350 HP Engine Dynamometer vented to a thermal oxidizer.	<p>OAC rule 3745-17-07(A)(1)</p> <p>OAC rule 3745-17-11(B)(1)</p> <p>OAC rule 3745-18-06</p> <p>OAC rule 3745-21-07(B)</p> <p>OAC rule 3745-21-08</p> <p>OAC rule 3745-23-06(B)</p>
	<p>OAC rule 3745-35-07(B) (synthetic minor to avoid Title V)</p>

Applicable Emissions
Limitations/Control
Measures

See A.2.c below.

See A.2.d below.

Emissions from the
combustion of gasoline shall
not exceed:

See A.2.e below.

3.5 lbs/hr of carbon
monoxide (CO);

See A.2.f below.

See A.2.e below.

0.13 lb/hr and 0.6 ton of
organic compounds (OC);

2.2 lbs/hr and 9.8 tons/year
of nitrogen oxides (NO_x);

0.14 lb/hr and 0.6 ton/year
of particulate emissions
(PE);

0.12 lb/hr and 0.5 ton/year
of sulfur dioxide (SO_x).

The requirements of this
rule also include compliance
with the requirements of
OAC rule 3745-31-07(B).

See A.2.a below.

CO emissions shall not
exceed 15.2 tons per year,
based on a rolling 12-month
summation.

See Section B.2 below.

See A.2.b below.

2. Additional Terms and Conditions

- 2.a** The permittee shall vent emissions from this emissions unit to a thermal oxidizer while operating this emissions unit.
- 2.b** This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11, see A.I.2.c.
- 2.c** The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11, does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.
- 2.d** OAC rule 3745-18-06(B) exempts stationary internal combustion engines which have rated heat input capacities equal to, or less than, 10 MMBtu/hr from the sulfur dioxide emission limit in OAC rule 3745-18-06(G). This emissions unit has a rated heat input of 3.125 MMBtu/hr.
- 2.e** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-07 for control of organic materials from stationary sources and OAC rule 3745-23-06 for control of nitrogen oxide emissions from stationary sources, respectively, by committing to comply with the best available technology requirements of OAC rule 3745-31-05(A)(3).
- 2.f** The design of the emissions unit and the technology associated with the current operating practices will satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.g** The particulate, nitrogen oxides, sulfur dioxide, and organic compound emissions limitations specified in Section A.1 reflect the emissions unit's potential to emit without

Emissions Unit ID: **B003**

controls for these pollutants; therefore, no additional monitoring, record keeping or reporting requirements are necessary to ensure compliance with these emission limitations.

The carbon monoxide and organic compound hourly and annual emissions limitations specified in Section A.1 reflect the emissions unit's potential to emit with controls for these pollutants; therefore, no additional monitoring, record keeping or reporting requirements are necessary to ensure compliance with these emission limitations.

B. Operational Restrictions

1. The average combustion temperature within the thermal incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature.

C. Monitoring and/or Record keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
2. The permittee shall collect and record the following information each day for the control equipment:
 - a. A log of the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation; and
 - b. All 3-hour blocks of time during which the average combustion temperatures within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that the emissions unit was in compliance.
3. For each day during which the permittee burns a fuel other than gasoline, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator did not

comply with the temperature limitation specified above. The reports shall be submitted in accordance with General Term and Condition A.1.c.ii.

2. The permittee shall submit annual reports that specify the total emissions of PE, SO_x, NO_x, OC, and CO from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.
3. The permittee shall submit deviation (excursion) reports that identify each day when fuels other than gasoline was burned in this emissions unit. Each report shall be submitted within 30 days after the occurrence of the deviation.

E. Testing Requirements

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

- a. Emission Limitations:
3.5 lbs/hr of CO.

Applicable Compliance Method:

The hourly carbon monoxide emission limitation was established by multiplying an emission factor of 3,940 lbs of carbon monoxide/1000 gallons of gasoline burned by the emissions unit's original gasoline usage rate (22 gallons/hr) by the thermal incinerator's control efficiency for this pollutant (1-0.96). The emission factor is specified in USEPA's Factor Information Retrieval Data System (FIRE 6.24) for criteria air pollutants (using SCC number 20400401 for reciprocation gasoline engines).

$$(3940 \text{ lbs CO}/1000 \text{ gal}) \times (22 \text{ gal/hr}) = 86.7 \text{ lbs CO/hr (uncontrolled)}$$

$$(86.7 \text{ lbs CO/hr}) \times (1 - 0.96) = 3.5 \text{ lbs CO/hr (controlled)}$$

If required, the permittee shall demonstrate compliance with the hourly carbon monoxide emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

- b. Emission Limitations:
0.13 lb/hr and 0.6 ton of OC.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the

Emissions Unit ID: **B003**

emission factor of 148.0 pounds of OC per 1,000 gallon of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.24) by the maximum daily gasoline usage of 22 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 148.00 pounds of OC per 1,000 gallon of gasoline burned by the maximum annual gasoline usage of 192,720 gallons per year and dividing by 2,000 pounds per ton.

$$(148 \text{ lbs OC} / 1000 \text{ gal}) \times (22 \text{ gal/hr}) = 3.3 \text{ lbs OC/hr}$$

$$(3.3 \text{ lbs OC/year}) \times (1 - 0.96) = 0.13 \text{ lb OC/hr}$$

$$(148 \text{ lbs OC} / 1000 \text{ gal}) \times (192,720 \text{ gal/yr}) \times (1 \text{ ton}/2000\text{lbs}) = 14.3 \text{ tons OC/year}$$

$$(14.3 \text{ tons OC/year}) \times (1 - 0.96) = 0.6 \text{ ton OC/yr}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 18, 25, or 25A.

- c. Emission Limitations:
2.2 lbs/hr and 9.8 tons/year of NO_x.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 102.00 pounds of NO_x per 1,000 gallon of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.24) by the maximum daily gasoline usage of 22 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 102.00 pounds of NO_x per 1,000 gallon of gasoline burned by the maximum annual gasoline usage of 192,720 gallons per year and dividing by 2,000 pounds per ton.

$$(102 \text{ lbs NO}_x/1000 \text{ gal}) \times (22 \text{ gal/hr}) = 2.2 \text{ lb NO}_x/\text{hr}$$

$$(102 \text{ lbs NO}_x/1000 \text{ gal}) \times (192,720 \text{ gal/yr}) \times (1 \text{ ton}/2000\text{lbs}) = 9.8 \text{ tons NO}_x/\text{year}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 7E.

- d. Emission Limitations:
0.14 lb/hr and 0.6 ton/year of PE.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 6.47 pounds of PE per 1,000 gallon of gasoline burned (U.S. EPA's

Factor Information Retrieval Data System (FIRE) Version 6.24) by the maximum daily gasoline usage of 22 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 6.47 pounds of PE per 1,000 gallon of gasoline burned by the maximum annual gasoline usage of 192,720 gallons per year and dividing by 2,000 pounds per ton.

$$(6.47 \text{ lbs PE}/1000 \text{ gal}) \times (22 \text{ gal/hr}) = 0.14 \text{ lb PE/hr}$$

$$(6.47 \text{ lbs PE}/1000 \text{ gal}) \times (192,720 \text{ gal/yr}) \times (1 \text{ ton}/2000\text{lbs}) = 0.6 \text{ ton PE/year}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- e. Emission Limitations:
0.12 lb/hr and 0.5 ton/year of SO_x.

Applicable Compliance Method:

Compliance with the short term limitation shall be demonstrated by multiplying the emission factor of 5.31 pounds of SO₂ per 1,000 gallon of gasoline burned (U.S. EPA's Factor Information Retrieval Data System (FIRE) Version 6.24) by the maximum daily gasoline usage of 22 gallons per day. Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 5.31 pounds of SO₂ per 1,000 gallon of gasoline burned by the maximum annual gasoline usage of 192,720 gallons per year and dividing by 2,000 pounds per ton.

$$(5.3 \text{ lbs SO}_x/1000 \text{ gal}) \times (22 \text{ gal/hr}) = 0.12 \text{ lb SO}_x/\text{hr}$$

$$(5.3 \text{ lbs SO}_x/1000 \text{ gal}) \times (192,720 \text{ gal/yr}) \times (1 \text{ ton}/2000\text{lbs}) = 0.5 \text{ tons SO}_x/\text{year}$$

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Method 6C.

- f. Emission Limitation:
CO emissions shall not exceed 15.2 tons per year, based on a rolling 12-month summation.

Applicable Compliance Method:

Compliance with the long term limitation shall be demonstrated by multiplying the emission factor of 3,940 pounds of CO per 1,000 gallon of gasoline burned by the emissions unit's annual gasoline usage rate (192,720 gallons/hr) by the thermal incinerator's control efficiency for this pollutant (1-.96) and dividing by 2,000 pounds per ton. The emission factor is specified in USEPA's Factor Information

Cardington Yutaka Technologies Inc

PTI Application: 01 08005

Issued

Facility ID: 0159000140

Emissions Unit ID: **B003**

Retrieval Data System (FIRE 6.24) for criteria air pollutants (using SCC number 20400401 for reciprocation gasoline engines).

$(3940 \text{ lbs CO}/1000 \text{ gal}) \times (192,720 \text{ gal/yr}) \times (1 \text{ ton}/2000\text{lbs}) = 379.7 \text{ tons CO/year}$
(uncontrolled)

$(379.7 \text{ tons CO/year}) \times (1 - 0.96) = 15.2 \text{ tons CO / yr (controlled)}$

F. Miscellaneous Requirements

None