



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL CERTIFIED MAIL**  
**FRANKLIN 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: 01-08092**

**DATE: 4/26/00**

Treasure Chest Advertising Company Inc  
Stephen Hultquist  
511 W. Citrus Edge  
Glendora, CA 91740-5098

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  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: USEPA

CDO



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Issue Date: 4/26/00

**FINAL PERMIT TO INSTALL 01-08092**

Application Number: 01-08092  
APS Premise Number: 0125041807  
Permit Fee: **\$400**  
Name of Facility: Treasure Chest Advertising Company Inc  
Person to Contact: Stephen Hultquist  
Address: 511 W. Citrus Edge  
Glendora, CA 91740-5098

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

**4051 Fondorf Drive  
Columbus, Ohio**

Description of proposed emissions unit(s):

**Four unit Harris 954 (K006) heatset web offset printing press with an integrated dryer and thermal incinerator.**

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 Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping 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 recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted 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 are inadequate 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 prove to be inadequate 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 application must be made to the Director for the installation or modification of any other emissions unit(s).

**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 thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

**14. Construction Compliance Certification**

Treasure Chest Advertising Company Inc  
 PTI Application: 01-08092  
 Issued: 4/26/00

Facility ID: 0125041807

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>
Organic compounds	18.7
Carbon monoxide	87.6
Nitrogen oxides	9.1
Sulfur dioxide	0.008
Particulate emissions	0.17



Applicable Emissions  
Limitations/Control Measures

Organic compound (OC) emissions shall not exceed 30.82 pounds per hour and 18.7 tons per year. See A.2.b. below.

Particulate emissions (PE) shall not exceed 0.052 lb/hr and 0.17 ton/yr. See A.2.a below.

Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.002 lb/hr and 0.008 ton /yr. See A.2.a below.

Carbon monoxide (CO) emissions shall not exceed 20.0 lbs/hr and 87.6 tons/yr.

Nitrogen oxide (NO<sub>x</sub>)emissions shall not exceed 2.08 lbs/hr and 9.1 tons/yr.

See A.2.d., A.2.e., and A.2.f. below.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1).

Opacity shall not exceed 20 percent as a six minute average, except as provided by rule.

The emission limitation specified by this rule is less stringent than the

emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

See A.2.c. below.

**2. Additional Terms and Conditions**

- 2.a** The pound per hour emission limitations for OC, SO<sub>2</sub>, and particulate matter reflect the unit's potential to emit based on AP-42 emission factors. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.
- 2.b** The pound per hour and the ton per year emission limitations for CO and NO<sub>x</sub> reflect the unit's potential to emit based on emission factors developed through source testing of similar sources by the permittee. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.
- 2.c** The permittee shall control OC emissions from K006 through the use of a thermal afterburner with a minimum control efficiency of 95%.
- 2.d** Organic compound emissions from K006 shall be reduced overall by a minimum of 95%.
- 2.e** OC content of the ink shall not exceed 50 percent by weight of ink.
- 2.f** OC content of the fountain solution shall not exceed 2 pounds per gallon.
- 2.g** OC content of the manual blanket and automatic blanket wash solvent shall not exceed 5.5 pounds per gallon.

**B. Operational Restrictions**

1. The average combustion temperature within the thermal afterburner, for any 3-hour block of time when K006 is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that K006 was in compliance.

**C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal afterburner when K006 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 for each day:
  - a. All 3-hour blocks of time during which the average combustion temperature within the thermal afterburner, when K006 was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated that K006 was in compliance.
  - b. A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when K006 was in operation.
3. The permittee shall collect and record the following information each month for emissions unit K006:
  - a. The company identification for each ink and fountain solution employed.
  - b. The company identification for each cleanup material (manual and automatic blanket wash solvents) employed.
  - c. The number of gallons or pounds of each ink and fountain solution employed.
  - d. The number of gallons of each cleanup material (manual and automatic blanket wash solvents) employed.
  - e. The organic compound content of each ink and fountain solution employed, in pounds per gallon or pounds per pound.

- f. The organic compound content of each cleanup material (manual and automatic blanket wash solvents) employed, in pounds per gallon.
- g. The total uncontrolled organic compound emission rate for all inks and fountain solutions, in pounds per month (i.e. the summation of the product of 3.c. \* 3.e. for each ink and fountain solution employed). The assumptions listed in Section C.4. shall be used in calculating the total uncontrolled organic compound emission rate for all inks and fountain solutions.
- h. The total uncontrolled organic compound emission rate for all cleanup materials (manual and automatic blanket wash solvents) in pounds per month (i.e. the summation of the product of 3.d. \* 3.f. for each cleanup material employed). The assumptions listed in Section C.4. shall be used in calculating the total uncontrolled organic compound emission rate for all cleanup materials.
- i. The total uncontrolled organic compound emission rate for all inks and fountain solutions and cleanup materials (i.e. summation of the values obtained in 3.g. and 3.h.).
- j. The total controlled organic compound emission rate for all inks, fountain solutions, and cleanup materials, in pounds and tons per month. The assumptions listed in Section C.4. shall be used in calculating the total controlled organic compound emission rate for all inks, fountain solutions, and cleanup materials.
- k. Hours of operation.

[Note: The ink information must be for the inks as employed, including any thinning solvents added at the emissions unit.]

- 4. \* Per DAPC guidance (Engineering guide 56, 6/15/99), the following assumptions will be used in calculating the OC emissions for emissions unit K006: 20 percent (by weight) of the solvent in the inks is retained in the web after the dryer. The remaining 80 percent (by weight) of the OCs in the inks is vented to the thermal afterburner. 30 percent of the fountain solution emissions is fugitive, and 70 percent is vented to the thermal afterburner. For manual blanket wash, 50 percent of the solvent is fugitive, and 50 percent is retained in the cloths. For automatic blanket wash systems 60 percent of the solvent is fugitive, and 40 percent is captured and vented to the afterburner. For the OCs vented to the afterburner and generated by the ink, automatic blanket wash solvent, and the fountain solution, a capture efficiency of 100% shall be used for the calculations.
- 5. The permit to install for this emissions unit (K006) was evaluated based on the actual materials

(typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Napthalene

TLV (mg/m<sup>3</sup>): 52

Maximum Hourly Emission Rate (lbs/hr): 1.65

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 50.23

MAGLC (ug/m<sup>3</sup>): 1238

Pollutant: Glycol ether

TLV (mg/m<sup>3</sup>): 121

Maximum Hourly Emission Rate (lbs/hr): 1.675

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 50.23

MAGLC (ug/m<sup>3</sup>): 2881

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the

handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **D. Reporting Requirements**

1. In accordance with the General Terms and Conditions of this permit under section (A)(1), the permittee shall submit deviation (excursion) reports that identify:
  - a. all exceedances of the OC content limits for ink, fountain solution and blanket wash solvent.
  - b. all 3-hour blocks of time during which the average combustion temperature within the thermal afterburner does not comply with the temperature limitation specified above.
2. The permittee shall also submit annual reports which specify the total organic compound

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**Treas**

**PTI A**

**Issued: 4/26/00**

Emissions Unit ID: **K006**

emissions from emissions unit K006 for the previous calendar year. These reports shall be submitted by January 31 of each year.

## E. Testing Requirements

1. Compliance with the emission limitations of this permit shall be determined in accordance with the following method(s):

- a. Emission Limitation:  
Particulate matter emissions shall not exceed 0.052 lb/hr and 0.17 ton/yr.

### Applicable Compliance Method:

Compliance with the lb/hr particulate matter emission limit shall be determined by adding the particulate matter emissions in lbs/hr from natural gas and ink oil combustion.

Multiply an emission factor of 7.6 lbs particulate matter/million cubic feet (from table 1.4-2(7/98) of AP-42, 5th edition) with a maximum natural gas consumption of 3,000 cubic feet per hour and divide by 1,000,000 (to convert 3,000 cubic feet per hour to million cubic feet per hour) to obtain particulate matter emissions from natural gas combustion.

Multiply an emission factor of 2.0 lbs particulate matter/1,000 gallons (from chapter 1.3 (9/98) of AP-42, 5th edition) with a maximum ink oil consumption of 14.52 gallons/hr and divide by 1,000 (to convert 14.52 gallons/hr to thousand gallons per hour) to obtain particulate matter emissions from ink oil combustion.

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

Compliance with the ton/yr particulate matter emission limit shall be determined by adding the particulate matter emissions in tons/yr from natural gas and ink oil combustion.

Multiply an emission factor of 7.6 lbs particulate matter/million cubic feet (from table 1.4-2(7/98) of AP-42, 5th edition) with a maximum natural gas consumption of 26.28 million cubic feet per yr and divide by 2,000 lbs/ton to obtain particulate matter emissions from natural gas combustion in tons/yr.

Multiply an emission factor of 2.0 lbs particulate matter/1,000 gallons (from chapter 1.3 (9/98) of AP-42, 5th edition) with a maximum ink oil consumption of 70,000 gallons/yr and divide by 2,000 lbs/ton to obtain particulate matter emissions from ink oil combustion in tons/yr.

- b. Emission limitation:  
Sulfur dioxide emissions shall not exceed 0.002 lb/hr and 0.008 ton /yr.

**Applicable Compliance Method:**

Compliance with the lb/hr sulfur dioxide emission limit shall be multiplying an emission factor of 0.6 lbs sulfur dioxide/million cubic feet (from table 1.4-2(7/98) of AP-42, 5th edition) with a maximum natural gas consumption of 3,000 cubic feet per hour and dividing by 1,000,000 (to convert 3,000 cubic feet per hour to million cubic feet per hour) to obtain sulfur dioxide emissions in lbs/hr. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6C.

Compliance with the ton/yr sulfur dioxide emission limit shall be determined by multiplying an emission factor of 0.6 lb SO<sub>2</sub>/million cubic feet (from table 1.4-2(7/98) of AP-42, 5th edition) with a maximum natural gas consumption of 26.28 million cubic feet per year and divide by 2,000 lbs/ton to obtain sulfur dioxide emissions in tons/yr.

**c. Emission limitation:**

Nitrogen oxide emissions shall not exceed 2.08 lbs/hr and 9.1 tons/yr.

**Applicable Compliance Method:**

The hourly NO<sub>x</sub> emission rate was developed by Treasure Chest Advertising Company, Inc. through source testing of a similar source. The source testing showed higher emissions compared to AP-42. The hourly emissions are based on the maximum single hour during the extended test period and represent potential to emit.

If, necessary the permittee shall demonstrate compliance with the nitrogen oxide allowable hourly mass emission limitation in accordance with the procedures specified in Methods 1 through 4 and 7E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

Compliance with the ton per year emission limitations for nitrogen oxides shall be determined by multiplying the hrs of operation per year (8760) with the hourly mass emission rate (2.08 lbs/hr) and dividing by 2,000 pounds per ton to obtain the yearly emissions in tons/year.

**d. Emission limitation:**

Carbon monoxide emissions shall not exceed 20.0 lbs/hr and 87.6 tons/yr.

**Applicable Compliance Method:**

The hourly CO emission rate was developed by Treasure Chest Advertising Company, Inc. through source testing of a similar source. The source testing showed higher emissions compared to AP-42. The hourly emissions are based on the maximum single hour during the extended test period and represent potential to emit.

If required, the permittee shall demonstrate compliance with the allowable carbon monoxide hourly mass emission limitation in accordance with the procedures specified in Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

Compliance with the ton per year emission limitations for carbon monoxide shall be determined by multiplying the hours of operation per year (8760) with the hourly mass emission rate (20.0 lbs/hr) and dividing by 2,000 pounds per ton to obtain the yearly emissions in tons/year.

- e. Emission limitation:  
Organic compound emissions shall not exceed 30.82 lbs/hr and 18.7 tons /yr.

Applicable Compliance Method:

Compliance with the 30.82 lbs/hr emission limitation shall be determined by totaling the following products obtained in accordance with the following equations and using the assumptions listed in Section C.4.:

$$E1 = I * V * C.E. * (1 - C)$$

where

E1 = OC emissions from ink usage

I = maximum ink usage per hr (275 lbs/hr)

V = maximum allowable OC content of the ink (50% by weight)

C.E. = capture efficiency of 100% (100% capture efficiency refers to the 80% of the ink OC not retained in the paper.

C = control efficiency of the thermal afterburner (95%)

$$E2 = [F * V * C.E. * (1 - C)] + F2 * F * V$$

where

E2 = OC emissions from usage of fountain solution

F = maximum fountain solution usage per hour (2 gallons/hr) based upon maximum ink usage of 275 lbs per hour

V = maximum allowable OC content of the fountain solution (2 lbs/gallon)

C.E. = capture efficiency of 70%

F2 = 30%

C = control efficiency of the thermal afterburner (95%)

$$E3 = M*V*F3$$

where

E3 = OC emissions from manual blanket wash

M = maximum blanket wash solvent usage per hour ( 5 gallons/hr)

V = maximum allowable OC content of the manual blanket wash (5.5 lbs/gallon)

F3 = 50% of the blanket wash solvent not retained in the towels

$$E4 = M*V*F3*(1-C) + M*V*F4$$

where

E4 = OC emissions from automatic blanket wash

M = maximum automatic blanket wash solvent usage per hour (3 gallons/hr)

V = maximum allowable OC content of the automatic blanket wash (5.5 lbs/gallon)

F3 = 40% of the blanket wash solvent that is captured

C = control efficiency of the thermal afterburner (95%)

F4 = 60% of the blanket wash solvent that is not captured.

Compliance with the ton per year emission limitation shall be demonstrated through the records required pursuant to Section C (i.e. the 12-month summation of the total monthly controlled organic compound emissions).

- f. Emission limitation:  
95% control efficiency of the thermal afterburner.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emissions testing for K006 to demonstrate compliance with the 95 % minimum destruction efficiency requirement in accordance with the following requirements:

- i. The emission testing shall be conducted within 90 days after initial startup of emissions unit K006.
- ii. The following test method(s) shall be employed to determine the destruction and removal efficiency of the control device controlling organic compound emissions from this emissions unit: 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25 or 25A, as appropriate
- iii. The test(s) shall be conducted while K006 is at normal operating capacity and venting emissions to the control device unless otherwise specified or approved by

the Ohio EPA, Central District Office.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

- g. Emission Limitation:  
Opacity shall not exceed 20% opacity as a six minute average.

Applicable Compliance Method:  
If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- h. Emission limitation:  
95% overall control of OC emissions

Applicable Compliance Method:  
Compliance shall be determined through the emission calculation methodology specified in C.3 above, the destruction efficiency emissions testing required by these terms and conditions and an assumed capture efficiency of 100%(for the VOC vented to the afterburner and generated by the ink, automatic blanket wash solvent, and the fountain solution).

- i. Emission limitation:

Treasure Chest Advertising Company Inc

PTI Application: 01 0000

Issued

Facility ID: 0125041807

Emissions Unit ID: K006

OC content of the ink shall not exceed 50 % by weight.

Applicable Compliance Method:

Formulation data or USEPA Method 24 shall be used to determine the organic compound content of the ink.

Compliance with the above emission limitation shall also be demonstrated through the records required pursuant to Section C.3.e.

i. Emission limitation:

OC content of the fountain solution shall not exceed 2 lbs per gallon.

Applicable Compliance Method:

Formulation data or USEPA Method 24 shall be used to determine the organic compound content of the fountain solution.

Compliance with the above emission limitation shall also be demonstrated through the records required pursuant to Section C.3.e.

j. Emission limitation:

OC content of the automatic and manual blanket wash solvent shall not exceed 5.5 lbs per gallon.

Applicable Compliance Method:

Formulation data or USEPA Method 24 shall be used to determine the organic compound content of the automatic and manual blanket wash solvents.

Compliance with the above emission limitation shall be demonstrated through the records required pursuant to Section C.3.e.

## F. Miscellaneous Requirements

1. The potential to emit from the source identified in this permit to install (PTI) subject this facility to the Title V requirements. Through either production or throughput limitations or the use of controls, the actual permit allowable emission limitation(s) are below the Title V thresholds. This PTI has been issued as a direct final action. In order for these emission limitations to be federally enforceable, the state Permit to Operate must be issued as a draft action. Until the State Permit to Operate is issued as a final action, the facility may be considered a Title V facility.

**NEW SOURCE REVIEW FORM B**

PTI Number: 01-08092 Facility ID: 0125041807

FACILITY NAME Treasure Chest Advertising Company, Inc.

FACILITY DESCRIPTION Producer of advertising inserts and other similar products CITY/TWP Columbus

SIC CODE 2752 SCC CODE 40500412 EMISSIONS UNIT ID K006

EMISSIONS UNIT DESCRIPTION Heatset web offset printing press with an integrated dryer/thermal afterburner.

DATE INSTALLED modification date 02/2000

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter				0.052	0.17
PM <sub>10</sub>					
Sulfur Dioxide				0.002	0.008
Organic Compounds				30.82	18.7
Nitrogen Oxides				2.08	9.1
Carbon Monoxide				20.0	87.6
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? \_\_\_\_\_ NESHAP? \_\_\_\_\_ PSD? \_\_\_\_\_ OFFSET POLICY? \_\_\_\_\_

**WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**  
 Compliance with permitted limits and applicable rules and regulations. BAT is control of OC emissions from K006 through the use of a thermal afterburner with a minimum control efficiency of 95%.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

**TOXIC AIR CONTAMINANTS**

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED\*? X YES        NO

IDENTIFY THE AIR CONTAMINANTS: Naphthalene and Glycol ether

**NEW SOURCE REVIEW FORM B**

PTI Number: 01-08092

Facility ID: 0125041807

FACILITY NAME Treasure Chest Advertising Company, Inc.

FACILITY DESCRIPTION	Producer of advertising inserts and other similar products	CITY/TWP	Columbus
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**Please describe any hard copy information is being submitted with this recommendation (Please send hard copy information to Pam McGraner, DAPC Central Office - Air Quality Modeling and Planning):**

**The following hard copy items are being submitted:**

11. New Source Review write-up
12. Emission Calculations
13. Air Toxics information including modeling
14. Engineering guide 56

**Please provide any additional permit specific notes as you deem necessary:**

None.

**Please fill in the following for this permit:**

**TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
Organic compounds	18.7
Carbon monoxide	
Nitrogen oxides	87.6
Sulfur dioxide	9.1
Particulate emissions	0.008
	0.17