

STATE OF MISSOURI

PERMIT BOOK



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 102011-008

Project Number: 2011-06-002  
Installation Number: 229-0001

Parent Company: Hutchens Industries, Inc.

Parent Company Address: P.O. Box 1427, Springfield, MO 65801

Installation Name: Hutchens Industries, Inc.

Installation Address: 398 East Commercial, Mansfield, MO 65704

Location Information: Wright County, S22, T28N, R15W

Application for Authority to Construct was made for:

The installation and operation of a controlled pyrolysis cleaning furnace. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

OCT 17 2011

EFFECTIVE DATE

A handwritten signature in cursive script that reads "Lynn L Moore".

DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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**SPECIAL CONDITIONS:**

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."*

Hutchens Industries, Inc.  
Wright County, S22, T28N, R15W

1. Operational Requirements for the Pyrolysis Cleaning Oven (EP-36)
  - A. Hutchens Industries, Inc. shall use this pyrolysis cleaning oven (EP-36) exclusively to remove non-chlorinated/non-hazardous coatings from metal parts.
  - B. Natural gas shall be the only fuel burned in this oven.
  - C. Hutchens Industries, Inc. shall use a direct flame afterburner to control emissions from the cleaning oven. The afterburner shall be operated at a temperature of at least 1,400 degrees Fahrenheit with more than a one-half (1/2) second residence time to ensure a minimum combustion efficiency of 99.9%.
  - D. The oven shall be equipped with an electric controller, with digital readout, which is able to monitor and display the temperature in the second combustion chamber to an accuracy of plus or minus two percent (2%).
  - E. The cleaning oven shall have opacity of less than ten percent (10%) at all times. Opacity shall be determined by Method 9 compliance testing.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2011-06-002  
Installation ID Number: 229-0001  
Permit Number:

Hutchens Industries, Inc.  
398 East Commercial  
Mansfield, MO 65704

Complete: June 7, 2011

Parent Company:  
Hutchens Industries, Inc.  
P.O. Box 1427  
Springfield, MO 65801

Wright County, S22, T28N, R15W

REVIEW SUMMARY

- Hutchens Industries, Inc. has applied for authority to construct a controlled 300,000 British thermal unit/hour (BTU/hr) natural gas pyrolysis cleaning (burn-off) furnace for removing cured primers from metal hooks used in dip painting operations.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment in insignificant amounts due to the combustion of natural gas.
- None of the New Source Performance Standards (NSPS) apply to the installation. Subpart E, *Standards of Performance for Incinerators*, does not apply to this unit because this unit has a charging rate of less than 50 tons per day. Subpart CCCC, *Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced After June 1, 2001*, does not apply to this unit because this unit is defined as a part reclamation unit per 40 CFR Part 60 Section 60.2265 and is therefore exempted from Subpart CCCC per 40 CFR Part 60 Section 60.2020(k).
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- A direct flame afterburner is being used to control the PM<sub>10</sub>, VOC and HAP emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The burn-off oven in this permit is classified as an incinerator. All incinerators are required to obtain a permit from the Air Pollution Control Program as mandated in 10 CSR 10-6.060. Potential emissions of all criteria air pollutants are less than de minimis levels.

- This installation is located in Wright County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing are not required for the equipment.
- Hutchens Industries, Inc. must submit, within one (1) year after this permit is issued, a request to modify its Part 70 Operating Permit Renewal Application that is currently being processed by the Air Pollution Control Program.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Hutchens Industries, Inc. fabricates truck trailer suspensions in Mansfield, Missouri (Wright County). The installation also consists of welding and surface coating of metal parts. This installation has been in operation since approximately 1971 and currently operates under Operating Permit 2007-004A (Project Number 2008-12-043). This installation is a major source for Volatile Organic Compounds (VOCs) and utilizes the emission points as listed in Table 1.

Table 1: Summary of Emission Points

Emission Point (EP) Number	Emission Unit (EU) Number	Description
EP 13A	EU 0090	Spray Booth # 1
EP 13B	EU 0100	Spray Booth # 2
EP 13C	EU 0110	Spray Booth # 3
EP 27	EU 0120	Spray Booth # 4
EP 28	EU 0130	Dip Paint Operation # 1
EP 31	EU 0140	Dip Paint Operation # 2
EP 30	EU 0150	Curing Oven
EP 19	EU 0160	Pyrolysis Furnace # 1
EP 26	EU 0170	Plasma Torch
EP 12A	EU 0180	Robotic Welding Booth 12A
EP 12B	EU 0190	Robotic Welding Booth 12B
EP 12C	EU 0200	Robotic Welding Booth 12C
EP 12D	EU 0210	Robotic Welding Booth 12D
EP 17	N/D	Space Heaters
EP 29A	N/D	Alkaline Wash
EP 29 B	N/D	Phosphate Wash
EP 32	N/D	Combined Welding
EP 33	N/D	Dip Tank
EP 34A	N/D	Alkaline Wash # 2
EP 34B	N/D	Phosphate Wash # 2
EP 35	N/D	Curing Oven # 2

N/D = Not Determined

The following permits have been issued to Hutchens Industries, Inc. from the Air Pollution Control Program.

Table 2: Permit History

Permit Number	Description
0691-015	Construction of two (2) pyrolysis cleaning furnaces and four (4) paint booths
0596-008	Conversion from solvent based primer to water reducible primer, construction of liquefied petroleum gas (LPG) burner, construction of paint booth
0996-006	Construction of sawdust storage system, a propane lumber drying kiln, and a robotic welding line
1197-002	Installation of dry plasma metal cutting torch
0298-006	Installation of spray paint booth
062003-007	Installation of a primer dip tank
122003-005	Installation of a welding assembly area
062007-013	Increase production dip tank to two gallons per hour and by increasing length and speed of conveyor line which feeds the tank
082009-009	Installation of equipment for the dip painting operation

## PROJECT DESCRIPTION

Hutchens Industries, Inc. proposes to install a controlled pyrolysis cleaning furnace (burn-off oven) that will be used to remove cured coatings from metal hooks. Emissions will be controlled using a direct flame afterburner. The oven is designed to incinerate a maximum of 10 pounds of waste per hour. This is known as the oven's maximum hourly design rate (MHDR). The natural gas fired burner is rated at 300,000 British thermal units per hour (BTU/hour). The metal hooks are loaded into the furnace and heated to at least 800 degrees Fahrenheit by the primary burner, which results in the cured coatings decomposing into smoke. The smoke then enters the secondary chamber (afterburner) of the furnace and is heated to least 1,400 degrees Fahrenheit.

Most pollutants in the smoke are destroyed and the emissions that are released from the afterburner are negligible. Emissions from the controlled pyrolysis cleaning furnace are primarily due to the combustion of natural gas and metal HAPs that did not decompose from the cured coatings. Hutchens Industries, Inc. uses two primers, which includes a black water reducible force dry primer (product code N-6888) that is made up of a cobalt compound. Based on the cleaning furnace's MHDR and this coating's Material Safety Data Sheet (MSDS), the potential cobalt emissions from the cleaning furnace is approximately 0.066 tons per year. The Screening Modeling Action Level (SMAL) of cobalt is 0.10 tons per year. Because the potential emissions of cobalt are less than its SMAL, refined or increment modeling is not required for this project.

Since the coatings from metal hooks are burned off, this oven is classified as an incinerator. Therefore, a construction permit is required for this oven according to 10 CSR 10-6.060(1)(B).

## EMISSIONS/CONTROLS EVALUATION

The emission factors used to calculate the emissions from the burning of natural gas in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.4, *Natural*

*Gas Combustion* (July 2008). A mass balance approach was used to calculate the potential cobalt emissions of the project. Existing potential emissions represent an installation-wide potential to emit, which is based on a calculation that Hutchens Industries, Inc. submitted to the Air Pollution Control Program on November 18, 2009 per Special Condition 3 of Permit # 082009-009. The existing actual emissions were taken from the previous year's EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>2.5</sub>	10.0	1.66	0.03	0.01	1.67
PM <sub>10</sub>	15.0	72.30	0.62	0.01	72.31
SO <sub>x</sub>	40.0	0.12	0.01	0.001	0.12
NO <sub>x</sub>	40.0	19.61	0.95	0.13	19.74
VOC	40.0	531.78	12.96	0.01	531.79
CO	100.0	5.62	0.30	0.11	5.73
Total HAPs	10.0/25.0	186.24	N/D	0.002	186.24
Cobalt	0.1	3.04	N/D	0.07	3.11

N/D = Not Determined

## PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.

## APPLICABLE REQUIREMENTS

Hutchens Industries, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

## GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110

The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.

- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170

#### STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

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Daronn A. Williams  
Environmental Engineer

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Date

#### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 17, 2011, received May 31, 2011, designating Hutchens Industries, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Material Safety Data Sheets (MSDS)

Mr. Kevin Dobson  
HR Manager  
Hutchens Industries, Inc.  
P.O. Box 137  
Mansfield, MO 65704

RE: New Source Review Permit - Project Number: 2011-06-002

Dear Mr. Dobson:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Daronn A. Williams, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief

KBH:dwl

Enclosures

c: Southwest Regional Office  
PAMS File: 2011-06-002

Permit Number: