



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: **07 2007 - 007** Project Number: 2007-05-006

Parent Company: FUJIFILM Sericol U.S.A., Inc.

Parent Company Address: 1101 West Cambridge Drive, Kansas City, KS 66103

Installation Name: FUJIFILM Sericol U.S.A., Inc.

Installation Address: 20 West 14th Avenue, North Kansas City, MO 64116

Location Information: Clay County, S23, T50, R33

Application for Authority to Construct was made for:
Addition of five (5) Schold 10 hp rotor stator dispersers for the manufacturing of ink. 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.

JUL 23 2007

EFFECTIVE DATE



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 department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located with 15 days after the actual start up of this (these) air contaminant source(s).

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 source(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.

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

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Permit No.	
Project No.	2007-05-006

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."

FUJIFILM Sericol U.S.A., Inc.
Clay County, S23, T50, R33

1. Emission Limitation
 - A. FUJIFILM Sericol U.S.A., Inc. shall emit less than five (5) tons glycol ethers, Hazardous Air Pollutants (HAPs), from the entire installation in any consecutive 12-month period.
 - B. Attachment A or equivalent form approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1(A). FUJIFILM Sericol U.S.A., Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Material Safety Data Sheets (MSDS) for all materials used in this installation.
 - C. FUJIFILM Sericol U.S.A., Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 1(B) indicate that the source exceeds the limitation of Special Condition Number 1(A).
2. Control Device
 - A. FUJIFILM Sericol U.S.A., Inc. shall control emissions from the weighing and mixing processes using a baghouse (CD4) as specified in the permit application. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the DNR employees may easily observe them. Replacement filters for the baghouse shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

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Permit No.	
Project No.	2007-05-006

SPECIAL CONDITIONS:

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

- B. FUJIFILM Sericol U.S.A., Inc. shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
 - C. FUJIFILM Sericol U.S.A., Inc. shall maintain an operating and maintenance log for the baghouse which shall include the following:
 - i) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - ii) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
3. **Operational Requirements**
FUJIFILM Sericol U.S.A., Inc. shall keep the solvents and cleaning solutions in sealed containers whenever the materials are not in use. FUJIFILM Sericol U.S.A., Inc. shall provide and maintain suitable, easily read, permanent markings on all solvents and cleaning solutions containers used with this equipment.

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

Project Number: 2007-05-006
Installation ID Number: 047-0141
Permit Number:

FUJIFILM Sericol U.S.A., Inc.
20 West 14th Avenue
North Kansas City, Missouri 64116

Complete: April 27, 2007

Parent Company:
FUJIFILM Sericol U.S.A., Inc.
1101 West Cambridge Drive
Kansas City, KS 66103

Clay County, S23, T50, R33

REVIEW SUMMARY

- FUJIFILM Sericol U.S.A., Inc. has applied for authority to add five (5) Schold 10 hp rotor stator dispersers for the manufacturing of ink.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAP of concern from this process is ethylene glycol monobutyl ether acetate (CAS# 112-07-2).
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- 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 baghouse is being used to control the particulate matter 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*. Potential emissions of glycol ethers are requested to be limited to below Section 112(g) threshold level for the entire installation. Due to the limitation on glycol ethers, the potential emissions of Volatile Organic Compounds (VOC) are at de minimis level.
- This installation is located in Clay County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment/source.
- A Part 70 Operating Permit is required for this installation within 1 year of equipment startup. FUJIFILM Sericol U.S.A., Inc. can submit an Intermediate Operating Permit application if they wish to take a voluntary VOC emission limitation of 100 tons per year.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Fujifilm Sericol, Incorporated operates a printing ink manufacturing plant at North Kansas City, Missouri. This installation received a Basic Operating Permit (Permit Number OP1999-021) on February 5, 1999 from the Air Pollution Control Program and an Amendment to that Permit on August 11, 2005. The following construction permits have been issued to this installation from the Air Pollution Control Program.

Table 1: Previously Issued Permits

Permit Number	Description
1097-001	Construction of an ink manufacturing plant (EP01), a solvent washing distillation main unit (EP02) with a back-up unit, and four (4) new 1500-gallons capacity fixed roof storage tanks (EP20-23).
082003-007	Installation of a Buhler K120 Horizontal Bead Mill.
092005-008	Installation of a heat-cleaning oven.

PROJECT DESCRIPTION

Fujifilm Sericol proposed to add five (5) Schold 10 hp rotor stator dispersers to their ink manufacturing facility for the purpose of manufacturing new printing ink product lines. In addition to the dispersers, a baghouse, CD4, along with stack, S33, will be added. Stack, S34, will also be added for their fume extraction system.

This is a batch manufacturing process with batch sizes averaging 30-70 gallons using stainless steel, water cooled mixing vessels. Based on the projected maximum annual production and hours of operation, the maximum design rate is estimated to be 28.2 gallons per hour. The primary ink ingredients are approximately 75% ethylene glycol monobutyl ether acetate and 15% cyclohexanone. The balance ingredients are a pigment dispersion and resin. Ethylene glycol monobutyl ether acetate is a glycol ether HAP. Glycol Ethers have a Section 112(g) threshold level of 5 tons per year. Fujifilm Sericol has proposed in their application to keep recordingkeeping of their material usage to ensure the facility-wide annual emissions do not exceed 5 tons of glycol ethers.

EMISSIONS/CONTROLS EVALUATION

The emission factors for VOC and glycol ethers emissions used in this analysis are obtained from the *National Association of Printing Ink Manufacturers Guide to Estimating VOC Emissions From Printing Ink Manufacturing* prepared by Dixon Environmental Associates, Inc. and the Material Safety Data Sheets (MSDS) submitted with the permit application. The existing potential emissions were evaluated from the previous Permit No. 092005-008. The existing actual emissions were estimated from the 2006, Emission Inventory Questionnaire (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 1: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2006 EIQ)	Potential Emissions of the Application	Installation Conditioned Potential
PM ₁₀	15.0	N/D	N/A	N/A	N/A
SO _x	40.0	N/D	0.0015	N/A	N/A
NO _x	40.0	N/D	0.254	N/A	N/A
VOC	40.0	<100	43.32	59.3***	N/A
CO	100.0	N/D	0.053	N/A	N/A
HAPs	10.0/25.0	10.29	N/D	44.5***	N/A
Glycol ethers**	10.0	N/D	N/D	44.5	< 5.0

*N/A = Not Applicable; N/D = Not Determined

**Glycol Ethers have a Section 112(g) threshold level of 5 tons per year.

***Due to the emissions limitation on glycol ethers, potential emissions of VOC and combined HAPs will be at de minimis level.

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 glycol ethers are requested to be limited to below Section 112(g) threshold level for the entire installation. Due to the limitation on glycol ethers, the potential emissions of VOC are at de minimis level.

APPLICABLE REQUIREMENTS

FUJIFILM Sericol U.S.A., 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 April 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 10-3.090*

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.

Fuad Wadud
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated April 18, 2007, received April 27, 2007, designating FUJIFILM Sericol U.S.A., Inc. as the owner and operator of the installation.
- *National Association of Printing Ink Manufacturers Guide to Estimating VOC Emissions From Printing Ink Manufacturing* prepared by Dixon Environmental Associates, Inc.
- Kansas City Regional Office Site Survey, dated May 15, 2007.

Mr. Craig Poggenpohl
Regulatory Compliance Manager
FUJIFILM Sericol U.S.A., Inc.
20 West 14th Avenue
North Kansas City, MO 64116

RE: New Source Review Permit - Project Number: 2007-05-006

Dear Mr. Poggenpohl:

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 me at (573) 751-4817, or you may write to me at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH: fwl

Enclosures

c: Kansas City Regional Office
PAMS File 2007-05-006

Permit Number: