

AIR EMISSION PERMIT NO. 07700010- 001

IS ISSUED TO

Solvay America Inc.

SOLVAY PHARMACEUTICALS

210 Main Street West

Baudette, Lake of the Woods County, MN 56623

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date
Total Facility Operating Permit	04/17/1995; 1/5/01; 10/23/01

This permit authorizes the Permittee to operate and modify the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: State; Syn Min Part 70

Issue Date: September 3, 2002

Expiration: Non-expiring
All Title I Conditions do not expire.

Ann M. Foss
Major Facilities Section Manager
Majors and Remediation Division

for Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition.

Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

Solvay Pharmaceuticals is primarily engaged in the production of pharmaceutical products. Associated with this pharmaceutical production is a tablet coating activity. Methylene chloride and methanol are Hazardous Air Pollutants (HAPs) that are emitted from this tablet finishing activity (which includes equipment cleanup). Emissions of these HAPs as the facility currently exists are above the thresholds for a Part 70 source.

The Permittee will be installing a Regenerative Thermal Oxidizer (RTO) system, consisting of a RTO and a scrubber, for control of HAPs from the tablet coating system (EU 011 Accela-coater and EU 012 Coating Prep Room). The RTO will provide control for methylene chloride and methanol; the scrubber will be used to remove hydrochloric acid that is produced as a result of oxidation of the chlorinated compounds. The RTO system will provide control such that the facility's HAPs emissions will be less than the Part 70 thresholds. The facility will not be a major facility for Part 70 or for MACT, and will not be subject to the promulgated MACT standard for the pharmaceutical industry.

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/03/02

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010 - 001

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item:	Total Facility
What to do	Why to do it
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/03/02

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010 - 001

Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/03/02

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010 - 001

Subject Item: SV 009 RTO System

Associated Items: EU 011 Accela-coater

EU 012 Coating Prep Room

What to do	Why to do it
POLLUTANT AND OPERATING CONDITION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Methanol: greater than or equal to 95 percent control efficiency . The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for VOC and HAPs of 95%.	Limit taken to avoid classification as a major source under 40 CFR Section 63; Minn. R. 7007.0800, subp. 2 and 14
Methylene chloride (dichloromet: greater than or equal to 95 percent control efficiency . The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for VOC and HAPs of 95%.	Limit taken to avoid classification as a major source under 40 CFR Section 63; Minn. R. 7007.0800, subp. 2 and 14
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
The Permittee shall operate and maintain the RTO System (regenerative thermal oxidizer and scrubber) any time that any process equipment controlled by the RTO System is in operation.	Limit taken to avoid classification as a major source under 40 CFR Section 63; Minn. R. 7007.0800, subp. 2 and 14
Temperature: greater than or equal to 1400 degrees F absolute minimum at the Combustion Chamber unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the average temperature recorded during the most recent MPCA approved performance test where compliance for HAP emissions was demonstrated. If the temperature drops below the minimum temperature limit, this shall be reported as a deviation.	Limit taken to avoid classification as a major source under 40 CFR Section 63; Minn. R. 7007.0800, subp. 2 and 14
Scrubber Recirculation pH: the pH shall be maintained within the range of greater than or equal to 7.5 and less than or equal to 9.5, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the average pH recorded during the most recent MPCA approved performance test where compliance for HAP emissions was demonstrated. If the pH goes outside the range, this shall be reported as a deviation.	Minn. R. 7007.0800, subp. 4 and 5
The Permittee shall maintain a continuous hard copy readout or computer disk file of the temperature readings for the combustion chamber. The Permittee shall record the pH of the scrubber recirculation at least one time per operating shift.	Limit taken to avoid classification as a major source under 40 CFR Section 63; Minn. R. 7007.0800, subp. 2 and 14
Daily Monitoring: The Permittee shall physically check the temperature and recirculation pH recording devices at least once each operating day to verify that they are working and recording properly.	Minn. R. 7007.0800, subp. 4 and 5
Monitoring Equipment: The Permittee shall install and maintain thermocouples to conduct temperature monitoring required by this permit. The monitoring equipment must be installed, in use, and properly maintained whenever operation of the monitored control equipment is required.	Minn. R. 7007.0800, subp. 4
The Permittee shall maintain and operate a thermocouple monitoring device that continuously indicates and records the combustion chamber temperature of the thermal oxidizer. The monitoring device shall have a margin of error less than the greater of +/- 1.5 percent of the temperature being measured or +/- 21 degrees Celsius.	Minn. R. 7007.0800, subp. 4 and 5
Quarterly Inspections: At least once per calendar quarter, the Permittee shall inspect the control equipment internal and external system components, including but not limited to the refractory, heat exchanger, and electrical systems. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	Minn. R. 7007.0800, subp. 4, 5, and 14
Annual Calibration: The Permittee shall calibrate the temperature and scrubber flow rate monitors at least annually and shall maintain a written record of the calibration and any action resulting from the calibration.	Minn. R. 7007.0800, subp. 4, 5, and 14
Corrective Actions: If the temperature is below the minimum specified by this permit or if the thermal oxidizer or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the temperature to at least the permitted minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the thermal oxidizer. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14
The Permittee shall operate and maintain the RTO System in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
PERFORMANCE TESTING REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/03/02

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010 - 001

Performance Test: due 180 days after Permit Issuance to measure methanol and methylene chloride emissions.	Minn. R. 7017.2020, subp. 1
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TABLE A: LIMITS AND OTHER REQUIREMENTS

09/03/02

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010 - 001

Subject Item: EU 007 Boiler 7 Kewanee

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input (PTE is 0.007 lb/million Btu per design, using AP-42 emission factors)	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
Fuel Type: Natural gas only, by design	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/03/02

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010 - 001

Subject Item: EU 009 Generator

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input (PTE is 0.29 lbs/million Btu per equipment design, using AP-42 emission factors).	Minn. R. 7011.2300, subp. 2
Fuel Type: No. 2 distillate fuel only, by design.	Minn. R. 7007.0800, subp. 2
Recordkeeping - Hours of Operation: The Permittee shall record the number of hours the unit was operated at the end of each period of operation. The documentation shall be maintained on-site to show that the unit is an emergency generator by design that qualifies under the U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators" dated September 6, 1995, limiting operation to 500 hours per year.	Minn. R. 7007.0800, subps. 4 and 5
Recordkeeping - Fuel Type: The Permittee shall keep records of the type of fuel burned in EU 009 when in operation.	Minn. R. 7007.0800, subps. 4 and 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/03/02

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010 - 001

Subject Item: EU 034 Burnham Boiler 2

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input (PTE is 0.007 lb/million Btu per design, using AP-42 emission factors)	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
Fuel Type: Natural gas only, by design	Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

09/03/02

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010 - 001

Subject Item: EU 035 Burnham Boiler 3

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input (PTE is 0.007 lb/million Btu per design, using AP-42 emission factors)	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
Fuel Type: Natural gas only, by design	Minn. R. 7007.0800, subp. 2

TABLE B: SUBMITTALS

09/03/02

Facility Name: Solvay Pharmaceuticals
Permit Number: 07700010 - 001

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

Permit Technical Advisor
Permit Section
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

Supervisor
Compliance Determination Unit
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

TABLE B: RECURRENT SUBMITTALS

09/03/02

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010 - 001

What to send	When to send	Portion of Facility Affected
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX B

Insignificant Activities and Applicable Requirements

Facility Name: Solvay Pharmaceuticals

Permit Number: 07700010-001

Under Minn. R. 7007.1250, subp. 1(A), the Permittee may add insignificant activities to the stationary source throughout the term of the permit without getting permit amendments. Certain exclusions apply and are listed in Minn. R. 7007.1250, subp. 2.

The following sources at the Permittee's facility qualify as insignificant activities under Minn. R. 7007.1300, subs. 2, 3 and 4 and are not required to be listed in the permit.

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
3(D)(2)	Processing Operations (PM/PM10 emissions are filtered through an air cleaning system and vented inside of the building 100% of the time) <ul style="list-style-type: none"><i>Torit-Donaldson Model 84 dust collector unit, located in Room No. 1608, which services activities in Technical Service's Rooms No. 1416 and 1418;</i><i>Torit-Donaldson Model 66 portable dust collector unit, located in Room No. 1212, which services activities in the liquid processing area (Room Nos. 1212, 1214, 1216)</i>	Minn. R. 7011.0715
3(G)	Emissions from a laboratory. <ul style="list-style-type: none"><i>Various laboratories, currently No. 1400 and No. 1500 areas, which provide quality control testing support to the facility production.</i>	Minn. R. 7011.0715
3(H)(1)	Miscellaneous (uses less than 200 gallons of VOC for any consecutive 12-month period) <ul style="list-style-type: none"><i>Cleaning of production process equipment and operation with an alcohol-based solvent</i>	Minn. R. 7011.0715
3(H)(4)	Miscellaneous (brazing, soldering, or welding equipment) <ul style="list-style-type: none"><i>Facility maintenance welding operations</i>	Minn. R. 7011.0715
3(H)(8)	Miscellaneous (cleaning operations) <ul style="list-style-type: none"><i>Various production process equipment cleaned with alkaline-based cleaning solutions</i>	Minn. R. 7011.0715
3(I)(2)	Individual emission units at a stationary source which each have a potential to emit of each of the following pollutants less than: 2, 000 pounds per year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, VOCs, and ozone. <i>Solvay has several of these individual emissions units; many of</i>	Minn. R. 7011.0715

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
	<p><i>these are controlled by a dust collector. These include:</i></p> <ul style="list-style-type: none"> • <i>Cooling tower</i> • <i>Vector coater</i> • <i>Inspection room</i> • <i>Tablet polishing</i> • <i>Imprinting rooms 1 and 2</i> • <i>Mixing rooms 1 and 2</i> • <i>Gemco</i> • <i>Tech services mixing room</i> • <i>Tech services prep area</i> • <i>QA sample room</i> • <i>Packaging Lines 1,2, 3 and 4</i> • <i>Gruenberg ovens (nos. 8 and 11)</i> • <i>Dristeam Humidifiers 1 and 2</i> • <i>Imprinters (Ackley – room 1846, Markem 156A – room 1844, Markem 156MK2 – room 1844)</i> • <i>Equipment parts washer, located in Room No. 1802 – 30 gallon capacity (Davco petroleum naptha solvent)</i> • <i>Various small tanks containing aqueous-based chemical treatment solutions for process water supply purification and cooling tower water supply conditioning</i> 	
3(K)	<p>Plant upkeep</p> <ul style="list-style-type: none"> • <i>Infrequent use of spray paint equipment</i> 	Minn. R. 7011.0715

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 07700010-001

This Technical Support Document is for all the interested parties of the permit. The purpose of this document is to set forth the legal and factual basis for the permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 2834)
Solvay Pharmaceuticals, Inc. 901 Sawyer Road Marietta, Georgia 30062 (770) 578-9000	210 Main Street West P.O. Box 370 Baudette, MN 56623 Lake of the Woods County (218) 634-3605

1.2. Description of the facility

Solvay Pharmaceuticals is primarily engaged in the production of pharmaceutical products. Associated with this pharmaceutical production is a tablet coating activity. Methylene chloride and methanol are Hazardous Air Pollutants (HAPs) that are emitted from this tablet finishing activity (which includes equipment cleanup). Emissions of these HAPs as the facility currently exists are above the thresholds for a Part 70 source.

Part 70, which was promulgated after the Clean Air Act Amendments (CAAA) of 1990, requires facilities with a potential to emit greater than or equal to 10 tons per year of any HAP or 25 tons per year of combined HAPs to get a Part 70 permit; therefore, this facility would require a Part 70 permit. U.S. Environmental Protection Agency (EPA) is promulgating emissions standards (Part 63 National Emissions Standard for Hazardous Air Pollutants (NESHAPs)) for sources that are major for HAPs.

1.3 Description of any changes allowed with this permit issuance

The Permittee will be installing a Regenerative Thermal Oxidizer (RTO) system, as applied for in a submittal dated October 23, 2001. The RTO system consists of a RTO and a scrubber, for control of HAPs from the tablet coating system (EU 011 Accela-coater and EU 012 Coating Prep Room). The RTO will provide control for methylene chloride and methanol; the scrubber will be used to remove hydrochloric acid that is produced as a result of oxidation of the methylene chloride. The RTO system will provide control such that the facility's HAPs emissions will be less than the Part 70 thresholds. The facility will not be a major facility for Part 70 or for Maximum Achievable Control Technology (MACT), and will not be subject to the promulgated MACT standard for the pharmaceutical industry.

1.4. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

EU/ SV No.	Emission Unit Description	PM tpy	PM₁₀ tpy	SO₂ tpy	NO_x tpy	CO tpy	VOC tpy	Meth Chl* tpy	MeOH* tpy	All HAPs tpy
EU 007	Boiler 7 Kewanee	0.15	0.15	0.013	2.0	1.6	0.11			
EU 009	Emergency Generator	0.21	0.21	0.19	2.9	0.63	0.24			
EU 034	Burnham Boiler 2	0.15	0.15	0.013	2.0	1.6	0.11			
EU 035	Burnham Boiler 3	0.15	0.15	0.013	2.0	1.6	0.11			
SV 009	RTO System	0.048	0.048	0.0003	1.0	0.49	1.1	2.2	1.1	3.3
	Totals	0.71	0.71	0.23	9.9	5.9	1.7	2.2	1.1	3.3

	PM tpy	PM₁₀ tpy	SO₂ tpy	NO_x tpy	CO tpy	VOC tpy	Meth Chl* tpy	MeOH* tpy	All HAPs tpy
Total Facility Limited Potential Emissions	0.71	0.71	0.23	9.9	5.9	1.7	2.2	1.1	3.3
Total Facility Actual Emissions	0.06	0.06	0.01	1.1	0.87	6.2	11	5.7	17

* Meth Chl = Methylene Chloride (methylene chloride is not a VOC)

* MeOH = Methanol

* Actual emissions are as reported in 2000 Air Emissions Inventory

Table 2. Facility (TF) and Permit Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)			PM, PM ₁₀ , NO _x , SO ₂ , VOC, CO
NAAR (list pollutant)	N/A	N/A	N/A
Part 70 Permit Program (list pollutant)		HAPs	PM, PM ₁₀ , NO _x , SO ₂ , VOC, CO

* Refers to potential emissions that are less than those specified as major by 40 CFR § 52.21, 40 CFR pt. 51 Appendix S, and 40 CFR pt. 70.

2. Regulatory and/or Statutory Basis

Solvay is installing an RTO system to control HAP emissions. The HAP emissions will be low enough to avoid major source classification under the federal operation permit program (40 CFR pt. 70) and the National Emission Standards for Hazardous Air Pollutants (NESHAPs, 40 CFR pt. 63). Therefore, Solvay will not be subject to the NESHAP for Pharmaceuticals Production (40 CFR pt. 63, subp. GGG) as long as the company remains a non-major source.

Table 3. Regulatory Overview of Facility

EU, or SV #	Applicable Regulations	Comments:
Total Facility	Minn. R. chs. 7002, 7007, 7009, 7011, 7019, 7030	Table A contains requirements that apply to all facilities in Minnesota. Reporting and monitoring requirements are contained in Table B of the permit.
SV 009	Synthetic minor limit for NESHAP	Installation of RTO and scrubber to reduce HAPs to avoid major source classification under NESHAP, Part 70. Requirement for control efficiency for methanol and methylene chloride.
EU 007, EU 034, EU 035 (boilers)	Minn. R. 7011.0515	Standards of Performance for New Indirect Heating Equipment
EU 009 (generator)	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines

3. Technical Information

3.1. Potential to Emit Calculations

Attachment 1 to this TSD contains Form GI-07, which summarizes the Potential to Emit (PTE) of the facility, as well as more detailed calculations prepared by the Minnesota Pollution Control Agency (MPCA) based on information supplied by the Permittee.

3.2. Periodic Monitoring

In evaluating the monitoring included in the permit, the MPCA considered the following per EPA guidance documents:

- the likelihood of violating the applicable requirement;
- whether add-on controls are necessary to meet the emission limit;
- the variability of emissions over time;
- the type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- the technical and economic feasibility of possible periodic monitoring methods; and
- the kind of monitoring found on similar units.

Table 4 summarizes the periodic monitoring requirements for which the monitoring required by the applicable requirement is nonexistent or inadequate.

Table 4. Periodic Monitoring Evaluation

EU/ GP/ CE	Emission limit (Basis)	Additional Monitoring	Discussion
SV 009 (RTO System)	PM: variable depending on airflow or process weight rate Opacity: $\leq 20\%$ (Minn. R. 7011.0715) 95% Control Efficiency for Methanol, Methylene Chloride (To avoid major source classification for Part 70, and for 40 CFR pt. 63, subp. GGG)	Monitoring of temperature for RTO; monitoring of liquid and make-up flow rates for scrubber	PM, Opacity: Based on general knowledge of how this process operates, it is not reasonably expected to generate particulate matter or visible emissions. It is highly unlikely that it could violate the applicable requirement. Control Efficiency: Control equipment monitoring to ensure proper operation of control equipment to maintain control efficiency as measured during performance test.
EU 007, EU 034, EU 035 (Boilers)	PM: 0.4 lb/mmBtu Opacity: $\leq 20\%$ (Minn. R. 7011.0515)	None	For these units, based on the fuels used and on EPA published emission factors, it is highly unlikely that they could violate the applicable requirement.
EU 009 Emergency Generator	Opacity: $\leq 20\%$ SO ₂ : 0.5 lb/mmBtu (Minn. R. 7011.2300)	Record number of hours of operation	For this unit, based on the fuel used and on EPA published emission factors, it is highly unlikely that it could violate the applicable requirement. Hours of operation are recorded to verify use as emergency generator.
Various Insignificant Activities (listed in appendix of permit)	PM, variable depending on airflow or process weight rate Opacity $\leq 20\%$ (Minn. R. 7011.0715)	None	Based on general knowledge of how these units operate, they are not reasonably expected to generate particulate matter or visible emissions. It is highly unlikely that they could violate the applicable requirement. In addition, dust collectors are used in many instances, which make it even more unlikely that PM or opacity requirements would not be met.

3.3 Public Notice and Comment Period

No comments were received during the public notice period of the permit. No changes were made to the permit since the permit was public noticed.

4. Conclusion

Based on the information provided by Solvay, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 07700010-001, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Paula Connell, Cary Hernandez
Peer Review: Amrill Okonkwo

Attachment: Emission Calculations; CD-01 Forms