

217/782-2113

CONSTRUCTION PERMIT - REVISED

PERMITTEE

Cerro Flow Products LLC
Attn.: Joseph Grana, Manufacturing Support Manager
Post Office Box 66800
St. Louis, Missouri 63166

<u>Application No.:</u> 08080010	<u>I.D. No.:</u> 163121AAM
<u>Applicant's Designation:</u>	<u>Date Received:</u> May 17, 2010
<u>Construction of:</u> Tube Cleaning System	
<u>Date Issued:</u> January 14, 2011	
<u>Source Location:</u> 3000 Mississippi Ave., Sauget	

This Permit is hereby granted to the above-designated Permittee to CONSTRUCT emissions source(s) and/or air pollution control equipment consisting of a tube cleaning system and associated equipment, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1.1 Description

The Permittee manufactures copper tubing. This permit addresses construction of a new system to clean or degrease copper tubing prior to shipping. The new system will perform both liquid and vapor degreasing, in sequence, on loads of tubing while they are contained within a sealed processing vessel that operates at less than atmospheric pressure. This design minimizes emissions of the organic solvent used in the degreasing process.

The new tube cleaning system is designed to use n-propyl bromide as the degreasing solvent. N-propyl bromide (NPB) is a volatile organic material (VOM) with a moderate vapor pressure (0.14 atmosphere at 20 C). The new system would replace an existing dip tank cleaning system that uses trichloroethylene, which is a hazardous air pollutant (HAP), as its degreasing solvent.

This revised permit sets higher limits for the VOM emission of the new tube cleaning system, addressing actual emission data for the system that indicates potential exceedances of the limits set in the original permit issued in December 2008. Unlike that permit, this revised permit relies on an evaluation of the net change in VOM emissions from this project, considering the decrease in VOM emissions from the elimination of the existing dip tank cleaning system. (See also Condition 1.4(c) and Attachment 1.)

1.2 List of Emission Units

Unit(s)	Description
Degreasing Process	Degreasing process vessel and associated working tanks, equipment for handling and recycling solvent and the NPB solvent storage tanks, capacity less than 10,000 gallons
Support Units	Natural gas boiler, heat input less than 2.5 mmBtu/hr*
Other Operations	Tube marking station*
	Deburring machine*
	Air blowout system*

* This emission unit is considered an insignificant activity pursuant to 35 IAC 201.146 and 201.210.

1.3 Applicability Provisions and Applicable Regulations

- a.
 - i. The "affected degreaser" for the purpose of this permit is the new degreasing process and associated NPB Storage tank as described in Conditions 1.1 and 1.2.
 - ii. The "affected storage tanks" for the purpose of this permit are the storage and soak tanks, other than the NPB storage tank, associated with the degreasing process described in Conditions 1.1 and 1.2.
 - iii. The "other affected units" for the purpose of these unit-specific conditions are the other emission units described in Condition 1.2.
- b. The affected degreaser is subject to following requirements of 35 IAC 219.183, as the degreaser performs "open top vapor degreasing" as defined by 35 IAC 212.4170:
 - i. Porous or absorbent materials, such as cloth, leather, wood or rope shall not be degreased. [35 IAC 219.183(a)(3)]
 - ii. Solvent leaks shall be repaired immediately. [35 IAC 219.183(a)(7)]
 - iii. Waste solvent shall be stored in covered containers only and not disposed of in such a manner that more than 20 percent of the waste solvent (by weight) is allowed to evaporate into the atmosphere. [35 IAC 219.183(a)(8)]
 - iv. A permanent conspicuous label summarizing the operating procedure shall be affixed to the degreaser. [35 IAC 219.183(b)(3)]

1.4 Non-Applicability Provisions

- a. This permit is issued based on certain provisions in 35 IAC 219.183, as follow, not being applicable to the affected degreaser because they cannot be meaningfully applied or would not act to reduce emissions because of the particular design and operation of the affected degreaser:
 - i. The following operating practices in 35 IAC 219.183(a) are not applicable to the affected degreaser:
 - A. The cover of the degreaser is closed when workloads are not being processed through the degreaser. [35 IAC 219.183(a)(1)]
 - B. Solvent carryout emissions are minimized by racking parts to allow complete drainage, moving parts in and out of the degreaser at less than 3.3 meter per minute, holding the parts in the vapor zone until condensation ceases, tipping out any pools of solvent on the cleaned parts before removal from the vapor zone, and allowing parts to dry within the degreaser until visually dry. [35 IAC 219.183(a)(2)(A) through (E)]
 - C. Less than half of the degreaser's open top area is occupied with a workload; [35 IAC 219.183(a)(4)]
 - D. The degreaser is not loaded to the point where the vapor level would drop more than 10 cm when the workload is removed from the vapor zone; [35 IAC 219.183(a)(5)]
 - E. Spraying is done below the vapor level only; [35 IAC 219.183(a)(6)]
 - F. Water shall not be visually detectable in solvent exiting from the water separator; [35 IAC 219.183(a)(9)]
 - G. Exhaust ventilation exceeding 20 cubic meters per minute per square meter of degreaser open area is not used, unless necessary to meet the requirements of the federal Occupational Safety and Health Act (29 USC Section 651 et seq.). [35 IAC 219.183(a)(10)]
 - ii. The following equipment features identified in 35 IAC 219.183(b) are not applicable to the affected degreaser:
 - A. A cover designed to open and close easily without disturbing the vapor zone; [35 IAC 219.183(b)(1)]

- B. Switches to shut off the sump heat source if the amount of condenser coolant is not sufficient to maintain the designed vapor level, shut off the spray pump if the vapor level drops more than 10 cm below the bottom condenser coil, and shut off the sump heat when the vapor level exceeds the design level. [35 IAC 219.183(b)(2)(A) through (C)]
- C. A freeboard height of 3/4 of the inside width of the degreaser tank or 91 cm, whichever is less; and if the degreaser opening is greater than 1 square meter, a powered or mechanically assisted cover. [35 IAC 219.183(b)(4)]

Note: The design of the affected degreaser is distinctly different from that of conventional open top vapor degreasers, which are directly addressed by the various requirements of 35 IAC 219.183. In conventional open top vapor degreasers, a workload of material being degreased is moved in and out of the degreaser through an opening at the top of the degreaser tank while the degreaser is in operation, i.e., the solvent in the degreaser is being heated and a zone of solvent vapor is present with the vapor retained in the degreaser by condenser coils located at an appropriate height around the interior wall of the degreaser vessel. In contrast, a workload is moved into the affected degreaser through a port on the side of the degreaser, which is then sealed and air is evacuated to achieve a pressure less than 0.01 atmosphere. Only then is cleaning solvent introduced into the degreasing vessel and that solvent is extracted from the vessel by a vacuum before the vessel is reopened and the cleaned workload is removed. The solvent vapor extracted from the vessel is condensed in an external condenser.

- b. This permit is issued based on the affected storage tank not being subject to 35 IAC 219.122(b) because the vapor pressure of the material stored in the tank is less than 2.5 psia at 70°F and the storage of this material does not contribute to an odor nuisance.
- c. This permit is issued based on this project not being a major project subject to 35 IAC Part 203, Major Stationary Sources Construction and Modification (MSSCAM). This is because the net increase in emissions of VOM from the project is not significant, as further explained in Attachment 1.

1.5 Operational Limits and Work Practices

- a. i. The net amount of VOM cleaning solvent lost from the affected degreaser shall not exceed 8.0 tons/month and 79.9 tons/year, based on a material balance from solvent received at the source and used solvent shipped from the

source, if the Permittee elects to keep records for the amount of solvent contained in shipments of used solvents.

ii. Compliance with this annual limit and other annual limits in this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

b. The affected units shall be operated and maintained in accordance with good air pollution control to minimize emissions.

1.6 Emissions Limitations

a. The emissions of VOM from the affected degreaser and storage tanks, combined, shall not exceed 8.0 tons/month and 79.9 tons/year.

b. This permit is issued based on minimal emissions of NSR pollutants from other affected units. For this purpose, the emissions of each NSR pollutant from these units, in total shall not exceed 1.1 tons/year.

1.7 Instrumentation Requirements

a. The affected degreaser shall be equipped, operated and maintained with instrumentation to measure the following:

i. The pressure in the degreasing vessel.

ii. The temperature of the cooling water supply for the condensers for the solvent vapor exhaust from the degreasing process and the distillation equipment for used solvent.

1.8 Recordkeeping Requirements

a. i. The Permittee shall maintain records for shipments of fresh cleaning solvent for the affected degreaser (tons/month and tons/year).

ii. The Permittee shall maintain records for the VOM contained in of used solvent from the degreaser that is shipped from the source (pounds/shipment) if the Permittee elects to determine the net loss of cleaning solvent from the affected degreaser. In such case, records shall be kept for the net loss of cleaning solvent (tons/month and tons/year), with supporting calculations.

b. The Permittee shall maintain operating logs or other similar records that, at a minimum, include the following information related to the affected degreaser and associated equipment:

- i. For periods when the degreaser is in service and operating normally, relevant process information to generally confirm normal operation.
 - ii. For periods when the degreaser is in service and is not operating normally, identification of each such period, with detailed information describing the operation of the degreaser, the potential consequences for additional emissions, the potential of any excess emissions, the actions taken to restore normal operation, and any actions taken to prevent similar events in the future.
 - iii. Other information as may be appropriate to show that the degreaser is operated in accordance with good air pollution control practices.
- c. The Permittee shall maintain inspection, maintenance and repair logs or other similar information that, at a minimum, include the following information related to the affected degreaser and associated equipment:
 - i. Identification of equipment, with date, time, responsible employee and type of activity.
 - ii. For inspections, a description of the inspection, findings, and any recommended actions, with reason.
 - iii. For maintenance and repair activity, a description of actions taken, reason for action, e.g., preventative measure or corrective action as a result of inspection, probable cause for requiring maintenance or repair if not routine or preventative, and the condition of equipment following completion of the activity.
 - iv. Other information as may be appropriate to show that the degreaser and associated equipment is maintained in accordance with good air pollution control practices, including prompt repair of defects that interfere with effective control of emissions.
- d. The Permittee shall maintain records of the VOM emissions of the affected degreaser (tons/month and tons/year), with supporting calculations.
- e. All records required by this permit shall be retained on site for a period of at least five years and shall be readily available for inspection and copying by the Illinois EPA upon request. Any record retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection

1.9 Reporting Requirements

- a. The Permittee shall promptly report any deviation of the requirements of this permit, as determined by the records required by this permit or by other means, to the Illinois EPA as specified below until such time the affected degreaser is addressed by the CAAPP permit. The reports shall include the identity of the deviation, with date, time, duration and description, describe the effect of the deviation on emissions, if any, and describe the probable cause of the deviation and any corrective actions or preventive measures taken.
 - i. Exceedances of the emission limits in Conditions 1.6(a) shall be reported within 30 days.
 - ii. Other deviations shall be reported with a quarterly report.
- b. Two copies of these reports shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

Telephone: 217/782-5811 Fax: 217/782-6348

and one copy of all required notifications shall be sent to the Illinois EPA's regional office at the following address, unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall St.
Collinsville, Illinois 62234

Telephone: 618/346-5120 Fax: 618/346-5155

1.10 Authorization to Operate

The Permittee is allowed to operate the affected units under this construction permit until final action is taken to address these units in a revision to or renewal of the CAAPP permit for the source.

Please note this permit has been revised to include the NPB storage tank as part of the degreasing process and to increase permitted VOM emission for the tube cleaning system.

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If you have any questions on this permit, please call Kevin Smith at 217/782-2113.

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

ECB:KLS:psj

cc: Region 3

Attachment 1

Net Change in VOM Emissions from this Project (Tons/Year)

Permitted Emissions of this Project	79.9
Contemporaneous Emission Decrease ^a	-43.7
Contemporaneous Emissions Increases ^b	0.0
Total	36.2

Notes:

- a. Decrease in VOM emissions from the permanent shut down of the existing degreaser, based on its average annual emissions for the period of 2007 and 2008, which is considered more representative of its typical operation.
- b. There have been no other contemporaneous emissions increases.

KLS:psj