

Bushman



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



AUG 24 1987

STATE OF CONNECTICUT)
DEPT. OF ENVIRONMENTAL PROTECTION)
VS.)
SPONGEX INTERNATIONAL, LTD.)
SHELTON, CONNECTICUT)

STATE ORDER NO. 8008

Proposed; February 20, 1987
Final Order; August 7, 1987

WHEREAS, Spongex International, Ltd. (hereinafter, the "Company") doing business at 6 Bridge Street, Shelton, Connecticut operates Polyvinyl Chloride (PVC) foam manufacturing equipment subject to the standards and limitations of the Administrative Regulations for the Abatement of Air Pollution (hereinafter, "Regulations"); and

WHEREAS, the PVC manufacturing equipment consists of eight (8) mixers, thirty (30) injection molding machines and eighteen (18) normalizing ovens which emits Volatile Organic Compounds (VOC); and

WHEREAS, documentation obtained through a plant inspection prior to December 1986 by the Department of Environmental Protection indicates real VOC emissions greater than one hundred (100) tons per year at Spongex International, Ltd.; and

WHEREAS, Section 22a-174-20(ee) of the Regulations requires that any premise with "actual" emissions, as currently defined in the "Regulations" of Volatile Organic Compounds in excess of one hundred (100) tons per year utilize Reasonably Available Control Technology (RACT) to limit the discharge of volatile organic compounds; and

WHEREAS, Reasonably Available Control Technology is defined as the lowest emission limit that a facility is capable of meeting through the application of control technology that is reasonably available considering technological and economic feasibility where the determination of "potential" emissions is based upon, in part, maximum rated capacity and Federally enforceable operating conditions and requirements; and

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DISPOSITION

WHEREAS, the Commissioner of the Department of Environmental Protection (hereinafter "Commissioner") issued State Order No. 947 to the Housatonic Ever-Float Company on December 23, 1985, which required the review of process parameters, VOC emission rates, and available production and pollution control technology for all process equipment sufficient to permit a RACT determination to be completed; and

WHEREAS, in December of 1986, Spongex International, Ltd. purchased the Polyvinyl Chloride (PVC) foam manufacturing equipment and assets from the Housatonic Ever-Float Company which assigns all requirements and constraints previously applicable to the subject equipment to Spongex International, Ltd., including all applicable regulatory requirements; and

WHEREAS, on May 1, 1986, as required by State Order No. 947, the Housatonic Ever-Float Company submitted a proposal that RACT for this facility is the reduction of actual uncontrolled VOC emissions (200.3 tons per year for 1983, 257.2 tons per year for 1984 and 178.8 tons per year for 1985) through reformulation to reduce Volatile Organic Compound (VOC's) content in the compound mix or by capture and incineration of VOC emissions from the Normalizing Ovens and/or a combination thereof and which plan has been acknowledged by the Company as representing its own proposal; and

WHEREAS, review of the Company's RACT proposal as well as review of subsequent submissions concerning the feasibility of other abatement options has been conducted by representatives of the Connecticut Department of Environmental Protection's Air Compliance Unit and has been determined to represent the lowest emission limitation that is reasonably achievable considering technological and economic feasibility and therefore constitutes Reasonably Available Control Technology; and

WHEREAS, the Company consents to the entry of this Order No. 8008 as an order of the Commissioner requiring that the Company implement and adhere to certain terms and conditions as specified by this order regarding the operation of the subject Polyvinyl Chloride (PVC) foam manufacturing equipment and acknowledges required approval of this RACT proposal by the United States Environmental Protection Agency as a formal revision to Connecticut's State Implementation Plan.

NOW, THEREFORE, by authority of Sec. 22a-178 et. seq., of the Connecticut General Statutes and Section 110A of the Clean Air Act, as amended, 42 U.S.C. Sec. 7410A, the Commissioner hereby approves the RACT proposal to be demonstrated subject to and described by the following terms and conditions; and as further noted in the Compliance Timetable (which is hereby incorporated, by reference, to this order);

1) A) The reformulation of the compound mix used in the process mixers, injection molding equipment, and normalizing ovens to achieve a reduction of the total Volatile Organic Compound (VOC) content by a minimum of sixty-five percent (65%) on a solids-equivalent basis; OR

B) The installation of fume incineration control equipment to capture emissions from all normalizing ovens providing: 1) emissions from the normalizing ovens shall represent a minimum of eighty percent (80%) of the total process VOC emissions; 2) the incinerator shall achieve a minimum ninety percent (90%) capture efficiency and a minimum ninety percent (90%) destruction efficiency (or an equivalent overall total VOC reduction); and 3) resulting VOC premise emissions shall be reduced by an overall sixty-five percent (65%). Should material balance calculations determine that less than eighty percent (80%) of the total process VOC's are emitted from the normalizing ovens, appropriate capture efficiencies and incinerator destruction efficiencies must be increased in order to maintain the provision stipulated in part (3) above; OR

C) a combination of methods 1A and 1B above such that the total Volatile Organic Compound (VOC) content used in the process is reduced by sixty-five percent (65%).

2) Submission of additional documentation as required by the Compliance Timetable.

3) Emission Testing requirements as noted by the Compliance Timetable.

4) Monitoring and Recordkeeping requirements as noted by the Compliance Timetable.

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Shelton, Connecticut

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5) This RACT demonstration does not exempt this source from complying with any source-specific VOC emission limitations which may be adopted at any future time nor does it exempt this source from complying with Section 22a-174-29, concerning Hazardous Air Pollutants.

Failure to complete any step or steps (other than Progress Report requirements) detailed in this order and the accompanying Compliance Timetable by the specified date(s) shall be a violation of an Order of the Commissioner and shall subject Spongex International, Ltd. to liability for civil assessments pursuant to Section 22a-6b (a)(3) of the Connecticut General Statutes and Section 22a-6b-603 of the Department's Regulations. Failure to submit a satisfactory Progress Report by the date(s) set forth in the Compliance Timetable shall subject the Company to liability for civil assessments pursuant to Section 22a-6b (a)(3) of the General Statutes and Section 22a-6b-601 of the Department's Regulations. Departmental action under this authority in no way prevents the Commissioner from seeking, in addition or separately, an injunction enforcing this State Order together with penalties of up to five thousand dollars (\$5,000) per week in court proceedings under Section 22a-180 of the General Statutes.

Questions concerning the terms of this Order should be addressed to David A. Sattler, Enforcement Section, Air Compliance Unit. Any future correspondence should make reference to this State Order.

Entered as a final decision of the Commissioner of Environmental Protection this 12 day of August, 1987.



Leslie Carothers
Commissioner
Dept. of Environmental Protection

Spongex International, Ltd.
Shelton, Connecticut

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As a duly authorized representative of Spongex International, Ltd., I hereby consent to the terms and conditions of this order and do hereby waive the right to appeal this order pursuant to Sec. 22a-174-12 (b)(4) of the Regulations this 21st, day of August 1987.

Spongex International, Ltd.

By:

Cornell E. Kress

Title:

Technical Director

LC

Enc.

COMPLIANCE TIMETABLE

TYPE OF SOURCE: MAJOR MINOR PROCEDURAL OTHER _____

PRIME CONTACT: Mr. Cornell E. Kress	SOURCE NAME: Spongex International Ltd.
TITLE OF CONTACT PERSON: Technical Director	
SOURCE ADDRESS: 6 Bridge Street Shelton, Connecticut 06484	PREMISE NO.: 163-086 CLIENT NO.: 001933
	ORDER NO.: 8008 DATE ISSUED: 8/7/87
TELEPHONE NO.: 735-9335	N.V. NO.: 90324 DATE ISSUED: - - - -
VIOLATION SUBSECTION: 22a-174-20 (ee)(1)	EQUIPMENT TYPE: 8 mixers, 30 injection molders, 18 normalizing ovens
	REG. NO.: P-015, 034 INSPECTOR AND NO.: DS-125

R109 thru I13

STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
	<p>This Compliance Timetable delineates a schedule for: A) the reformulation of the compound mix to reduce the quantity of total Volatile Organic Compounds (VOC's) used in the process (mixers, injecting molding equipment and the normalizing ovens) by a minimum of sixty-five percent (65%) on a solids-equivalent basis; OR B) the installation of fume incineration control equipment to capture emissions from all normalizing ovens providing: 1) emissions from the normalizing ovens shall represent a minimum of eighty percent (80%) of the total process VOC emissions; 2) the incinerator shall achieve a minimum ninety percent (90%) capture efficiency and a minimum ninety percent (90%) destruction efficiency (or an equivalent overall total VOC reduction); and 3) resulting VOC premise emissions shall be reduced by an overall sixty-five percent (65%). Should material balance calculations determine that less than eighty percent (80%) of the total process VOC's are emitted from the normalizing ovens, appropriate capture efficiencies and incinerator destruction efficiencies must be increased in order to maintain the provision stipulated in part (3) above; OR C) a combination of the above VOC reduction methods such that the total VOC content used in the process is reduced by sixty-five percent (65%).</p> <p>These measures have been determined by the Department to constitute Reasonably Available Control Technology (RACT) for the subject equipment. The Compliance Timetable further contains interim deadlines, reporting requirements, and emission testing requirements.</p>			
1.	Continue investigations addressing reformulation efforts to reduce the total Volatile Organic Compound (VOC) content in the compound mix.	Underway		

COMPLIANCE TIMETABLE

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STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
2.	Submit Progress Report detailing the specific reformulation efforts as per Step 1 including but not limited to: supplier identification; reformulated product compound mix formulations; and calculated total emission reductions achieved to date.	Completed		
3.	Submit a determination addressing the historical and present quantity of VOC in pounds of VOC per pound of compound mix <u>or</u> the pounds of VOC per pound of PVC utilized. Calculate the corresponding theoretical sixty-five percent (65%) VOC reduction required; and determine the RACT VOC levels in pounds of VOC per pound of Compound Mix <u>or</u> the pounds of VOC per pound of PVC utilized. The above quantities must be determined for <u>all</u> product formulations. Spongex will submit a table specifying each product and its enforceable Post-RACT emission limitation. Upon submission this table will be incorporated into this Order and be designated as Appendix A.	Completed		
4.	Submit Progress Report.	Completed		
5.	Select Compliance option. <u>Option A</u> - achieve a sixty-five percent (65%) reduction in total Volatile Organic Compounds (VOC's) (on a solids applied basis) used in the PVC manufacturing process or <u>Option B</u> - submit design and begin installation of fume incineration control equipment for the "Normalizing" ovens such that this equipment will achieve a sixty-five percent (65%) reduction in total VOC's used in the process. <u>Option C</u> - initiate a combination of both Options A and B above in order to reduce total VOC process emissions by sixty-five percent (65%).	Completed		
6.	Submit Progress Report as per Step No. 2 and detail Spongex International, Ltd.'s selected compliance option. If the Company proceeds with Option A, proceed to Step No. 7. If the Company proceeds with Option B, proceed to Step No. 18. <u>If the Company proceeds with Option C, proceed with Step No. 7 and No. 18 concurrently.</u>	Completed		

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STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
7.	Continue reformulation efforts and inform Underwriters Laboratory (UL) in order to obtain UL approval for reformulated products	Underway		
8.	Submit Progress Report.	9/1/87		
9.	Submit Progress Report.	10/1/87		
10.	Submit Progress Report.	11/1/87		
11.	Submit documentation for verification of the sixty-five percent (65%) reduction (on a solids-applied basis) of total Volatile Organic Compounds (VOC's) used in the PVC manufacturing process. Documentation of this sixty-five percent (65%) reduction includes, but is not limited to; a tabulated comparison on a product-by-product formulation basis identifying the historical and complying RACT level (65% total VOC reduction) in pounds of VOC per pound of compound mix or in pounds of VOC per pound of PVC utilized.	12/1/87		
12.	Submit Progress Report per Step No. 11.	12/1/87		
13.	Institute a daily recordkeeping procedure at the mixer location which includes, but is not limited to: product identification, batch quantity of pounds of compound mix or pounds of PVC resin utilized with the identification of the quantity of pounds of VOC contained in the batch. This record-keeping must be instituted for all formulation batches and be retained for at least three years for review at the Commissioner's request.	12/15/87		
14.	Submit Progress Report noting institution of requirements per Step No. 13.	12/31/87		
15.	For any new product formulations developed subsequent to the effective date of this order the maximum allowable VOC content shall not exceed the maximum Post-RACT VOC content of any product listed in Appendix A. New product formulations shall be added to Appendix A and submitted immediately.	12/31/87		

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STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
16.	Be in compliance with Section 22a-174-20(ee) through the implementation of RACT as specified by this order.	12/31/87		
17.	Submit Progress Report and continue submitting progress reports at precisely one month intervals if you are delinquent in complying with any steps of this order.	12/31/87		
	<u>Option B</u>			
18.	Issue Purchase Orders for Fume Incineration Equipment. Commence the installation of duct-work necessary to vent normalizing ovens to control apparatus and proceed with any modifications necessary in order to receive and install Fume Incineration equipment.	7/1/87		
19.	Submit Progress Report.	8/1/87		
20.	Submit Progress Report.	9/1/87		
21.	Receive all equipment and control apparatus and begin installation.	10/1/87		
22.	Submit Intent to Test Forms specifying the emission test protocol for the Fume Incinerator in order to demonstrate destruction efficiency and capture efficiency as required.	10/1/87		
23.	Submit Progress Report noting completion of Step No. 20 and Step No. 21.	10/1/87		
24.	Complete installation and debugging of control equipment. Commence operation of Fume Incinerator.	11/1/87		
25.	Submit Progress Report.	11/1/87		
26.	Conduct Emission Testing in a DEP-approved manner on the Fume Incinerator.	12/1/87		
27.	Submit Progress Report.	12/1/87		

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STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
28.	Institute a daily recordkeeping procedure at the mixer location which includes, but it not limited to, product identification, batch quantity of pounds of compound mix or pounds of PVC resin utilized with the identification of the quantity of pounds of VOC contained in the batch. This recordkeeping must be instituted for all formulation batches and be retained for at least three years for review at the Commissioner's request.	12/15/87		
29.	Submit Emission Test Report which demonstrates a 65% reduction of total VOC used in the process and which indicates compliance with the required minimum capture and destruction efficiencies.	12/31/87		
30.	Be in compliance with Section 22a-174-20(ee) through the implementation of RACT as specified by this order.	12/31/87		
31.	Submit Progress Report and continue submitting progress reports at precisely one month intervals if you are delinquent in complying with any steps of this order.	12/31/87		