Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

Notice of Permit Modification

In the Matter of an

Application for Permit Modification by:

Mr. Rafael Rodriguez, Plant Manager
Foamex L.P.
1351 Gemini Boulevard
Orlando, Florida 32837
_____/

Permit No. AC48-214902B
AIRS I.D. 0950225-003-AC
Orange County

Enclosed is a letter that modifies Permit Number AC 48-214902B (0950225-003-AC) for Foamex L.P.'s flexible polyurethane foam manufacturing plant located at 1351 Gemini Boulevard, Orlando, Orange County, Florida 32821. This permit is issued pursuant to Section 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 14 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
904-488-1344

Foamex L.P.

Permit No. AC 48-214902B (0950225-003-AC)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT MODIFICATION (including the PERMIT MODIFICATION) was sent by certified mail(*) and that all copies were mailed by U.S. mail before the close of business on 9-6-96 to the person(s) listed:

Mr. Rafael Rodriguez, Foamex, L.P.*

L. Kozlov, CD
D. Nester, OCEPD
K. Rykowski, HLA

Clerk Stamp

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Kuri Joher 9-6-96
Clerk Date

FINAL DETERMINATION

Foamex L.P. Flexible Polyurethane Foam Manufacturing Plant
Orange County
Permit No. AC 48-214902B (0950225-003-AC)

The Intent to Issue a construction permit modification for Foamex L.P.'s flexible polyurethane foam manufacturing plant located at 1351 Gemini Boulevard, Orlando, Orange County, Florida 32821 was distributed on July 31, 1996. The Notice of Intent to Issue Permit modification was published in the Orlando Sentinel on August 10, 1996. Copies of the evaluation were available for public inspection at the Department offices in Orlando and Tallahassee and at the Orange County Environmental Protection Department in Orlando.

During the public notice period, the applicant submitted comments. Their comments were that the modification should be issued in the name of the current plant manager, that the limits in the permit were for methylene chloride usage instead of emissions, and that the modified rebond foam process would contain 3 molds after the addition on the new one. The proposed modification was revised to incorporate these changes.

The final action of the Department will be to issue a letter modifying the referenced construction permit as proposed except for the change noted above.

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

September 4, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Rafael Rodriguez
Plant Manager
Foamex L.P.
1351 Gemini Boulevard
Orlando, Florida 32821

Dear Mr. Rodriguez:

Re: Modification of Permit
Permit No. AC 48-214902B
AIRS I.D. No. 0950225-003-AC

The Department is in receipt of your June 3 letter requesting the referenced air construction permit for your flexible polyurethane foam manufacturing facility located at 1351 Gemini Boulevard, Orlando, Orange County, Florida 32821, be modified. The requested modifications are: to allow an increase in methylene chloride emissions from 280 to 365 tons per year (TPY), limit methylene chloride usage as a blowing agent in the Slabstock Polyurethane Foam Process to a maximum of 180 TPY after this 5 year period when the new manufacturing technology that will use carbon dioxide as some of the blowing agent is in service, and increase rebond foam production by installing a new fan and mold. These requests are acceptable, with conditions, and permit No. AC 48-214902A is modified as follows:

SPECIFIC CONDITION NO. 1

From:

The enhanced exhaust systems shall meet or exceed the following specifications. The systems shall include: two 2.8 ft. diameter by 125 ft. high stacks, each handling 30,000 acfm of air; three roof exhaust fans with 3.6 ft. diameter 53 ft. high stacks, each handling 50,000 acfm of air; and two roof exhaust fans with 2 ft. diameter by 53 ft. high stacks, each handling 15,000 acfm of air. The two 125 ft. high stacks shall be equipped with stack sampling facilities meeting the specifications listed in Rule 62-297.345, F.A.C. Tank No. 10 shall be equipped with a pressure/vacuum relief valve.

To:

The enhanced exhaust systems shall meet or exceed the following specifications. The systems shall include: two 2.8 ft. diameter by 125 ft. high stacks, each handling 30,000 acfm of air; three roof exhaust fans with 3.6 ft. diameter 53 ft. high stacks each handling 50,000 acfm of air; and **three** roof exhaust fans **serving three molds in the rebond foam production process** with 2 ft. diameter by 53 ft. high stacks, each handling 15,000 acfm of air. The two 125 ft. high stacks shall be equipped with stack sampling facilities meeting the specifications listed in Rule **62-297.310, F.A.C.** Tank No. 10 shall be equipped with a pressure/vacuum relief valve.

SPECIFIC CONDITION NO. 2

From:

The methylene chloride used as a blowing agent in the Slabstock Polyurethane Foam Process at the facility shall not exceed 551,192 pounds (275.6 tons) during any twelve month period. The other chemicals used in the manufacturing process at the facility shall not exceed the following quantities during any twelve month period: 1,000,000 lbs/yr (500 TPY) polymer; 15,000,000 lbs/yr (7,500 TPY) polyol; and 10,000,000 lbs/yr (5,000 TPY) toluene diisocyanate. Cleanup solvent losses shall not exceed: 20 gallons/month isopropyl alcohol; 5,770 lbs/yr 1,1,1,-trichloroethane with silicone lubricant; and 1,000 lbs/yr mineral spirits.

Compliance with this condition shall be determined by records of purchases, inventory changes, and receipts for chemicals disposed of off site. The permittee shall maintain a log showing the amount of chemicals used each month to document compliance with these limitations.

To:

The methylene chloride used as a blowing agent in the Slabstock Polyurethane Foam Process at the facility shall not exceed **720,000** pounds (**360.0** tons) during any twelve month period **from the date of this amendment until May 31, 2001. This time is needed to install the alternate manufacturing technology that will replace part of the methylene chloride blowing agent with carbon dioxide. After May 31, 2001, methylene chloride usage as a blowing agent shall not exceed 360,000 pounds (180.0 tons) during any 12 month period and methylene chloride emissions shall not exceed the standard established by an applicable Maximum Achievable Control Technology (MACT)**

determination. The other chemicals used in the manufacturing process at the facility shall not exceed the following quantities during any twelve month period: 1,000,000 lbs/yr (500 TPY) polymer; 15,000,000 lbs/yr (7,500 TPY) polyol; and 10,000,000 lbs/yr (5,000 TPY) toluene diisocyanate. Cleanup solvent losses shall not exceed: 20 gallons/month isopropyl alcohol; 5,770 lbs/yr 1,1,1,-trichloroethane with silicone lubricant; and 1,000 lbs/yr mineral spirits.

Compliance with this condition shall be determined by records of purchases, inventory changes, receipts for chemicals disposed of off site, **and any procedures specified in an applicable MACT determination.** The permittee shall maintain a log showing the amount of chemicals used each month to document compliance with these limitations.

SPECIFIC CONDITION NO. 4

From:

For inventory purposes, the estimated emissions from this facility (based on emissions factors listed in the application, the limitations on operation time, and chemical usage) are:

AVERAGE EMISSIONS FROM FACILITY OPERATIONS:

Chemicals	Emissions lbs/hr	TPY
methylene chloride	2,223	280
1,1,1-trichloroethane	2.5	1.86
toluene diisocyanate	0.375	0.42

MAXIMUM POTENTIAL EMISSIONS FROM INDIVIDUAL OPERATIONS ARE ESTIMATED TO BE:

	Operation/chemical	Emissions lbs/hr	TPY
I.	Slabstock Polyurethane Foam Production/toluene diisocyanate	0.37	0.40
II.	Foam Line Stack/ methylene chloride	1,400	165.36

III. Long Bun Storage Room Stack/ methylene chloride	816.7	96.5
IV. Foam Fabrication Operations/ methylene chloride	5.3	15.4
1,1,1-trichloroethane	2.5	1.86
V. Rebond Polyurethane Foam Production/ toluene diisocyanate	0.0046	0.02
VI. Tank Storage (Tank No. 10) methylene chloride	0.66	2.92
VII. Steam Boiler products of combustion (Less than 1 lb/hr of all pollutants)	Trace amounts of the normal	
VIII. Environmental Heating products of combustion (less than 1 lb/hr of all pollutants)	Trace amounts of the normal	

To:

For inventory purposes, the estimated emissions from this facility (based on emissions factors listed in the application, the limitations on operation time, and chemical usage) are:

AVERAGE EMISSIONS FROM FACILITY OPERATIONS:

Chemicals	Emissions lbs/hr	TPY
methylene chloride	**2,224**	**365***
1,1,1-trichloroethane	2.5	1.86
toluene diisocyanate	**0.380**	**0.44**

***After May 31, 2001, estimated emissions shall not exceed 180 TPY and any applicable MACT standard.**

MAXIMUM POTENTIAL EMISSIONS FROM INDIVIDUAL OPERATIONS ARE ESTIMATED TO BE:

Operation/chemical	Emissions lbs/hr	Emissions TPY
I. Slabstock Polyurethane Foam Production/toluene diisocyanate	0.37	0.40
II. Foam Line Stack/ methylene chloride	1,400	**216**
III. Long Bun Storage Room Stack/ methylene chloride	816.7	**126**
IV. Foam Fabrication Operations/ methylene chloride	**6.3**	**19.6**
1,1,1-trichloroethane	2.5	1.86
V. Rebond Polyurethane Foam Production/ toluene diisocyanate	**0.0092**	**0.04**
VI. Tank Storage (Tank No. 10) methylene chloride	**0.70**	**3.03**
VII. Steam Boiler products of combustion (Less than 1 lb/hr of all pollutants)	Trace amounts of the normal	
VIII. Environmental Heating products of combustion (less than 1 lb/hr of all pollutants)	Trace amounts of the normal	

SPECIFIC CONDITION NO. 5

From:

To confirm the emission factors used in the application, the permittee shall measure the emissions from both slabstock process stacks for methylene chloride by EPA Method 18, as described in 40 CFR 60, Appendix A. If the measured emission factors are significantly different from the ones used in the application, the applicant shall remodel the emissions from the facility using the emission factors established by the stack test to confirm that the Acceptable Ambient Concentration from methylene chloride is not exceeded. Testing of emissions shall be conducted with the source operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then sources

may be tested at less than capacity (i.e. less than 90% of the maximum operating rate allowed by this permit); in this case, subsequent source operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. The stack test and modeling results hall be submitted to the Department with the application for permit to operate required by Specific Condition No. 8. (Rule 62-4.070, F.A.C.)

To:

To confirm the emission factors used in the application, the permittee shall measure the emissions from both slabstock process stacks for methylene chloride by EPA Method 18, as described in 40 CFR 60, Appendix A, **prior to January 1, 1997.** If the measured emission factors are significantly different from the ones used in the application, the applicant shall remodel the emissions from the facility using the emission factors established by the stack tests **and update the Risk Assessment** for methylene chloride. Testing of emissions shall be conducted with the source operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then sources may be tested at less than capacity (i.e. less than 90% of the maximum operating rate allowed by this permit); in this case, subsequent source operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. The stack test and modeling results shall be submitted to the Department with the application for permit to operate required by Specific Condition No. 8.
(Rule 62-4.070, F.A.C.)

A copy of this letter shall be attached to permit No. AC 48-214902 and shall become a part of that permit.

Sincerely,

for Howard L. Rhodes, Director
Division of Air Resources Management

HLR/wh/t

Attachment: Foamex June 3, 1996 letter
HLA August 8, 1996 letter

Harding Lawson Associates

June 3, 1996

26005.F21.816

Mr. C. H. Fancy, P.E.
Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Request for Permit Amendment
Foamex, L.P.
Permit No. AC48-214902A

Dear Mr. Fancy:

INTRODUCTION

This letter is to request an amendment to Construction Permit AC48-214902A, issued to Foamex, L.P. This letter presents a summary of the requested changes to Specific Conditions 1, 2, and 4 issued by FDEP. The requested changes include an increase in the annual methylene chloride usage in the slabstock foam production process and a modification to the enhanced exhaust system for the rebond foam production process. This amendment is requested to allow Foamex to increase slabstock foam production at their Orlando facility in the short term, for a period of up to five years, in preparation for the installation of an alternate manufacturing technology that will reduce the annual usage of methylene chloride as a blowing agent in the slabstock foam production process to less than half of the requested usage rate.

As discussed in the following comments and supported by the attachments, the predicted maximum ground level concentration for toluene diisocyanate (TDI) does not exceed the FDEP Ambient Reference Concentration (ARC) and the methylene chloride emissions from the facility pose a less than a one-in-one-million increased cancer risk as a result of the requested changes to Specific Conditions 1, 2, and 4.

COMMENT 1

Foamex requests a change to increase the number of exhaust fans for the rebond foam production process from two exhaust fans to three exhaust fans. This change is requested to increase the rebond foam production at the facility. Foamex will be adding a second mold to the rebond foam production process and relocating the process approximately 60 feet to the northeast of its current location. The addition of a second mold will require a third exhaust fan to vent the emissions from the rebond process to the atmosphere. The modification to the rebond process will also include a recirculating dust filter/collection system, which does not vent to the atmosphere. The increase in rebond foam production requires an increase in TDI usage in the process from the current usage rate of 164 lbs/hr to 328 lbs/hr. Based on the TDI emission factor of 0.000028 lb emitted/lb used,

presented in the permit application, this will result in an increase of TDI emissions from 0.0046 lbs/hr (0.02 TPY) to 0.0092 lbs/hr (0.04 TPY) from the rebond foam production process.

The modeling analysis has been revised to account for the modifications to the rebond foam production process, including 1) the increase in TDI emissions, 2) the addition of a third exhaust fan, and 3) the relocation of the rebond process. The modification only impacts the modeling results for TDI, since it is the only pollutant emitted from the rebond process exhaust fans. The results of the revised modeling analysis, presented below, show that the 8-hour and 24-hour maximum ground level concentrations for TDI are below the applicable FDEP ARC's.

Compound	Averaging Time	Revised Maximum ISCST2 Ground Level Concentration ($\mu g/m^3$)	FDEP ARC ($\mu g/m^3$)
Toluene Diisocyanate	8-hour 24-hour	0.3 0.05	0.4 0.09

The revised pages, based on the requested changes, of Volume I and Volume II: Dispersion Modeling Analysis of the permit application along with the output listings from the revised modeling analysis are attached.

The requested change in Specific Condition 1 is given below.

From:

1. The enhanced exhaust systems shall meet or exceed the following specifications. The systems shall include: two 2.8 ft. diameter by 125 ft. high stacks, each handling 30,000 acfm of air; three roof exhaust fans with 3.6 ft. diameter 53 ft. high stacks, each handling 50,000 acfm of air; and two roof exhaust fans with 2 ft. diameter by 53 ft. high stacks, each handling 15,000 acfm of air. The two 125 ft. high stacks shall be equipped with stack sampling facilities meeting the specifications listed in Rule 62-297.345, F.A.C. Tank No. 10 shall be equipped with a pressure/vacuum relief valve.

To:

1. The enhanced exhaust systems shall meet or exceed the following specifications. The systems shall include: two 2.8 ft. diameter by 125 ft. high stacks, each handling 30,000 acfm of air; three roof exhaust fans with 3.6 ft. diameter 53 ft. high stacks, each handling 50,000 acfm of air; and **three** roof exhaust fans with 2 ft. diameter by 53 ft. high stacks, each handling 15,000 acfm of air. The two 125 ft. high stacks shall be equipped with stack sampling facilities meeting the specifications listed in Rule 62-297.345, F.A.C. Tank No. 10 shall be equipped with a pressure/vacuum relief valve.

COMMENT 2

Foamex requests a change in the limits on the annual quantity of methylene chloride used at the facility, as stated in Specific Condition 2. An increase in the annual usage rate of methylene chloride from 551,192 lbs/yr (275.6 TPY) to 720,000 lbs/yr (360.0 TPY) is requested to maximize slabstock foam production in the short term, in preparation for the installation of an alternate manufacturing technology that will reduce the annual usage of methylene chloride as a blowing agent in the slabstock foam production process. The new manufacturing technology is expected to be in place and fully operational within five years. At that time the annual usage rate of methylene chloride is expected to be less than half of the requested usage rate of 720,000 lbs/yr (360.0 TPY), or less than 360,000 lbs/yr (180.0 TPY). Depending on the success of the implementation of the new process technology for the production of all grades of foam, the annual usage rate of methylene chloride may be reduced well below this level. However, it is difficult to establish a more reliable estimate at this time. Foamex will continue to reassess their ability to lower the usage of methylene chloride throughout the next five years, in order to commit to the lowest usage rate possible as a permit condition.

The requested annual increase only affects the annual average emission rates and does not affect the maximum hourly or daily emissions of methylene chloride from the slabstock foam production process. The dispersion modeling analysis has been revised based on the requested increase in the annual methylene chloride usage.

A risk assessment was also conducted to show that the increased methylene chloride emissions from the facility over a five year period and the reduced emissions after the five year period pose less than a one-in-one-million increased cancer risk over a lifetime (70 years). The risk assessment is presented as Attachment A to this letter. The basis of the risk assessment was to calculate the maximum off-site annual methylene chloride concentration due to emissions from the facility averaged over a lifetime (70 years) and compare that concentration with an annual ambient reference concentration that represents a one-in-a-million cancer risk as a result of exposure over a lifetime. The FDEP annual ARC for methylene chloride of 2.0 $\mu g/m^3$ is based on an ambient concentration that represents a one-in-one-million increased cancer risk as a result of exposure to that level over a lifetime (70 years). It was calculated by dividing 1.0E-6 by the EPA unit risk factor of 4.7E-7 $(\mu g/m^3)^{-1}$. As part of the risk assessment, additional modeling was conducted to determine the maximum off-site annual ground level concentration due to the reduced methylene chloride emissions after the five year period of increased emissions. The maximum off-site annual concentration due to the increased emissions for five years is 2.73 $\mu g/m^3$ and the maximum off-site annual concentration due the reduced methylene chloride usage is 1.38 $\mu g/m^3$. The maximum off-site annual methylene chloride concentration due to emissions from the facility averaged over a lifetime (70 years) is calculated as follows:

$$[(2.73\ \mu g/m^3 \times 5\ \text{years}) + (1.38\ \mu g/m^3 \times 65\ \text{years})] \div 70\ \text{years} = 1.48\ \mu g/m^3$$

The resulting off-site annual methylene concentration averaged over a lifetime was then compared with the FDEP annual ARC for methylene chloride. The results, presented below, show that the

maximum off-site annual ground level concentration of methylene chloride is less than the FDEP ARC and, therefore, the exposure to the estimated methylene chloride emissions from the facility over a lifetime pose less than a one-in-one-million increased cancer risk.

Compound	Averaging Time	Maximum Off-Site Annual Ground Level Concentration Averaged Over a Lifetime ($\mu g/m^3$)	FDEP Annual ARC Representing a One-in-One-Million Increased Cancer Risk Over a Lifetime ($\mu g/m^3$)
Methylene Chloride	Annual	1.48	2.0

The revised pages, based on the requested change, of Volume I and Volume II: Dispersion Modeling Analysis of the permit application along with the output listings from the revised modeling analysis are attached.

It should be noted that the USEPA is currently developing NESHAP regulations for the Flexible Polyurethane Foam Manufacturing Industry that will require Maximum Achievable Control Technology (MACT) for facilities that have emissions of methylene chloride or any other single hazardous air pollutant (HAP) greater than 10 tons per year. It is expected that these regulations will be promulgated within the next one to two years.

The requested change in Specific Condition 2, which includes the increase in annual TDI usage as discussed in Comment 2, is given below.

From:

2. The methylene chloride used as a blowing agent in the Slabstock Polyurethane Foam Process at the facility shall not exceed 551,192 lbs/yr (275.6 TPY) during any twelve month period. The other chemicals used in the manufacturing processes at the facility shall not exceed the following quantities during any twelve month period: 1,000,000 lbs/yr (500 TPY) polymer; 15,000,000 lbs/yr (7,500 TPY) polyol; and 10,000,000 lbs/yr (5,000 TPY) toluene diisocyanate. Cleanup solvent losses shall not exceed: 20 gallons/month isopropyl alcohol; 5,770 lbs/yr 1,1,1-trichloroethane with silicone lubricant; and 1,000 lbs/yr mineral spirits.

   Compliance with this condition shall be determined by records of purchases, inventory changes, and receipts for chemicals disposed of off site. The permittee shall maintain a log showing the amount of chemicals used each month to document compliance with these limitations.

To:

2. The methylene chloride used as a blowing agent in the Slabstock Polyurethane Foam Process at the facility shall not exceed **720,000 lbs/yr (360.0 TPY)** during any twelve month period **for a five year period ending May 31, 2001 and thereafter shall not exceed 360,000 lbs/yr (180.0 TPY) during any twelve month period.** The other chemicals used in the manufacturing processes at the facility shall not exceed the following quantities during any twelve month period: 1,000,000 lbs/yr (500 TPY) polymer; 15,000,000 lbs/yr (7,500 TPY) polyol; and 10,000,000 lbs/yr (5,000 TPY) toluene diisocyanate. Cleanup solvent losses shall not exceed: 20 gallons/month isopropyl alcohol; 5,770 lbs/yr 1,1,1-trichloroethane with silicone lubricant; and 1,000 lbs/yr mineral spirits.

   Compliance with this condition shall be determined by records of purchases, inventory changes, and receipts for chemicals disposed of off site. The permittee shall maintain a log showing the amount of chemicals used each month to document compliance with these limitations.

COMMENT 3

As a result of the requested increases in annual methylene chloride, discussed in Comments 2, and the increase in the hourly TDI usage in the rebond process, discussed in Comment 1, Foamex requests a modification of the estimated emissions stated in Specific Condition 4. The calculations supporting this change are provided in the attached revised pages of Volume I of the permit application. The requested change in Specific Condition 4 is given below.

From:

4. For inventory purposes, the estimated emissions from this facility (based on the emission factors listed in the application, the limitations on operation time, and chemical usage) are:

   AVERAGE EMISSIONS FROM FACILITY OPERATIONS:

Chemicals	Emissions lbs/hr	TPY
methylene chloride	2,222.65	280.13
1,1,1-trichloroethane	2.5	1.86
toluene diisocyanate	0.3746	0.424

MAXIMUM POTENTIAL EMISSIONS FROM INDIVIDUAL OPERATIONS ARE ESTIMATED TO BE:

	Operation/chemical	Emissions lbs/hr	Emissions TPY
I.	Slabstock Polyurethane Foam Production/ toluene diisocyanate	0.37	0.404
II.	Foam Line Stack/ methylene chloride	1,400	165.36
III.	Long Bun Storage Room Stack/ methylene chloride	816.67	96.46
IV.	Foam Fabrication Operations/ methylene chloride	5.32	15.39
	1,1,1-trichloroethane	2.5	1.86
V.	Rebond Polyurethane Foam Production/ toluene diisocyanate	0.0046	0.02
VI.	Tank Storage (Tank No. 10)/ methylene chloride	0.66	2.92
VII.	Steam Boiler	Trace amounts of the normal products of combustion (less than 1 lb/hr of all pollutants)	
VIII.	Environmental Heating	Trace amounts of the normal products of combustion (less than 1 lb/hr of all pollutants)	

To:

4. For inventory purposes, the estimated emissions from this facility (based on the emission factors listed in the application, the limitations on operation time, and chemical usage) are:

AVERAGE EMISSIONS FROM FACILITY OPERATIONS:

Chemicals	Emissions lbs/hr	TPY
methylene chloride	2,223.64	364.64
1,1,1-trichloroethane	2.5	1.86
toluene diisocyanate	0.3792	0.444

MAXIMUM POTENTIAL EMISSIONS FROM INDIVIDUAL OPERATIONS ARE ESTIMATED TO BE:

	Operation/chemical	Emissions lbs/hr	TPY
I.	Slabstock Polyurethane Foam Production/ toluene diisocyanate	0.37	0.404
II.	Foam Line Stack/ methylene chloride	1,400	216
III.	Long Bun Storage Room Stack/ methylene chloride	816.67	126
IV.	Foam Fabrication Operations/ methylene chloride	6.28	19.61
	1,1,1-trichloroethane	2.5	1.86
V.	Rebond Polyurethane Foam Production/ toluene diisocyanate	0.0092	0.04
VI.	Tank Storage (Tank No. 10)/ methylene chloride	0.69	3.03
VII.	Steam Boiler	Trace amounts of the normal products of combustion (less than 1 lb/hr of all pollutants)	
VIII.	Environmental Heating	Trace amounts of the normal products of combustion (less than 1 lb/hr of all pollutants)	

CLOSING

Should you require any additional information or have any questions regarding these issues please contact Kay Rykowski at (407)851-1484.

Yours very truly,

HARDING LAWSON ASSOCIATES

John Wolber
Project Scientist

Joseph L. Tessitore, P.E.
Managing Principal
State of Florida P.E. Registration Number 23374

JMW/JLT/jmw
26005W06.DOC/

Attachments:
A. Risk Assessment of Methylene Chloride Emissions
B. Revised pages to Volume I of Original Permit Application
C. Revised pages to Volume II: Dispersion Modeling Analysis of Original Permit Application
D. Output Listings from Revised Modeling (Appendixes C, F, G, and H of Volume II of Original Permit Application)

cc: Mr. Raphael Rodriguez, Foamex, L.P., Orlando, Florida
Mr. Tom Burghardt, Foamex, L.P., Linwood, Pennsylvania
Ms. Teri Copeland, HLA, Irvine, California

Harding Lawson Associates

August 8, 1996

26005.F21.816

Mr. Willard Hanks
Review Engineer
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Foamex, L.P., Orlando
DRAFT Modification of Permit & Public Notice of Intent to Issue
Permit No. AC 48-214902B
AIRS I.D. No. 0950225-003-AC

Dear Mr. Hanks:

Foamex, L.P. (Foamex) and Harding Lawson Associates (HLA) have received and reviewed the subject DRAFT Modification of Permit and Public Notice of Intent to Issue for Foamex's Orlando Facility. We have four minor comments regarding the draft modification. These comments do not affect or change the emissions as presented in the draft modification or public notice.

COMMENT 1

Rafael Rodriguez is the new Plant Manager of Foamex's Orlando facility. Please address the final Modification of Permit, and all future correspondence, to Mr. Rodriguez.

COMMENT 2

The rebond foam production process at the facility currently consists of two roof exhaust fans serving two molds. Foamex will be adding a third mold and fan to this process. Foamex requests that Specific Condition No. 1, as presented on Page 2 of the draft modification, be corrected to read as follows:

"... and three roof exhaust fans serving <u>three</u> molds in the rebond foam production process ..."

COMMENT 3

Specific Condition No. 2 has always limited methylene chloride usage, not emissions. As presented in the draft modification, this condition limits methylene chloride usage prior to May 31, 2001, and limits methylene chloride emissions after May 31, 2001. Even though all of the methylene chloride used in the Slabstock Process is emitted, Foamex requests, that to be consistent, Specific Condition No. 2 in the modification be revised to limit methylene chloride usage only. The following revised wording is suggested:

"The methylene chloride used as a blowing agent in the Slabstock Polyurethane Foam Process at the facility shall not exceed 720,000 pounds (360.0 tons) during any twelve month period **from the date of this amendment until May 31, 2001. This time is needed to install the alternate manufacturing technology that will replace part of the methylene chloride blowing agent with carbon dioxide. After May 31, 2001, methylene chloride usage as a blowing agent shall not exceed 360,000 pounds (180.0 tons) during any 12 month period or methylene chloride emissions shall not exceed the standard established by an applicable Maximum Achievable Control Technology (MACT) determination, whichever is most restrictive.** ..."

COMMENT 4

The emissions contained in Specific Condition No. 4 of the permit are presented as estimated emissions for inventory purposes and are not presented as limits. In the draft modification, the footnote to the total estimated annual methylene chloride emissions limits methylene chloride emissions after May 31, 2001, to 180 TPY or MACT, whichever is most restrictive. Since the methylene chloride emissions are limited by the usage limits imposed by Specific Condition No. 2 and Specific Condition No. 4 presents all other emissions as estimated emissions, Foamex requests that the footnote be revised to present the methylene chloride emissions after May 31, 2001 as estimated emissions. The following revised wording is suggested:

"***After May 31, 2001, estimated emissions do not exceed 180 TPY or MACT, whichever is most restrictive.**"

CLOSING

As previously stated, the comments above do not affect the emissions as presented in the draft modification and public notice. Therefore, upon confirmation from you that these comments do not constitute a significant change in the DRAFT Modification of Permit and will not require FDEP to reissue the draft modification package, we will go ahead with the publication of the Public Notice of Intent to Issue.

Please do not hesitate to contact us if you any questions or comments or if you require any additional information.

Yours very truly,

HARDING LAWSON ASSOCIATES

John Wolber
Project Scientist

Joseph L. Tessitore, P.E.
Managing Principal

JMW/JLT/tbm/26005W34.DOC

cc: Mr. Alan Zahm, FDEP Central District
Mr. Dennis Nester, OCEPD
Mr. Tom Burghardt, Foamex International, Linwood, PA
Mr. Tony Grosso, Foamex International, Linwood, PA
Mr. Rafael Rodriguez, Foamex, L.P., Orlando
Ms. Kay Rykowski, HLA, Orlando

Florida Department of
Environmental Protection

Memorandum

I signed

To: Howard L. Rhodes

Thru: Clair Fancy

From: Willard Hanks

Date: September 3, 1996

Subject: Modification of Permit
Foamex L.P.

Attached for your approval and signature is a letter that will modify the construction permit for Foamex's flexible polyurethane foam manufacturing facility located in Orlando, Orange County, Florida.

The modification will:

- allow the permittee to increase methylene chloride usage in the Slabstock Polyurethane Process from 280 to 365 TPY for a period of 5 years,
- extended the permit to allow time to install a carbon dioxide system which will replace some of the methylene chloride used in the process,
- by the end of the 5 year period, the methylene chloride usage in the Slabstock Polyurethane Process will be reduced to a maximum of 180 TPY,
- the rebond foam operation will be relocated to an adjacent area and the production will be increased by the addition of another mold and exhaust fan.

Modeling results of the reconfigured plant shows the Ambient Reference Concentration for methylene chloride is exceeded during the five year period of high emissions. The health risk for this emission rate is estimated to be 1.34 in a million. After the methylene chloride emissions are reduced to 180 TPY, the Ambient Referenced Concentrations are met and the health risk is less than one in a million.

During the public notice period, the applicant submitted comments. Their comments were that the modification should be

issued in the name of the current plant manager, that the limits in the permit were on methylene chloride usage instead of emissions, and that the modified Rebond Foam Process would contain 3 molds after the addition on the new one. The proposed modification was revised to incorporate these changes.

I recommend your approval and signature of the permit modification.

CHF/wh/t

Attachments

P 339 251 149

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to: Rafael Rodriguez	
Street & Number: Goarex, LP	
Post Office, State, & ZIP Code: Orlando, FL	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date: 9-6-96	

PS Form **3800**, April 1995

AC48-2149028
0950225-003-AC

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Rafael Rodriguez
Goarex, LP
1351 Generic Blvd
Orlando, FL 32837

4a. Article Number: P 339 251 149

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery: 9-9-96

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)

PS Form **3811**, December 1991 *U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

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