



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
 MAR 20 2000
 SOUTHWEST DISTRICT
 TAMPA

March 3, 2000

Mr. Gerald Kissel, P.E.
 Florida Department of Environmental Protection
 Division of Air Resources Management - Permitting Section
 1410 North 21st Street
 Tampa, Florida 33605

RE: Application to Modify Permit to Title V/Scale Up of a Batch Reactor System
TSE Industries, Inc.; Permit No. 1030207-001-AO RENEWAL APP'N RCUD 1/25/00; PROJECT 002
CERTIFIED MAIL - Article #P 308 841 153

Dear Mr Kissel:

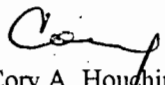
As you are aware, TSE Industries, Inc. (TSE) has to renew the permit governing their rubber processing operations on 113th Avenue in Clearwater, Pinellas County. However, due to rapid growth & technology advancement, it has become apparent that significant modification to the new permit will be necessary. Therefore, find enclosed an application for the construction of a batch reactor system used to produce a toluene diisocyanate dimer used as an adhesion promoter. As this process has not been operating at typical production levels, estimates have been made on the amount of toluene that will be needed to meet a production schedule of 300,000 pounds of adhesion promoter annually. Also, the amount of waste toluene to be shipped for recycling, as well as process fugitive losses, have been estimated by scaling up to meet the desired production rate. Therefore, it is likely that modification to the permitted emission rates may be necessary prior to the end of the permit life. TSE expects that more than 20 tons of toluene will be lost each year due to the reactor process. Therefore, TSE requests 23.75 tons toluene/yr. TSE also requests that an additional 2.75 tons VOC/yr be included in their *Fugitive VOC Emissions* (ID 002), bringing the total VOC emissions for ID 002 to 6.0 tons VOC/yr, and the facility total to 29.75 tons VOC/yr.

Be aware that the rubber compounding operation has been discontinued. TSE plans to dismantle several of the mills in the next few months. Please terminate this source in the new permit.

TSE understands that the use of this quantity of toluene triggers Title V regulation. Therefore, no application fee has been submitted as TSE will now be required to pay fees annually based on toluene use. Please notify this office should fees or other documentation be necessary.

Thank you for your cooperation in this matter. Please feel free to contact this office at any time should you have questions or comments.

Sincerely,


 Cory A. Houchin
 Project Manager

Enclosure

cc: Dave Richcreek, TSE Industries, Inc.
 Gary Robbins, PCDEM

P.O. Box 7495
 Tampa, Florida 33673-7495
 Telephone: (813) 930-9074
 FAX: (813) 935-1167

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
MAR 06 2000
SOUTHWEST DISTRICT
TAMPA

**Department of
Environmental Protection**

**DIVISION OF AIR RESOURCES MANAGEMENT
APPLICATION FOR AIR PERMIT - LONG FORM**

I. APPLICATION INFORMATION

Identification of Facility Addressed in This Application

1. Facility Owner/Company Name : TSE Industries, Inc.	
2. Site Name :	
3. Facility Identification Number :	1030207 [] Unknown
4. Facility Location : TSE Industries, Inc. Street Address or Other Locator : 5260 113th Avenue North City : Clearwater County : Pinellas Zip Code : 33760	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

I. Part 1 - 1

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official :

Name : Robert Klingel
Title : President

2. Owner or Authorized Representative or Responsible Official Mailing Address :

Organization/Firm : TSE Industries, Inc.
Street Address : 5260 113th Avenue North
City : Clearwater
State : FL Zip Code : 33760

3. Owner/Authorized Representative or Responsible Official Telephone Numbers :

Telephone : (727)573-7676 Fax : (727)572-0415

4. Owner/Authorized Representative or Responsible Official Statement :

I, the undersigned, am the owner or authorized representative of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions units.*



Signature

2/15/00

Date

* Attach letter of authorization if not currently on file.

I. Part 2 - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type
002	VOC Fugitive Emissions	ACM1
003	Toluene Diisocyanate Batch Reactor System	AC1E

Purpose of Application and Category

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain :

- Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

- Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number :

- Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed :

- Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number :

Operation permit to be revised :

- Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application.

Operation permit to be revised/corrected :

- Air operation permit revision for a Title V source for reasons other than construction or modification of an emissions unit.

Operation permit to be revised :

Reason for revision :

Category II : All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain :

- Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s) :

- Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed :

- Air operation permit revision for a synthetic non-Title V source.

Operation permit to be revised :

Reason for revision :

Category III : All Air Construction Permit Applications for All Facilities and Emissions Units

This Application for Air Permit is submitted to obtain :

- Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any :

I. Part 4 - 2

DEP Form No. 62-210.900(1) - Form

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1030207-001-AO

- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s) :

- Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one :

[] Attached - Amount : \$0.00 [X] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations : TSE Industries, Inc. proposes to permit their scaled up batch reactor system which generates fugitive toluene emissions. Additionally, TSE requests an increase in the permitted VOC Fugitive Emissions (EUID 002) annual rate and that the rubber compounding process (EUID 001) be terminated.
2. Projected or Actual Date of Commencement of Construction :
3. Projected Date of Completion of Construction :

Professional Engineer Certification

1. Professional Engineer Name : Douglas R. Ashline, Jr. Registration Number : 43583
2. Professional Engineer Mailing Address : Organization/Firm : Environmental Sciences Group, Inc. Street Address : P.O. Box 7495 City : Tampa State : FL Zip Code : 33673-7495
3. Professional Engineer Telephone Numbers : Telephone : (813)930-9074 Fax : (813)935-1167

4. Professional Engineer Statement :

I, the undersigned, hereby certify, except as particularly noted herein, that :*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollutant control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Royce Ashline Jr

Signature
(seal)

2/21/00

Date

* Attach any exception to certification statement.

I. Part 6 - 1

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Application Contact

1. Name and Title of Application Contact :
Name : Cory A. Houchin Title : Project Manager
2. Application Contact Mailing Address :
Organization/Firm : Environmental Sciences Group, Inc. Street Address : P.O. Box 7495 City : Tampa State : FL Zip Code : 33673-7495
3. Application Contact Telephone Numbers :
Telephone : (813)930-9074 Fax : (813)935-1167

Application Comment

TSE Industries, Inc. (TSE) informed the Department in May, 1997 that they had designed and constructed a pilot plant in which to investigate the production of toluene diisocyanate (TDI) dimer via the reaction of toluene and diisocyanate monomer under pressure in a batch reactor. TSE has determined that excess toluene is needed in the reaction to obtain adequate conversion (@ 40oF). Most of the toluene can be recovered and reused, but some loss does occur during product drying and removal. Once scale up of the process is complete, a permit governing toluene emissions will be necessary.

As toluene is considered a volatile organic compound (VOC), as well as a Hazardous Air Pollutant (HAP), an increase in the permitted VOC Fugitive Emissions (EUID 002) rate will be necessary.

Additionally, TSE no longer compounds rubber at the 113th Avenue facility and plans to dismantle their 4 rubber mixing mills. Therefore, this emission unit needs to be removed from future permit regulation.

This modification application is meant to serve as a renewal application for Permit #1030207-001-AO as it expires 04/02/2000. A check in the amount of \$1000.00 was recently submitted in order to assure that the renewal process was considered "timely".

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility, Location, and Type

1. Facility UTM Coordinates :					
Zone :	17	East (km) :	332.40 North (km) :	3084.00	
2. Facility Latitude/Longitude :					
Latitude (DD/MM/SS) :		27 51 22	Longitude (DD/MM/SS) :		82 41 14
3. Governmental Facility Code :	4. Facility Status Code :	5. Facility Major Group SIC Code :	6. Facility SIC(s) :		
0	A	30	3069		
7. Facility Comment :					
TSE Industries, Inc. is a rubber processing facility. Recent technical innovations in rubber manufacturing has allowed TSE to eliminate the need to cure/compound rubber in mixing mills prior to their process operations (molding, die-cut, etc.). However, scale-up of their batch reactor pilot plant is expected to generate significant toluene emissions.					

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Contact

1. Name and Title of Facility Contact :

Dave Richcreek
Safety/Environmental Administrator

2. Facility Contact Mailing Address :

Organization/Firm : TSE Industries, Inc.

Street Address : 5260 113th Avenue North

City : Clearwater

State : FL Zip Code : 33760

3. Facility Contact Telephone Numbers :

Telephone : (727)573-7676

Fax : (727)572-0415

II. Part 1 - 2

DEP Form No. 62-210.900(1) - Form

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Facility Regulatory Classifications

1. Small Business Stationary Source?	U
2. Title V Source?	Y
3. Synthetic Non-Title V Source?	N
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	N
5. Synthetic Minor Source of Pollutants Other than HAPs?	N
6. Major Source of Hazardous Air Pollutants (HAPs)?	Y
7. Synthetic Minor Source of HAPs?	N
8. One or More Emissions Units Subject to NSPS?	N
9. One or More Emission Units Subject to NESHAP?	N
10. Title V Source by EPA Designation?	N
11. Facility Regulatory Classifications Comment :	
Scale up of pilot plant batch reactor (diisocyanate monomer to TDI dimer) is expected to trigger Title V regulation due to fugitive toluene emissions.	

B. FACILITY REGULATIONS

Rule Applicability Analysis

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B. FACILITY REGULATIONS

List of Applicable Regulations

62-103, FAC Rules of Administrative Action

62-210, FAC Stationary Sources - General Requirements

62-212, FAC Stationary Sources - Preconstruction Review

62-213, FAC Operation Permits for Major Sources of Air Pollution

62-275, FAC Air Quality Areas

62-296, FAC Stationary Sources - Emissions Standards

62-297, FAC Stationary Sources - Emissions Monitoring

62-4, FAC Permits

II. Part 3b - 1

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C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
VOC	B
H169	A

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 1

1. Pollutant Emitted :	VOC
2. Requested Emissions Cap :	(lbs/hour) 29.7500 (tons/year)
3. Basis for Emissions Cap Code :	
4. Facility Pollutant Comment :	<p>Pollutant emissions are estimates due to plant scale-up. Modification of permitted emission rate may be required during the life of the permit.</p>

II. Part 4b - 1

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 2

1. Pollutant Emitted :	H169
2. Requested Emissions Cap :	(lbs/hour) 23.7500 (tons/year)
3. Basis for Emissions Cap Code :	
4. Facility Pollutant Comment :	<p>Pollutant emissions are estimates due to plant scale-up. Modification of permitted emission rate may be required during the life of the permit.</p>

D. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location :	Waived
2. Facility Plot Plan :	Waived
3. Process Flow Diagram(s) :	Process Flow
4. Precautions to Prevent Emissions of Unconfined Particulate Matter :	Waived
5. Fugitive Emissions Identification :	Waived
6. Supplemental Information for Construction Permit Application :	Supporting Docu

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities :
8. List of Equipment/Activities Regulated under Title VI :
9. Alternative Methods of Operation :
10. Alternative Modes of Operation (Emissions Trading) :
11. Identification of Additional Applicable Requirements :
12. Compliance Assurance Monitoring Plan :
13. Risk Management Plan Verification :
14. Compliance Report and Plan :
15. Compliance Certification (Hard-copy Required) :

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1

VOC Fugitive Emissions

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

- [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- [] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

- [] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- [] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- [X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 1

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III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 2

Toluene Diisocyanate Batch Reactor System

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

- [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- [] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

- [] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- [] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- [X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 2

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Emissions Unit Information Section 1

**B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)**

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : VOC Fugitive Emissions		
2. Emissions Unit Identification Number : 002 [] No Corresponding ID [] Unknown		
3. Emissions Unit Status Code : A	4. Acid Rain Unit? [] Yes [X] No	5. Emissions Unit Major Group SIC Code : 30
6. Emissions Unit Comment : Fugitive VOC emissions due to miscellaneous cleaning activities, quality control, etc.		

Emissions Unit Information Section 2

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Toluene Diisocyanate Batch Reactor System		
2. Emissions Unit Identification Number : 003 [] No Corresponding ID [] Unknown		
3. Emissions Unit Status Code : A	4. Acid Rain Unit? [] Yes [X] No	5. Emissions Unit Major Group SIC Code : 30 <i>Rubber & Misc. Products</i>
6. Emissions Unit Comment :		

Emissions Unit Information Section 1

VOC Fugitive Emissions

Emissions Unit Control Equipment 1

1. Description : NA
2. Control Device or Method Code :

Emissions Unit Information Section 2

Toluene Diisocyanate Batch Reactor System

Emissions Unit Control Equipment 1

1. Description :

Toluene vapor removed under vacuum and condensed for reuse

2. Control Device or Method Code : 73

III. Part 3 - 2

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**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
VOC Fugitive Emissions

Emissions Unit Details

1. Initial Startup Date :		
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		Model Number :
Manufacturer :		
4. Generator Nameplate Rating :		MW
5. Incinerator Information :		
Dwell Temperature :		Degrees Fahrenheit
Dwell Time :		Seconds
Incinerator Afterburner Temperature :		Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :		mmBtu/hr
2. Maximum Incinerator Rate :		lb/hr tons/day
3. Maximum Process or Throughput Rate :		0
4. Maximum Production Rate :		0
5. Operating Capacity Comment :		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :		
24 hours/day		7 days/week
52 weeks/year		8,760 hours/year

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 2
Toluene Diisocyanate Batch Reactor System

Emissions Unit Details

1. Initial Startup Date :		
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		
Manufacturer :		Model Number :
4. Generator Nameplate Rating :		MW
5. Incinerator Information :		
	Dwell Temperature :	Degrees Fahrenheit
	Dwell Time :	Seconds
	Incinerator Afterburner Temperature :	Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :		mmBtu/hr
2. Maximum Incinerator Rate :		lb/hr tons/day
3. Maximum Process or Throughput Rate :		
4. Maximum Production Rate :		300000 lb/yr
5. Operating Capacity Comment :		
Maximum Production Rate refers to the desired reaction product. A diisocyanate dimer is retained in semi-solid form and used as an adhesive		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :		
	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
VOC Fugitive Emissions

Rule Applicability Analysis

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**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Emissions Unit Information Section · 2
Toluene Diisocyanate Batch Reactor System

Rule Applicability Analysis

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Emissions Unit Information Section
VOC Fugitive Emissions

1

List of Applicable Regulations

62-4, FAC Permits

62-103, FAC Rules of Administrative Action

62-210, FAC Stationary Sources - General Requirements

62-212, FAC Stationary Sources - Preconstruction Review

62-213, FAC Operation Permits for Major Sources of Air Pollution

62-275, FAC Air Quality Areas

62-296, FAC Stationary Sources - Emissions Standards

62-297, FAC Stationary Sources - Emissions Monitoring

III. Part 6b - 1

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List of Applicable Regulations

62-4, FAC Permits

62-103, FAC Rules of Administrative Action

62-210, FAC Stationary Sources - General Requirements

62-212, FAC Stationary Sources - Preconstruction Review

62-213, FAC Operation Permits for Major Sources of Air Pollution

62-275, FAC Air Quality Areas

62-296, FAC Stationary Sources - Emissions Standards

62-297, FAC Stationary Sources - Emissions Monitoring

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 1

VOC Fugitive Emissions

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :			
2. Emission Point Type Code :		4	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :		F	
6. Stack Height :		0	feet
7. Exit Diameter :		0.0	feet
8. Exit Temperature :		0	°F
9. Actual Volumetric Flow Rate :		0	acfm
10. Percent Water Vapor :		0.00	%
11. Maximum Dry Standard Flow Rate :		0	dscfm
12. Nonstack Emission Point Height :		5	feet
13. Emission Point UTM Coordinates :			
Zone :	0	East (km) :	0.000
		North (km) :	0.000

III. Part 7a - 1

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14. Emission Point Comment :

Assumed to be general solvent cleaning by rubbing or wiping

III. Part 7a - 2

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E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 2

Toluene Diisocyanate Batch Reactor System

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :			
2. Emission Point Type Code :	4		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	F		
6. Stack Height :	0	feet	
7. Exit Diameter :	0.0	feet	
8. Exit Temperature :	0	°F	
9. Actual Volumetric Flow Rate :	0	acfm	
10. Percent Water Vapor :	0.00	%	
11. Maximum Dry Standard Flow Rate :	0	dscfm	
12. Nonstack Emission Point Height :	6	feet	
13. Emission Point UTM Coordinates :			
Zone :	0	East (km) :	0.000
		North (km) :	0.000

III. Part 7a - 3

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14. Emission Point Comment :

III. Part 7a - 4

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14. Emission Point Comment :

III. Part 7a - 4

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F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

VOC Fugitive Emissions

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Fabricated Plastics Products - Solvent Consumption	
2. Source Classification Code (SCC) : 30800703	
3. SCC Units : Tons Used	
4. Maximum Hourly Rate :	5. Maximum Annual Rate : 6.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur :	8. Maximum Percent Ash :
9. Million Btu per SCC Unit :	
10. Segment Comment : VOC Fugitive losses determined by mass balance between solvent purchases and recycled waste solvent. Therefore, Maximum Annual Rate refers to fugitive loss only (all other solvent is returned)	

III. Part 8 - 1

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 2

Toluene Diisocyanate Batch Reactor System

Segment Description and Rate : Segment 1

<p>1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) :</p> <p>Fabricated Rubber Products - Other Not Classified</p> <p>Desired Reaction Product - toluene diisocyanate dimer used as adhesive</p>	
<p>2. Source Classification Code (SCC) : 30800699</p> <p><i>Other not classified - 2000 3-01-999-99 tons produced</i></p>	
<p>3. SCC Units : Tons Produced Or Manufactured</p>	
<p>4. Maximum Hourly Rate :</p>	<p>5. Maximum Annual Rate : 150.00</p>
<p>6. Estimated Annual Activity Factor :</p>	
<p>7. Maximum Percent Sulfur :</p>	<p>8. Maximum Percent Ash :</p>
<p>9. Million Btu per SCC Unit :</p>	
<p>10. Segment Comment :</p>	

III. Part 8 - 2

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1

VOC Fugitive Emissions

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - VOC			EL

III. Part 9a - 1

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G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 2

Toluene Diisocyanate Batch Reactor System

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - VOC	073		EL
2 - H169	073		EL

III. Part 9a - 2

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H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1

VOC Fugitive Emissions

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : VOC			
2. Total Percent Efficiency of Control :	0.00	%	
3. Potential Emissions :	lb/hour	6.0000000	tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:	4	0.00	to 1.00 tons/year
6. Emissions Factor Reference	Units		
7. Emissions Method Code : 2			
8. Calculations of Emissions : See Attached			
9. Pollutant Potential/Estimated Emissions Comment :			

III. Part 9b - 1

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 2

Toluene Diisocyanate Batch Reactor System

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : VOC			
2. Total Percent Efficiency of Control :	97.00	%	
3. Potential Emissions :	lb/hour		23.7500000 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:	2		
	5.00	to	25.00 tons/year
6. Emissions Factor		Units	
Reference			
7. Emissions Method Code : 2			
8. Calculations of Emissions : See Attached			
9. Pollutant Potential/Estimated Emissions Comment :			

III. Part 9b - 1

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Effective : 3-21-96

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 2

Toluene Diisocyanate Batch Reactor System

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : H169			
2. Total Percent Efficiency of Control :	97.00	%	
3. Potential Emissions :	lb/hour	23.7500000 tons/year	
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:	2	5.00	to 25.00 tons/year
6. Emissions Factor Reference	Units		
7. Emissions Method Code : 2			
8. Calculations of Emissions : See Attached			
9. Pollutant Potential/Estimated Emissions Comment :			

III. Part 9b - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
VOC Fugitive Emissions

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype : NA
2. Basis for Allowable Opacity :
3. Requested Allowable Opacity : <div style="text-align: right; margin-right: 20px;">Normal Conditions : % Exceptional Conditions : % Maximum Period of Excess Opacity Allowed : min/hour</div>
4. Method of Compliance :
5. Visible Emissions Comment :

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section . 2
Toluene Diisocyanate Batch Reactor System

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype : NA
2. Basis for Allowable Opacity :
3. Requested Allowable Opacity : <div style="text-align: right; margin-right: 50px;">Normal Conditions : % Exceptional Conditions : % Maximum Period of Excess Opacity Allowed : min/hour</div>
4. Method of Compliance :
5. Visible Emissions Comment :

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section

Continuous Monitoring System Continuous Monitor

1. Parameter Code :	2. Pollutant(s):
3. CMS Requirement	
4. Monitor Information Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment :	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION**

Emissions Unit Information Section 1

VOC Fugitive Emissions

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

- [] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so baseline emissions are zero, and emissions unit consumes increment.
- [] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

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- [] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :			
PM :	SO2 :	NO2 :	
4. Baseline Emissions :			
PM :	lb/hour	tons/year	
SO2 :	lb/hour	tons/year	
NO2 :		tons/year	
5. PSD Comment :			

III. Part 12 - 2

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION**

Emissions Unit Information Section 2

Toluene Diisocyanate Batch Reactor System

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

-] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

III. Part 12 - 3

- [] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM :	SO2 :	NO2 :
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 1

VOC Fugitive Emissions

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Process Flow
2. Fuel Analysis or Specification :	Waived
3. Detailed Description of Control Equipment :	Waived
4. Description of Stack Sampling Facilities :	NA
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Supporting Docu
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :
11. Alternative Modes of Operation (Emissions Trading) :

12. Identification of Additional Applicable Requirements :

13. Compliance Assurance Monitoring Plan
:

14. Acid Rain Application (Hard-copy Required) :

Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))

Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)

New Unit Exemption (Form No. 62-210.900(1)(a)2.)

Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

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L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 2

Toluene Diisocyanate Batch Reactor System

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Process Flow
2. Fuel Analysis or Specification :	NA
3. Detailed Description of Control Equipment :	Waived
4. Description of Stack Sampling Facilities :	NA
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Supporting Docu
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :
11. Alternative Modes of Operation (Emissions Trading) :

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12. Identification of Additional Applicable Requirements :

13. Compliance Assurance Monitoring
Plan :

14. Acid Rain Application (Hard-copy Required) :

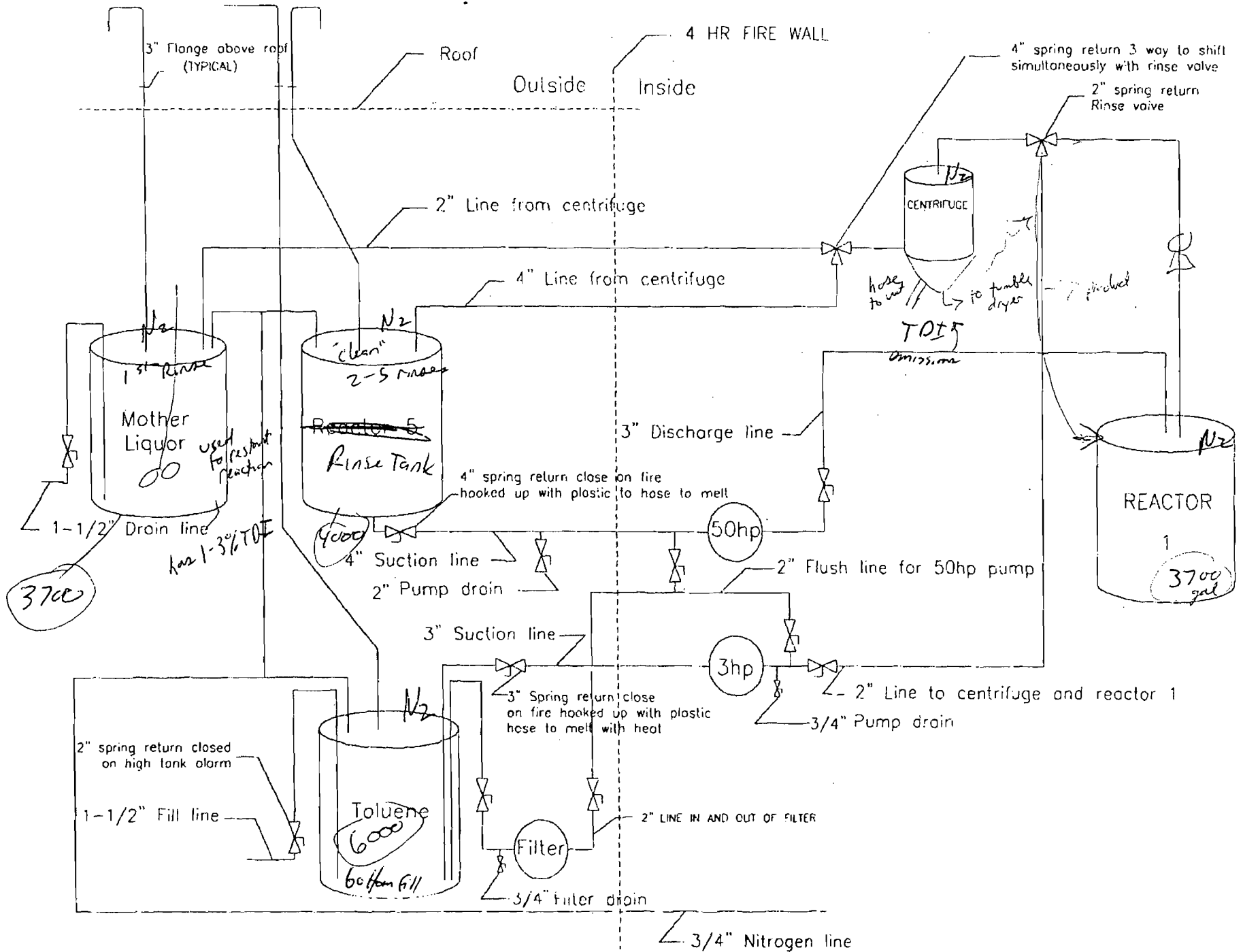
Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))

Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)

New Unit Exemption (Form No. 62-210.900(1)(a)2.)

Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. Part 13 - 2





Environmental
Sciences
Group

Client TSE Industries By CAJ Date 2/09/20

Project _____ Sheet No. _____ of _____

Subject Supporting Documentation Project No. _____

Scale up projection -

200,000 lb of TDI dimer produced in 1st yr -
expect $\approx 10\%$ increase each year. Therefore

use 300,000 lb/yr production rate. At this
rate, the batch reaction should require

$\approx 715,000$ lb toluene annually. Analysis of
the waste toluene revealed between 97% &

99% toluene. The batch reaction has shown
about a 5.5% loss of toluene, therefore the

amount of waste toluene to be recycled is
expected to be $\approx 675,000$ lb annually.

The difference is considered fugitive VOC/HAP
emissions of approx. 20.0 tons toluene/yr. A

buffer of 3.75 tons is requested bringing the
total VOC/HAP toluene emitted to 23.75 ton/yr.

Increase in VOC generated from typical
cleaning and clean-up operations due to
growth. An additional 2.75 ton/yr is requested.