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BUREAU OF AIR REGULATION

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DIVISION OF AIR
RESOURCES MANAGEMENT

SOLUTIA
Applied Chemistry, Creative Solutions

Solutia Inc.
P.O. Box 97
Gonzalez, Florida 32560-0097
Tel 850-968-7000

Mr. Ed Middleswart, P.E.
Florida Department of Environmental Protection
160 Governmental Center
Pensacola, FL 32501-5794

RE: Permit AC17-250268, Emission Unit 76, Quarterly Excess Emissions
Hazardous Organic NESHAP, 40 CFR Part 63 Subpart A/F/G

27-Oct-1999

Dear Mr. Middleswart:

The attached quarterly report of Excess Emissions is for the Huntsman Chemical Company's Maleic Anhydride manufacturing plant which Solutia Inc. operates.

In addition, attached is the periodic report required by per 40 CFR 63.152(c) and (d) of the Hazardous Organic NESHAP, Subpart G.

If you have any questions regarding the information provided, please contact Richard Williams at (850) 968-8482.

Sincerely,

Joseph C. Ochsner
Site Manager

Attachments

RE: Permit AC17-250268, Emission Unit 76, Quarterly Excess Emissions
Hazardous Organic NESHAP, 40 CFR Part 63 Subpart A/F/G

27-Oct-1999

cc:

Howard L. Rhodes
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

Mr. Winston Smith, Director
Air, Pesticides and Toxics Management Division
US Environmental Protection Agency, Region IV
61 Forsyth Street, SW
Atlanta, Georgia 30303-3104

Mr. Ken Keith
Huntsman Petrochemical Corp.
P.O. Box 219
Conroe, TX 77305

Mr. Scott Snedden
Huntsman Chemical Corp.
P.O. Box 219
Conroe, TX 77305

Mr. Don Marley
Huntsman Petrochemical Corp.
P.O. Box 847
Point Neches, TX 77652

Solutia Ine, Gonzalez, Florida

Hunstman Chemical Company MALEIC ANHYDRIDE PLANT

Permit AC17-250268, Emission Unit 76

Quarterly Excess Emission Report
Third Quarter 1999
and
Hazardous Organic NESHAP, 40 CFR Part 63 Subpart A/F/G Report

1- There were no valid occurrences of excess CO emissions from Boilers 7 or 8 during the reporting period.

2- No instances of excess venting occurred (Attachment 1 - Maleic Venting Log)

3- Hazardous Organic NESHAP 40 CFR 63, Subpart G Periodic Report (Attachment 2)

Attachment 1: Maleic Venting Log
3rd Quarter 1999

Date 1999	boiler	Time Start/Stop	Hours	Stack Flow KSCFH	% Comb.	% CO	CO LBS	VOC LBS	Comments
July									
05-Jul	8	1555/1610	0.25	540	0.65	0.42	44	51	B8-Startup - 1 Rx
13-Jul	8	210/232	0.37	2632	1.65	1.07	815	934	B8-Shutdown - 2 Rx
14-Jul	8	1625/1640	0.25	706	0.4	0.26	36	41	B8-Startup - 1 Rx
25-Jul	7	1115/1130	0.25	1289	0.1	0.07	16	19	B7-Malfunction - 1 Rx
25-Jul	7	1430/1445	0.25	1726	0.2	0.13	44	50	B7-Malfunction - 1 Rx
29-Jul	8	1625/1640	0.25	3955	1	0.65	501	574	B8-Malfunction - 2 Rx
30-Jul	8	1655/1740	0.75	3448	1.35	0.88	1770	2028	B8-Malfunction - 2 Rx
August									
01-Aug	8	640/720	0.67	3887	1.45	0.94	1915	2194	B8-Malfunction - 2 Rx
01-Aug	7	1525/1540	0.25	525	0.3	0.20	20	23	B7-Startup - 1 Rx
02-Aug	7	1325/1410	0.75	2263	0.77	0.50	663	759	B7-Malfunction - 1 Rx
03-Aug	7	810/825	0.25	1715	0.6	0.39	130	149	B7-Malfunction - 1 Rx
06-Aug	7	1240/1255	0.25	1170	0.3	0.20	44	51	B7-Malfunction - 1 Rx
10-Aug	7	1725/1740	0.25	667	0.3	0.20	25	29	B7-Startup - 1 Rx
11-Aug	7	1515/1530	0.25	601	0.2	0.13	15	17	B7-Malfunction - 1 Rx
20-Aug	8	555/710	1.25	3986	1.34	0.87	3385	3879	B8-Malfunction - 2 Rx
September									
No venting episodes in September						0.00	0	0	
Total Hours	**6.29**					**Total**	**9424**	**10799**	
Total CO	**9424**								
Total VOC	**10799**								

Attachment 2: HON Subpart G Periodic Report

27-Oct-1999

Hazardous Organic NESHAP
40 CFR 63, Subpart G
Periodic Report

§63.152(c) Periodic Report

§63.152(c)(1) Report submitted semiannually no later than 60 calendar days after the end of each 6-month period. The first report shall be submitted no later than 8 months after the date the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due.

§63.152(c)(2) Periodic Reports shall include all information specified in §63.117 and §63.118 for process vents, §63.122 for storage vessels, §63.129 and §63.130 for transfer operations, and §63.146 for process wastewater, including reports of periods when monitored parameters are outside their established ranges.

§63.117(a)(3) If any subsequent TRE determinations or performance tests are conducted after the Notification of Compliance Status has been submitted, report the data in paragraphs (a)(4) - (a)(8) of this section in the next Periodic Report

No subsequent TRE determinations or performance tests have been conducted after the June 16, 1998 Notification of Compliance Status submittal.

§63.118(f)(1) Reports of daily average values of monitored parameters for all operating days when the daily average values recorded under paragraphs (a) and (b) of this section were outside ranges established in the Notification of Compliance Status or operating permit.

No daily average values required. Exempt as stated in §63.114(a)(3).

§63.118(f)(2) Group 1 points, reports of the duration of periods when monitoring data is not collected for each excursion by insufficient monitoring data as defined in §63.152(c)(2)(ii)(A) of this subpart.

No emission points included in emission average.

§63.118(f)(3) Reports of times and durations of all periods recorded under paragraph (a)(3) of this section when the vent stream is diverted from the control device through a bypass line.

Refer to Attachment 1 above.

§63.118(g) Group 2 change to Group 1

No change from Notification of Compliance Status dated June 16, 1998

§63.118(h) Group 2 TRE>4 change to Group 2 TRE <4

No change from Notification of Compliance Status dated June 16, 1998

§63.118(i) Group 2 flow rate <0.005m^3/min change to Group 2 flow rate >= 0.005 m^3/min and TRE <= 4.0

No change from Notification of Compliance Status dated June 16, 1998

§63.118(j) Group 2 HAP < 50 ppm_v change to Group 2 HAP >= 50 ppm_v and TRE <4.0

No change from Notification of Compliance Status dated June 16, 1998

§63.118(k) Process change

No change from Notification of Compliance Status dated June 16, 1998

§63.122 exempt as stated in 63.119(a)(3)

§63.129 exempt as stated in 63.126(c)

§63.130 source is Group 2. Compliance is through §63.130(f)

§63.152(c)(3) Performance Tests report

No performance tests were conducted during the reporting period

§63.152(c)(4)(i) Reports of process changes as required in §63.118(g), (h), (i) and (j)

Refer to Section §63.152(c)(2) of Periodic Report

§63.152(c)(4)(ii) Supplements required §63.151(i) and (j)

§63.151(i) Not applicable due to no emission averaging performed

§63.151(j)(1) No deliberate change such that group status of any emission point changes

§63.151(j)(2) No change in control device

§63.151(j)(3) No addition of manufacturing process unit

§63.152(c)(4)(iii) No Group 2 change to Group 1

27-Oct-1999

Hazardous Organic NESHAP
40 CFR 63, Subpart G
Periodic Report

§63.152(d)(1) Reports of start-up, shutdown and malfunction required by §63.10(d)(5) of Subpart A. Report may be submitted on same schedule as Periodic Report.

§63.10(d)(5)(i) Periodic startup, shutdown, and malfunction reports.

Startup, shutdown, and malfunction report consist of a letter containing the name, title, signature of owner/operator who is certifying its accuracy.

If actions taken by owner/operator during startup, shutdown and malfunction are consistent with procedures specified in the source's startup, shutdown and malfunction plan, owner/operator state such information in startup, shutdown and malfunction report.

To the best of my knowledge the actions taken by the operator, Solutia, are consistent with the procedures specified in the Startup, Shutdown, and Malfunction Plan for the Maleic Anhydride Process.

Joseph C. Ochsner — 10/25/99

Joseph C. Ochsner
Site Manager, Solutia

Date

SOLUTIA

Applied Chemistry, Creative Solutions

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OCT 28 1999

BUREAU OF AIR REGULATION

Solutia Inc.
P.O. Box 97
Gonzalez, Florida 32560-0097
Tel 850-968-7000

Mr. Ed Middleswart, P.E.
Department of Environmental Protection
160 Governmental Center
Pensacola, Florida 32501-5794

27-Oct-1999

Dear Mr. Middleswart:

This letter is submitted to fulfill the quarterly reporting requirements in 40 CFR 60.334 for the Cogeneration Unit (Emission Unit: 032, AIRS ID: 0330040) at Solutia Inc., Gonzalez, FL facility. The sulfur content of the natural gas was below 0.8 percent during the 3rd quarter of 1999 (40 CFR 60.334(c)(2)).

Attached are copies of the third quarter 1999 monthly natural gas analysis for nitrogen and sulfur as required by 40 CFR 60.334(b)(2)

If you have any questions concerning this information, please contact Richard Williams at (850) 968-8482.

Sincerely,

Joseph C. Ochsner
Site Manager

Attachments: Koch Industries Inc. Natural Gas Analyses (Jul, Aug, Sep)
Dixie Services Inc, Certificate of Natural Gas Sulfur (Jul, Aug, Sep)

cc:
Mr. Alvaro A. Linero, Prof. Eng. Administrator
New Source Review Section
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5505
Tallahassee, FL 32399-2400

Koch Gateway Pipeline Company 08/02/99 11:53:35
Wichita, Kansas PAGE 1
CHROMATOGRAPH REPORT
for 07/99

Chromatograph ID: 002617
Chromatograph Name: solutia - pensacola

CO2	N2	Grav	BTU	Methane	Ethane	Propane	Ibutane	Nbutane	Ipentan	Npentan	C6
0.1920	1.0681	0.6054	1058.2920	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1364	0.7679	0.5965	1044.8009	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1154	0.6448	0.5930	1038.3369	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1316	0.7339	0.5946	1043.3649	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1090	0.6109	0.5916	1038.5522	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0895	0.5061	0.5899	1032.5305	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0947	0.5337	0.5900	1034.7726	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1317	0.7456	0.5946	1043.2311	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1219	0.6692	0.5939	1038.6082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1494	0.7968	0.5984	1049.3447	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1243	0.7184	0.5957	1046.7256	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1331	0.7257	0.5952	1044.4785	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0937	0.5223	0.5913	1036.8483	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1332	0.7438	0.5976	1043.5614	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1707	0.9387	0.6003	1051.4458	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1193	0.6170	0.5920	1038.4606	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1050	0.5815	0.5907	1038.1765	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1136	0.6185	0.5907	1038.7280	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1002	0.5592	0.5899	1035.4271	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
.1034	0.5732	0.5902	1037.6465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
.0982	0.5835	0.5925	1037.3158	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1122	0.6207	0.5910	1040.7180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1296	0.7139	0.5950	1041.9663	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0862	0.5127	0.5899	1035.0566	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1217	0.6634	0.5928	1039.6075	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1081	0.6135	0.5921	1037.7549	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0925	0.5255	0.5901	1035.9557	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0889	0.5137	0.5901	1035.7876	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1270	0.6866	0.5931	1042.1539	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0871	0.5188	0.5899	1035.7571	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.0741	0.4686	0.5899	1033.6519	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
0.1160	0.6489	0.5932	1040.2825								

Marks:

KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	18724
SLN:	2417	Date Sampled:	8/23/99
Customer:	MONSANTO COMPANY	Date Analyzed:	8/27/99
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	7/23/99
Field:		Effective Date:	8/1/99
Cylinder Number:		Sample Pressure (psig):	400
Sample Type:	COMP	Line Pressure (psig):	599
		Line Temperature (deg. F):	81

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.302	0.0	
Carbon Dioxide	1.038	0.0	
Methane	95.364	965.4	
Ethane	2.309	41.0	0.618
Propane	0.624	15.7	0.172
Iso-Butane	0.143	4.7	0.047
Normal Butane	0.114	3.7	0.036
Iso-Pentane	0.035	1.4	0.013
Normal Pentane	0.019	0.8	0.007
Hexanes+	0.052	2.8	0.023
Total	100.00	1035.4	0.916

Ideal Gravity :	0.5886
Real Specific Gravity:	0.5899
Compressibility Factor:	1.002
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	4.200
Grains H_2S / 100 CF:	
ID	BVAR7163
CS	45

Comments:

Pressure base (psia)	15.025	14.735	14.73	14.65
B.T.U / Cubic Foot				
Dry	1058.5	1038	1037.7	1032.1
Saturated	1040.1	1019.9	1019.7	1014.1
At Actual H_20 Content	1058.4	1037.9	1037.6	1032
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	0.934	0.915	0.915	0.91
Gal / MCF Pentanes +	0.044	0.043	0.043	0.043

Distribution: SALTER, ALEX ANALYST: JAMES CAIN

MONSANTO
JANIS ROSS
850-968-8814

OKALOOSA GAS
STEVE ALBIN
850-678-2165

GULF POWER COMPANY
JOCELYN HENDERSON
850-444-6080

DIXIE SERVICES INCORPORATED
POST OFFICE BOX 451 GALENA PARK, TEXAS 77547
713 672 1610 FACSIMILE 713 672 1634

CERTIFICATE OF ANALYSIS

Number: 99238

Date: July 29, 1999

Client: Solutia Incorporated
Post Office Box 97
Gonzalez, Florida 32560-0097

Attention: Ray Heitland

Sample: Natural gas, submitted 7/28/99
Marks: Header pressure 610 temperature 78 °
Date: 7/23/99
P. O. 4503016433

D 3246	Sulfur	6 ppm

Dixie Services Incorporated,

John C. Powers

JCP/kf

DIXIE SERVICES INCORPORATED
POST OFFICE BOX 451 GALENA PARK, TEXAS 77547
713 672 1619 FACSIMILE: 713 672 1634

CERTIFICATE OF ANALYSIS

Number: 99591

Client: Solutia Incorporated
Post Office Box 97
Gonzalez, Florida 32560-0097

Date: August 30, 1999

Attention: Ray Heitland

Sample: Natural gas, submitted 8/26/99
Date: 8/23/99
P. O. 4503016433

D 3246	Sulfur	12 ppm

Dixie Services Incorporated,

John C. Powers

JCP/kf

DIXIE SERVICES INCORPORATED
POST OFFICE BOX 451 GALENA PARK, TEXAS 77547
713 672 1619 FACSIMILE: 713 672 1634

CERTIFICATE OF ANALYSIS

Number: 99925

Date: September 29, 1999

Client: Solutia Incorporated
Post Office Box 97
Gonzalez, Florida 32560-0097

Attention: Ray Heitland

Sample: Natural gas, submitted 9/28/99
Date: 9/22/99
P. O. 4503016433

D 3246	Sulfur	4 ppm

Dixie Services Incorporated,

John C. Powers

JCP/kf

SOLUTIA

Applied Chemistry, Creative Solutions

Solutia Inc.
P.O. Box 97
Gonzalez, Florida 32560-0097
Tel 850-968-7000

Mr. Ed Middleswart, P.E.
Florida Department of Environmental Protection
160 Governmental Center
Pensacola, FL 32501-5794

RE: 40 CFR 60 - Subpart VV - Equipment Leaks of VOC in SOCMI

27-Oct-1999

Mr. Middleswart,

This letter is submitted to fulfill the semi-annual reporting requirements in 40 CFR 60.487(c) for the Huntsman Petrochemicals Corporation's Maleic Anhydride manufacturing plant operated by Solutia Inc. in Gonzalez, FL.

As first noted in L.L. Brown's letter to J.T. Wilburn, USEPA, dated 16-Apr-1984, the Maleic Anhydride manufacturing plant elected to comply with allowable percentage of valves leaking as specified in 40 CFR 60.483-1. The annual performance test was conducted on 09-Sep-1999. One valve was detected at 10,000 ppm and was repaired on 13-Sep-1999 by tightening the packing/union. Retest showed 0 ppm for this valve.

During the semi-annual reporting period 01-Apr-1999 through 30-Sep-1999, no additions were made to the inventory. During the reporting period, the Maleic Anhydride manufacturing plant experienced six process shutdowns on the following dates; (1) 04-Apr-1999, (2) 01-May-1999 thru 06-May-1999, (3) 24-Jun-1999, (4) 14-Jul-1999, (5) 27-Jul-1999 thru 01-Aug-1999, and (6) 28-Sep-1999 thru 30-Sep-1999.

If you have any questions regarding this report, please contact Richard Williams at (850) 968-8482.

Sincerely,

Joseph C. Ochsner
Site Manager

cc:

Mr. R. Douglas Neeley, Chief
Air & Radiation Technology Branch
Environmental Protection Agency, Region IV
Atlanta federal Center, 12th Floor
61 Forsyth Street, SW
Atlanta, GA 30303-3104

Mr. Alvaro Linero, P.E.
New Source review Section
Department of Environmental Protection
2600 Blair Stone Road MS 5505
Tallahassee, FL 32399-2400

William Alumbaugh - Huntsman

SOLUTIA
Applied Chemistry, Creative Solutions

Solutia Inc.
P.O. Box 97
Gonzalez, Florida 32560-0097
Tel 850-968-7000

October 3, 1998

Mr. Ed Middleswart, P.E.
Department of Environmental Protection
160 Governmental Center
Pensacola, FL 32501-5794

RE: 1. DEP Permit AO17-231861, Source ID 10PEN17004042
2. Your letter to J.C. Oschner, dated August 26, 1998, Subj: Report of Facility Inspections on 8/11 and 8/14/98.
3. 40 CFR Part 60, Subpart G, para 60.7 c
4. Solutia letter, J.C. Ochsner to Ed Middleswart, dated September 3, 1998
5. Telephone conversation, Carolyn Salmon, DEP, with Fred Sitten, Solutia, September 24, 1998

Our revised excesses emissions report for the Solutia nitric acid production unit for the first half of 1998 is attached, per the requirements of Specific Condition 7 of the referenced permit and the effective reporting requirements of reference 3.

The report which was submitted to you on September 3 reported 372 hours of analyzer downtime during the first half of 1998. This value was in error because it included downtime during periods when the nitric acid production unit was also shut down. The correct value for total downtime was twelve hours, which included two quarterly audits plus one hour when a chart pen stopped writing. The revised Summary Report and the Excess Emissions table are attached.

If you have any questions, please call Fred Sitten at 968-7349

Sincerely,

J.C. Ochsner
Facility Manager

Attachments:
1. SOLUTIA INC, First Half, 1998 Summary Report
2. Excess Emission Report

cc:

Mr. Alvaro A. Linero, NSPS Coordinator
DEP, Division of Air Resources Management, MS 5505
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Heather Adams
Janice Ross

Solutia Inc.

Revised 1/2/98

SOLUTIA INC., FIRST HALF, 1998 Summary Report

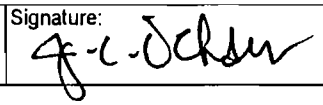
Gaseous and Opacity Excess Emission

and Monitoring System Performance

Pollutant:	NOx		
Reporting period dates:	From: 01/01/98	To:	06/30/98
Company:	Solutia Inc.	Emission Limitation: 2.72 Lbs. of NOx per Ton of 100% Nitric Acid	
Address:	P.O. Box 97 Gonzalez, FL 32560-0097	Monitor Manufacture and Model No.	DuPont Model No. 461
Process Unit Description:	Nitric Acid Plant "E", Source ID #10PEN17004042	Date of latest CMS Certification or audit:	9-Jun-98
		Total source operating time in reporting period (hours):	3,908.7

Emission Data Summary	Hours	CMS Performance Summary	Hours
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Startup/shutdown	62.25	a. Monitor equipment malfunctions	0.0
b. Control equipment problems	0.00	b. Non-Monitor equipment malfunctions	1.0
c. Process problems	3.00	c. Quality assurance calibration	11.0
d. Other known causes	3.00	d. Other known causes (Quarterly Audits)	0.0
e. Unknown causes		e. Unknown causes	
Total duration of excess emissions	68.25	2. Total CMS Downtime	12.0
[Total duration of excess emissions] x 100 / [Total source operating time]	1.75%	3. [Total CMS Downtime] x (100) / [Total source operating time]	0.3%

On a separate page, describe any changes since last period in CMS, process or controls.
I certify that the information contained in this report is true, accurate, and complete.

Name:	Signature:	Title:	Date:
C. Ochsner		Plant Manager	10/2/98

For opacity, record all times in minutes. For gases, record all time in hours. For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

Solutia Inc.

FIRST HALF OF 1998

Excess Emissions, "E" Nitric Acid Plant

Solutia Inc

Hours Emissions exceeded 2.72 lb/ton HNO3

By Cause

Date Started	Time Started	Date Stopped	Time Stopped	Hours	LB NOX PER TON 100% HNO3 Limit = 2.72	COMMENTS	Startup Shutdown	Control Equipment	Process	Other	Unknown
06-Jan-98	7:00	6-Jan-98	12:00	5:00:00	**4.36**	Attempted Startup	5:00:00				
06-Jan-98	14:30	6-Jan-98	17:30	3:00:00	**3.13**	Startup	3:00:00				
07-Jan-98	1:00	7-Jan-98	4:00	3:00:00	**5.17**	Shutdown/Startup	3:00:00				
09-Jan-98	3:00	9-Jan-98	6:00	3:00:00	**4.41**	Shutdown and attempted startup	3:00:00				
09-Jan-98	13:15	9-Jan-98	16:15	3:00:00	**2.89**	Attempted Startup	3:00:00				
09-Jan-98	19:30	9-Jan-98	22:30	3:00:00	**3.11**	Startup	3:00:00				
31-Jan-98	10:15	31-Jan-98	13:15	3:00:00	**2.82**	High after calibration	3:00:00				
01-Feb-98	0:05	1-Feb-98	3:05	3:00:00	**1.43**	Unit Tripped			3:00:00		
05-Feb-98	4:30	5-Feb-98	7:30	3:00:00	**2.96**	Startup	3:00:00				
12-Feb-98	10:00	12-Feb-98	13:00	3:00:00	**3**	High after calibration				3:00:00	
14-Feb-98	10:15	14-Feb-98	13:15	3:00:00	**3.79**	High (?)					3:00:00
11-Mar-98	23:45	12-Mar-98	1:15	1:30:00	**5.77**	Unit shutdown - used 7-15 minute period, pen not inking.	1:30:00				
13-Mar-98	16:45	13-Mar-98	19:45	3:00:00	**4.19**	Startup	3:00:00				
15-Apr-98	15:00	15-Apr-98	18:00	3:00:00	**5.82**	Shutdown	3:00:00				
16-Apr-98	0:15	16-Apr-98	3:15	3:00:00	**3.25**	Startup	3:00:00				
25-May-98	11:30	26-May-95	2:30	3:00:00	2.16	Shutdown					
31-May-98	12:45	31-May-98	16:45	4:00:00	1.11	Startup					
05-Jun-98	9:15	5-Jun-98	12:30	3:15:00	**5.69**	Shutdown/startup	3:15:00				
06-Jun-98	1:00	6-Jun-98	6:00	5:00:00	**5.18**	Shutdown/startup	5:00:00				
06-Jun-98	10:00	6-Jun-98	13:45	3:45:00	1.79	Shutdown					
07-Jun-98	23:00	8-Jun-98	4:30	5:30:00	**4.17**	Startup	5:30:00				
17-Jun-98	9:45	17-Jun-98	12:45	3:00:00	2.18	Shutdown					
17-Jun-98	18:00	17-Jun-98	21:00	3:00:00	**3.96**	Startup	3:00:00				
19-Jun-98	0:30	19-Jun-98	3:30	3:00:00	2.7	Shutdown					
19-Jun-98	20:59	19-Jun-98	23:59	3:00:00	**3.72**	Startup	3:00:00				
20-Jun-98	8:45	20-Jun-98	11:45	3:00:00	**2.84**	Shutdown	3:00:00				
20-Jun-98	12:45	20-Jun-98	15:45	3:00:00	**6.05**	Startup	3:00:00				
							Startup Shutdown	Control Equipment	Process	Other	Unknown
30-Jun-98			TOTAL HOURS	88:00:00			62:15:00	0:00:00	3:00:00	3:00:00	3:00:00
01-Jan-98											

SOLUTIA
Applied Chemistry, Creative Solutions

Solutia Inc.
P.O. Box 97
Gonzalez, Florida 32560-0097
Tel 850-968-7000

September 3, 1998

Mr. Ed Middleswart, P.E.
Department of Environmental Protection
160 Governmental Center
Pensacola, FL 32501-5794

RE: 1. DEP Permit AO17-231861, Source ID 10PEN17004042
2. Your letter to J.C. Oschner, dated August 26, 1998, Subj: Report of Facility Inspections on 8/11 and 8/14/98.
3. 40 CFR Part 60, Subpart G, para 60.7 c

The excesses emissions report for the Solutia nitric acid production unit for the first half of 1998 is attached, per the requirements of Specific Condition 7 of the referenced permit and the effective reporting requirements of reference 3.

If you have any questions, please call Fred Sitten at 968-7349

Sincerely,

J.C. Ochsner
Facility Manager

Attachments (1)

cc: Mr. Alvaro A. Linero, NSPS Coordinator
DEP, Division of Air Resources Management, MS 5505
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Heather Adams
Janice Ross

Solutia Inc.

SOLUTIA INC., FIRST HALF, 1998 Summary Report

Gaseous and Opacity Excess Emission

and Monitoring System Performance

Pollutant:	**NOx**		
Reporting period dates:	From: **01/01/98**	To:	**06/30/98**
Company:	**Solutia Inc.**	Emission Limitation: 2.72 Lbs. of NOx per Ton of 100% Nitric Acid	
Address:	P.O. Box 97 Gonzalez, FL 32560-0097	*Monitor Manufacture* and Model No.	DuPont Model No. 461
Process Unit Description:	Nitric Acid Plant "E", Source ID #10PEN17004042	Date of latest CMS Certification or audit:	9-Jun-98
		Total source operating time in reporting period (hours):	**3,908.7**

Emission Data Summary		CMS Performance Summary	
1. Duration of excess emissions in reporting period due to:	Hours	1. CMS downtime in reporting period due to:	Hours
a. Startup/shutdown	**62.25**	a. Monitor equipment malfunctions	**0.0**
b. Control equipment problems	**0.00**	b. Non-Monitor equipment malfunctions	**1.0**
c. Process problems	**3.00**	c. Quality assurance calibration	**364.0**
d. Other known causes	**3.00**	d. Other known causes (Quarterly Audits)	**8.0**
e. Unknown causes		e. Unknown causes	
2. Total duration of excess emissions	**68.25**	2. Total CMS Downtime	373.0
3. [Total duration of excess emissions] x 100 / [Total source operating time]	**1.75%**	3. [Total CMS Downtime] x (100) / [Total source operating time]	**9.5%**

On a separate page, describe any changes since last period in CMS, process or controls.
I certify that the information contained in this report is true, accurate, and complete.

Name:	Signature:	Title:	Date:
J. C. Ochsner	J-C Ochsner	**Plant Manager**	7/21/98

For opacity, record all times in minutes. For gases, record all time in hours. For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 60.7(c) shall be submitted.

PSD APPLICABILITY ANALYSIS
SOLUTIA INC. NYLON INTERMEDIATES EXPANSION
AREA II, AREA 471, AREA 480 PROJECTS
OCTOBER 5, 1998

BASIS

The following project description and PSD applicability analysis are based on information and assumptions as presented by Solutia in its applications, Solutia's response to request for additional information dated July 17, 1998, information received at a meeting of August 11, 1998 between DEP and Solutia at the Department's NW District office, subsequent telephone conversations between Joe Kahn and Bruce McLeod of August 12th, 13th, and 27th, and e-mail correspondence from Bruce McLeod to Joe Kahn dated August 19, 1998 and September 10, 1998. Attending the meeting of August 11th were Joe Kahn BAR/NSR; Andy Allen, NWD; Armando Sarasua, NWD; Ed Middleswart, NWD; Bruce McLeod, Solutia Inc.; and Ken Kosky, Golder Associates. The conclusions and recommendations in this analysis are based on the New Source Review Section's understanding of the proposed projects and related information as described in the following analysis.

This analysis was performed at the request of the NW District staff to determine if the proposed projects were subject to PSD review. Solutia also requested that this analysis be done to confirm the PSD applicability. This analysis was prepared by Joseph Kahn, P.E., of the Department's Bureau of Air Regulation, New Source Review Section.

SUMMARY

Solutia Inc. operates a facility in Gonzalez (Escambia County) that makes nylon and intermediate chemicals. Solutia has filed a permit application with the NW District office for an expansion of its Adipic acid production capacity. This expansion consists of three related projects--the Area II, Area 471 and Area 480 projects--that include a new production line with a new chemical process to produce the feedstock for the Adipic acid process, and an expansion of the existing Adipic acid production area. Because of associated control equipment and process improvements, emissions of most pollutants will decrease, but potential emissions of PM_{10} will increase. Solutia provided the Department with sufficient information to provide reasonable assurance that the PM_{10} increase will be below the PSD significance threshold for modifications to major sources. Pursuant to the analysis presented below, and assuming the imposition of permit limitations such those described below, it is reasonable to conclude that the proposed Area II, Area 471 and Area 480 projects will not be subject to PSD requirements. The district office can proceed with a minor source construction permit for the proposed projects.

SOLUTIA'S PSD APPLICABILITY DETERMINATION

At the meeting of August 11th Bruce McLeod reviewed the basis for Solutia's determination that it nets out of PSD for its pending permit applications for expansion of Area II, and construction of Areas 471 (Alphox production) and 480 (KA production). The Area 471 process is an entirely new process developed by Russian chemists and Solutia that will use benzene and nitrous oxide (N_2O) to make phenol. The Area 480 process uses that phenol and hydrogen, which will be produced by an Air Products hydrogen plant (via a natural gas reforming process), to make KA, a ketone-alcohol mixture of cyclohexanone and cyclohexanol. The KA produced by Area 480 will be used (along with KA from the existing Area I process) in the expanded Area II to produce more Adipic acid, which is sold as a product and used by Solutia to make nylon salt. The three projects are related, and will increase Adipic acid production capacity. Solutia has proposed them as separate projects because they are subject to different NSPS and NESHAP rules, but Solutia has evaluated emissions from the projects <u>together</u> for PSD applicability.

Solutia has estimated that emissions of all pollutants will decrease substantially as a result of the addition of new control equipment, with the exception of PM_{10}, which will increase by an estimated 14.7 TPY. This is just below the 15 TPY PSD significance level. Emissions of NOx are estimated to decrease by 179 TPY, emissions of CO are estimated to decrease by 102 TPY, and VOC will be reduced by 42 TPY. The NOx Area II emissions estimates are based on past allowable emissions, rather than actual, because previous emissions were in excess of allowable limits; this exceedence was settled via a consent order with the Department.

Solutia concluded that PSD does not apply to the projects, considered collectively. Emissions of most pollutants have been estimated to decrease, except for PM_{10}, which is estimated to increase below the PSD significance level for a major modification to a major source. Solutia believes that the contemporaneous increase provisions of Rule 62-212, F.A.C., are not applicable to this project and its previous expansion. The previous expansion was started in

1994 and increased Adipic acid production from 631 million pounds per year to 850 million pounds per year. Solutia believes the proposed expansion is an independent project from the 1994 project because this expansion was not contemplated in 1994 (so EPA's concept of "project splitting" is not an issue), because that project was undertaken by a different owner (Monsanto) and because the proposed Area 471 process is completely new and unrelated to the existing Area I KA process.

Solutia has not included emissions from the proposed Air Products hydrogen plant since Solutia believes that the Air Products plant is not a "support facility" or under Solutia's control, and thus does not have to be considered in its PSD evaluation. Reviews of the issues of common control of the Air Products plant and contemporaneous emissions change are included in the analysis below.

CONTROL EQUIPMENT

Control equipment associated with these projects include the addition of a backup NOx recirculation compressor in the Area II project which will prevent emissions of NOx in the event of a shutdown of the primary compressor, the addition of an SCR system to reduce NOx emissions from the existing TRU device in Area II from 500 ppm to 150 ppm, the addition of a backup SCR for the TRU that will emit NOx at 150 ppm, and the addition of a backup organic control device (OBUD) in the Area 471 project to control VOC and CO from Area 471 and Area I in the event of a shutdown of the TRU. Nitrous oxide from Area II, which formerly required control or disposal, will be routed to Area 471 as a raw material. Offgas from the Area 480 process will be controlled by combustion in Solutia's hydrogen plant, with the Air Products hydrogen plant as a backup. The liquid distillation residue from Area 471 will be routed to Solutia's Boiler #4 for combustion with the Area I liquid residue stream, or sent off site for contract disposal. The liquid distillation residue from Area 480 will be routed to the Air Products hydrogen plant for combustion. Solutia will store this waste, or route it to Boiler #4, or send it off site for contract disposal in the event of a shutdown of the Air Products hydrogen plant. Including a permit condition to require Solutia to secure alternate disposal option(s) seems prudent and is suggested in the discussion of suggested permit conditions below.

The control equipment must be operated to meet the emission rates proposed in Solutia's application. Given the interrelationship between the projects and the various control equipment proposed, the permit should explicitly require that the control equipment be operational upon startup of the proposed projects. This suggestion is reiterated below.

AIR PRODUCTS HYDROGEN PLANT

Solutia intends to purchase hydrogen from a proposed Air Products hydrogen plant on adjacent property. The Air Products plant will sell hydrogen to Solutia for use in the Area 480 process. Solutia expects to utilize about a third of the Air Products plant maximum capacity. Air Products will also provide steam to Solutia for process use. As noted above the plant will also serve as the primary means of disposal of the Area 480 liquid residue. Solutia will provide backup alternatives for this waste. The Air Products plant will also serve as a backup control for the Area 480 offgas, in the event that Solutia's hydrogen plant is not operating. In the meeting with the Department, Bruce McLeod discussed Solutia's relationship with Air Products regarding the proposed hydrogen plant: Solutia has no financial interest in the Air Products plant, other than its contractual obligation to purchase hydrogen. Solutia will have no lease/purchase clause in its contract, and is not intending to purchase the plant in the future. Most of the hydrogen produced by the plant will be transferred via an Air Products pipeline connected to Air Products' Pace facility for sale to other customers. Operation of the Air Products plant is not required for the control of the Area 480 waste, or for the production of steam.

Solutia has confirmed that its contract with Air Products does not provide Solutia any financial ownership interest in the hydrogen plant, nor any option to acquire an ownership interest. Thus, Solutia is not an owner of the plant. Solutia also described that it will pursue an alternate disposal option for the Area 480 liquid waste if Air Products plant shuts down or is unavailable to handle this waste. Securing one or more back-up disposal options for this waste prior to startup of Area 480 seems prudent and could be required as a permit condition if the district agrees it is appropriate. This suggestion is reiterated below.

Emissions from the Air Products hydrogen plant are what EPA terms "secondary emissions". The 1990 draft New Source Review Workshop Manual defines secondary emissions as emissions which are associated with a source but are not emitted from the source itself. Specifically these are emissions that come from a facility that would not be

constructed or, if constructed, increase emissions except as a result of the construction of the source under review. [See p. A.16 of the manual.] It seems clear to the Department that the Air Products facility will be located next to Solutia because Solutia will be a major customer, and that if Solutia did not increase its hydrogen requirements as a result of its proposed projects, the Air Products plant would either not be constructed, or would be constructed elsewhere. Thus, the emissions from the Air Products plant are secondary emissions. However, secondary emissions are excluded from the potential emissions estimates used for applicability determinations. They must be considered only if the project is subject to PSD review. [See p. A.18 of the manual.] Since the Department agrees with Solutia that its projects are not subject to PSD review, the secondary emissions from the Air Products plant will not be considered as part of Solutia's permit review. (This, of course, does not relieve Air Products from the obligation to obtain a construction permit for its emission sources.)

Although the Air Products facility will be closely linked operationally with Solutia's facility, it is reasonable to conclude that, given the facts as presented, the projects should not be considered under common control. Solutia's description that its demand for hydrogen will represent approximately one third of the production capacity of the proposed Air Products plant conforms to EPA's guidance that it should not be considered a support facility. (EPA discusses the percentage test for support facilities in the October 1990 draft New Source Review Workshop Manual.)

EMISSIONS ESTIMATES

Many of Solutia's emission estimates rely on emission factors or AP-42 information to account for fugitive and unmeasurable emissions. Some of the estimates rely on engineering judgment because insufficient data exists for the new Area 471 process. For example, the emission factor for NOx from natural gas combustion in the Area 471 estimates was increased by a factor of two to account for uncertainty. A major weakness in the Area 471 NOx emissions calculations is the use of an estimated 15% conversion factor for NOx converted from N_2O in the OBUD while firing process gas. This factor is from research published by DuPont, and the emissions estimate resulting using this factor is 99.37 TPY. Emissions of NOx will, of course, be very sensitive to this factor, and the entire reduction of NOx emissions could be eliminated if this factor is triple that estimated. Bruce McLeod stated that Solutia would commit to testing to verify this emission rate, if possible, and would install additional controls if necessary to meet this emission rate. The emission rate from the OBUD while firing process gas should be measured and verified upon plant construction, and additional controls should be installed if needed to meet the equivalent emission rate of approximately 99 TPY; this is included as a suggested permit requirement below.

Solutia's conclusion that the projects are not subject to PSD is very sensitive to the assumptions used in the estimates of PM_{10} emissions. PM_{10} results primarily from two processes: combustion emissions and emissions of Adipic acid particulate from the Area II refining process. Combustion emissions are from combustion of natural gas in the Area 471 OBUD and combustion emissions from the TRU in Area II. The PM emission factor for the Area 471 estimates is approximately twice the AP-42 factor, and is based on test data on Solutia's hydrogen plant. Thus, these estimates have some degree of reliability. The combustion emission factor for Area II is from AP-42, and may be less reliable, although it is rated "B". Combustion of process gas in the OBUD is not expected to produce PM_{10} in a significant quantity because the process gas has little fuel value. Emissions from combustion of natural gas have been accounted for year-round from the OBUD by including estimations for the pilot fuel, hot standby and assist modes.

Most in question are the refining emissions from Area II which are estimated by an AP-42 factor of 0.1 lb PM/ton of Adipic acid. This emission factor is rated "E". Although AP-42 includes a footnote for this factor that states it is based on a baghouse control device, there are no baghouses associated with the refining operation since the refining results in a wet product. Refining is done by chilling, crystallization and centrifugation. The Adipic acid solution is chilled by vacuum evaporation and the Adipic acid crystals form in the bottom of this process vessel. The Adipic crystals slurry is fed into a centrifuge which removes water and forms a cake. The wet cake is pushed out down a chute into pure water where the crystals are redissolved, and the solution is sent to the nylon production line. Although the emission factor is rated poorly, arguably the factor may tend more to overstate emissions, rather than understate them, considering the wet nature of the process. It is not feasible to perform emission testing to confirm these emissions. The reasonable conclusion is that the emissions estimate from Adipic acid refining is acceptable.

Although the emissions estimates for PM_{10} are not exact or absolute because they rely on emission factors, a review of the estimates suggests that they are reasonable. Solutia has evidently made an effort to attempt to account for all

sources of PM_{10} emissions in its analysis. Changes not accounted for in Solutia's original analysis are changes in emissions resulting from firing distillation liquid wastes from Area 471 and Area 480 in Boiler #4. Solutia proposes to use Boiler #4 as the primary means of disposal for the Area 471 wastes, and as a possible backup means of disposal for the Area 480 wastes in the event the Air Products hydrogen plant is not functioning, as an alternative to storing the Area 480 wastes. Solutia evaluated changes in PM_{10} emissions from the proposal to burn Area 471 and Area 480 liquid wastes in Boiler #4 and concluded that no emission increase is expected. This evaluation considered that firing wastes may offset the use of existing permitted fuels such as number 6 fuel oil.

Solutia requested that the Department comment on the possibility that the relative emissions from combustion of natural gas at various emissions units may change, provided the total emissions increase does not change. While Solutia has made a reasonable effort to estimate the overall emissions increase from its proposed projects by allocating natural gas consumption to its emissions units, the assumptions used in its evaluation are subject to variability. It is possible that upon construction of the proposed projects, Solutia discovers that natural gas usage is higher than it estimated within some or all of the emissions units. If this occurs, Solutia may demonstrate that its total emissions increase is no greater than it estimated by accounting for such unforeseen changes, and by compensating for them by decreasing natural gas consumption elsewhere. Typically, this is not necessary where an applicant has made a careful effort to estimate emissions, which Solutia has done. However, the complexity of Solutia's operation may make such a change necessary, and clearly, Solutia has the burden to advise the Department if its overall emissions estimate proves to be inaccurate. However, this approach would only be necessary if the natural gas consumption is greater than estimated in its application.

NO CHANGE IN DRYING EMISSIONS

AP-42 also lists an emission factor for drying, cooling and storage of Adipic acid crystals. These emissions are not accounted for in Solutia's PM emissions analysis because sales of dried Adipic acid will not be increased as part of these projects. Bruce McLeod stated in a telephone conversation with Joe Kahn on August 12, 1998 that increased sales would require the addition of another dryer, and Solutia does not plan to install another dryer. All of Solutia's dryers run continuously, except for downtime for repair, so providing significant additional dryer capacity will require a physical modification. Solutia has tested the dryers for particulate emissions and Solutia accounts for emissions based on grain loading and air flow rate. All of the increased production of Adipic acid associated with this project will be used in the manufacture of nylon salt, which does not require drying, cooling, storage and loading of crystals. Since no changes are proposed in the drying capacity of Adipic acid crystals, no change in emissions from this operation should occur.

It would be possible for Solutia to increase future Adipic drying capacity through the addition of new dryers. If this increase is a result of expansion of production capacity from the proposed projects, Solutia would be required to offset the increase in PM emissions by an equal or greater amount from reductions in emissions elsewhere. Solutia has flexibility in selecting where to achieve these offsets. For example, Solutia could upgrade dust collection systems on its bulk loading operations or terminate use of an operation to provide offsetting emissions.

CONTEMPORANEOUS EMISSIONS CHANGE

PM_{10} emissions from Adipic acid refining resulting from the 1994 expansion need not be considered as a contemporaneous emissions change as described in Rule 6-212.400(2)(e)3, F.A.C. Although Rule 62-212, F.A.C., makes no clarifications about when contemporaneous changes need not be counted, the Department has, since the 1980s, followed EPA guidance on accounting for contemporaneous changes. EPA's policy is that contemporaneous increases or decreases need not be considered unless a proposed modification, considered by itself, results in a significant net emissions increase. A memo dated September 18, 1989, Request for Clarification of Policy Regarding the "Net Emissions Increase", includes a discussion of when to count contemporaneous increases. EPA writes, "In other words, the netting calculus (the summation of contemporaneous emissions increase and decreases) is not triggered unless there will be a significant emissions increase associated with the proposed modification." [p. 2.] The 1989 memo refers to a 1983 memo titled Net Emission Increase Under PSD which states that EPA's position since 1981 has been that no aggregation of small changes is required. The 1989 memo does go on to note that project splitting to avoid PSD is not allowed. The issue of project splitting is addressed elsewhere in this analysis. EPA's guidance is clear on the issue of contemporaneous increases, and, because the Department follows EPA's guidance, Solutia is not required to include the emissions from the 1994 expansion with those of the proposed projects.

EPA's guidance requires that any subsequent project with emissions above major source thresholds must include an analysis of contemporaneous emissions increases and decreases. Under that scenario, emissions from these projects would be included in that analysis.

COLLATERAL CHANGES -- DEBOTTLENECKING

When plant capacity is changed, the applicant is required to evaluate plant-wide emissions increases that will occur as a result of the proposed project. These increases are called "debottlenecking increases." [1990 Draft NSR Workshop Manual, p. A.46.] Debottlenecking of emissions units results when a process-limiting unit ("bottleneck") is modified to increase its capacity (i.e., remove the bottleneck) and the associated emissions units upstream and downstream of the bottleneck can operate at a higher rate and emit more pollutants. Solutia, in e-mail dated August 19, 1998 from Bruce McLeod, evaluated the upstream and downstream collateral emission changes associated with producing more Adipic acid for nylon salt production. He evaluated the impacts on emissions from the nylon process, the Hexamethylene Diamine process, Solutia's hydrogen plant, increased Dimethyl Ester production, increased AGS byproducts storage and combustion, and the requirement for more nitric acid. No collateral emissions increases of PM_{10} are associated with the currently proposed projects. Solutia is considering a future increase in nylon polymerization capacity, which would have an associated increase in VOC emissions. Solutia also could conceivably increase its nitric acid plant capacity, which becomes more likely the closer the Adipic acid production gets to the 1100 MAR target. This would have associated increases in NOx emissions. Neither of these possible changes have an associated increase in PM_{10} emissions.

Future expansions that will result in emissions increases will be modifications and require construction permits. If those changes are directly related to the currently proposed projects, the emissions increases should then be evaluated with consideration for the emissions increases or decreases associated with this project. If increases in nitric acid production or nylon polymerization are not directly related to the proposed project, contemporaneous emissions increases or decreases need be considered only if the future emissions increases exceed the PSD thresholds for major modifications at existing major facilities, in accordance with EPA guidance. (The issue of contemporaneous emissions changes has been discussed previously.) Since the nitric acid and nylon polymerization processes are not associated with PM_{10} emissions, expansions of these processes will not materially affect the issue of PSD applicability for the proposed Area 471, Area 480 and Area II projects.

POTENTIAL TO EMIT AND SHAM PERMITS

Establishing the potential of a source to emit air pollutants is fundamental to the review of PSD applicability. In the case of Solutia's proposed projects, the pollutant of concern for PSD applicability is PM_{10} because the increase potential to emit (PTE) associated with the projects is fairly close to the major modification threshold of 15 tons per year. Solutia has calculated the PTE for PM_{10} on the basis of its proposed Adipic acid production capacity of 1100 MAR. How PTE for PM_{10} is determined or limited is pertinent to PSD applicability should Solutia desire to expand its Adipic acid production capacity in the future. Some discussion of sham permits is needed to understand the regulatory approaches required regarding PTE.

EPA has established by rule and guidance that sources must not avoid major source review by obtaining "sham" permits that purport to limit the source to minor levels only to relax those limits in the future, or that split major projects into multiple minor projects. EPA compels this prohibition in the permitting process primarily by two mechanisms: by examining the intent of the source, and by implementing the source obligation requirements. The permitting authority must examine the intention of the source in applying for a minor source permit, and should deny the permit if the source intends to improperly avoid PSD. Part of the "source obligation" requirements found at 40 CFR 52.21(r)(4) (included in Department rules as Rule 62-212.400(2)(g), F.A.C.) state that a source that accepts a limit on capacity or hours of operation becomes subject to PSD if, solely by virtue of relaxation of the limit, it becomes a major source. The PSD review is then done as if the source was not constructed. The topics of PTE and sham permits are discussed in some detail in the following paragraphs.

Obviously, a major part of the determination of whether a source is major or minor is review of the estimation of potential to emit. The emissions estimation must take into consideration the maximum source capacity, unless otherwise limited by permit condition, in order to properly determine the applicability of major source review (PSD in this case). EPA is concerned that sources may attempt to seek temporary permit limitations on PTE, or to split up major sources into two or more minor source projects, as a means of circumventing the preconstruction review requirements of major source review. An attempt to do these through minor source permitting results in what EPA

terms sham permits. Review of EPA guidance suggests that an important aspect of a major source applicability analysis (in addition to the review of the emissions estimation) is consideration of the intention of the applicant. Obviously, the closer a projected project is to the major source significance criteria, the more important it is to determine if an applicant is seeking a sham permit to escape major source review.

In its guidance memo, Limiting Potential To Emit In New Source Permitting, dated June 13, 1989, EPA writes about sham permits: "In the past year, several sources have obtained purportedly federally enforceable permits with operating restrictions limiting their potential to emit to minor or de minimis levels for the purpose of allowing them to commence construction prior to receipt of a major source permit. In such cases where EPA can demonstrate an intent to operate the source at major source levels, EPA considers the minor source construction permit void ab initio and will take appropriate enforcement action to prevent the source from constructing or operating without a major source permit." [p. 10.] EPA is evidently serious that sources should not subvert major source review by obtaining sham permits. Sham permits cannot allow a source to avoid major source review. EPA continues its discussion by relating the intention of the source to the future action of relaxing the permit limits. The memo reads, "[I]t is improper to construct a source with a minor source permit when there is intent to operate as a major source ..." [p. 11.] Relaxing the permit limits soon after beginning operation, of course, confirms that the minor source permit was a sham that subverted major source review. Note that EPA specifically refers to the intent of the source. Thus, when issuing a permit that limits a source to minor source levels, the Department must clearly understand that the intent of the applicant is not to obtain a sham permit. The same evaluation is arguably required when evaluating a project with PTE that is close to a major source threshold.

There are two underlying issues involved in examining the PTE for PM_{10} for Solutia's proposed projects, and both issues are related to EPA's prohibition on improperly avoiding major source review. We must be satisfied that the permit Solutia will receive is not a sham permit. One issue to be considered is whether a permit limitation on Adipic acid production capacity is required to establish the PTE for PM_{10}. Solutia has asserted that its Adipic acid production capacity will be physically limited so no permit limitation is required to limit PTE. The other issue is that of project splitting, or pursuing a project that increases emissions in multiple parts to intentionally avoid PSD review. Solutia has provided information to support its claim that the process will be physically limited by heat transfer capability and AGS removal rates, as well as production capacity of the reagents. Solutia has confirmed that it has no plans for further expansion of its Adipic acid production capacity within the scope of its planning horizon. We can examine how these issues affect regulatory requirements in more detail below.

PHYSICAL LIMITATION ON POTENTIAL TO EMIT

Solutia has asserted that no permit limitation is required to limit the PTE of PM_{10} because its Adipic acid production capacity will be physically limited. If no limitation on capacity is required to limit PTE because the source is physically limited, then there is no future issue of relaxing a PTE limitation. Stated another way, if the source calculates its PTE on the basis of its maximum operation or production rate, then it can only increase its PTE by making a physical modification, and not by solely relaxing a permit limit. A physical modification would not automatically trigger PSD review under Rule 62-212.400(2)(g), F.A.C. (40 CFR 52.21(r)(4)) because there can be no increase in emissions solely by relaxation of a permit limitation. So, where a source's capacity is physically limited, reiterating that capacity in a permit condition will not result in the burden of automatic PSD review under the source obligation requirements. This is because the production limit is not required to establish a limitation on pollutant emitting capacity. In fact, no production limit is required in the permit where PTE is calculated at the maximum production capacity of the source; this is recognized in EPA guidance discussed below. This does not preclude the Department from stating the physical capacity in a permit, for purposes of defining capacity for testing requirements, or to confirm the basis of the emissions calculations, to cite two examples.

EPA's guidance addresses the question of whether a source with a capacity that is physically limited needs to have a limitation in its permit to reflect that capacity, for the purpose of establishing that its potential to emit is less than major source thresholds. In the guidance memo Limiting Potential To Emit In New Source Permitting of June 13, 1989, EPA states, "Whether a new source or modification is major and subject to new source review under Parts C and D of the Clean Air Act is dependent on whether that source or modification has or will have the potential to emit major or significant amounts of a regulated pollutant. Therefore, the definition of "potential to emit" under the

new source regulations is extremely important in determining the applicability of new source review to a particular source. The federal [and state] regulations define "potential to emit" [in part] as:

> the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.
> 40 CFR 52.21(b)(4) [and Rule 62-210.200(228), F.A.C.]" [p.1.]

The memo emphasizes the use of permit conditions to limit potential to emit because, "[p]ermit limitations ... are the easiest and most common way for a source to obtain restrictions on its potential to emit." [p. 1.]

The memo continues its discussion of limitations on potential to emit by including some of the regulatory history: "Before [the Alabama Power court decision], EPA regulations required potential to emit to be calculated according to a source's maximum uncontrolled emissions. In Alabama Power, the D.C. Circuit remanded those regulations to EPA with instructions that the Agency include the effect of in-place control equipment in defining potential to emit. EPA went beyond the minimum dictates of the D.C. Circuit in promulgating revised regulations in 1980 to include, in addition to control equipment, any federally enforceable physical or operational limitation." [p. 4.] It is clear from this that EPA has always recognized that a source could calculate its potential to emit based on maximum uncontrolled emissions. As a result of court decisions, EPA added flexibility on determining potential to emit to allow for limitations on emissions to be considered, as long as those other limitations are federally enforceable. This reasoning does not negate the original case that a source's maximum uncontrolled emissions are its potential emissions in the absence of other limitations. EPA makes no mention that a source's uncontrolled capacity need to be reiterated in a permit to be effective. One could reasonably conclude EPA did this because a given source cannot exceed its physical capacity; the laws of nature make it so.

EPA continues its memo by describing how potential to emit should be calculated in general: "Potential emissions are defined as the product of a source's emission rate at maximum operating capacity, capacity utilization, and hours of operation." The memo continues, "To appropriately limit potential to emit consistent with the opinion in Louisiana-Pacific, all permits issued pursuant to [major source rules] must contain a production or operational limitation in addition to the emission limitation in cases where the emission limitation does not reflect the maximum emissions of the source operating at full design capacity without pollution control equipment." [pp. 5 - 6] Here again, EPA is clear that production or operational limitations are not required in PSD permits where potential to emit is based on maximum uncontrolled operation. The same would certainly be true for minor source permits. Further emphasis that production or operational limits are not required when the source is limited by its physical capacity is found in the memo. For example, the memo reads, "When permits contain production or operational limits ...", thus implying that not all permits must contain limits on production or operation. [p. 6.]

Another EPA memo, Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act (Act), undated (but presumed to be issued January 25, 1995), supports the idea that physical limitations can be used to determine potential to emit. In the section titled Determination of Maximum Capacity, EPA writes, "While EPA and States have been calculating potential to emit for a number of years, EPA believes that it is important at this time to provide some clarification on what is meant in the definition of potential to emit by the 'maximum capacity of a stationary source to emit under its physical and operational design.' Clearly, there are sources for which inherent physical limitations for the operation restrict the potential emissions of individual emission units. Where such inherent limitations can be documented by a source and confirmed by the permitting agency, EPA believes that States have the authority to make such judgments and factor them into estimates of a stationary source's potential to emit."

The 1989 memo also addresses this: "An emission limitation alone would limit potential to emit only when it reflects the absolute maximum that the source could emit without controls or other operational restrictions. When a permit contains no limits on capacity utilization or hours of operation, the potential to emit calculation should assume operation at maximum design or achievable capacity (whichever is higher) and continuous operation (8760 hours per year)." [p. 7.] The effect of EPA's guidance is that, absent a limitation on production capacity to make the proposed projects collectively a minor source of emissions, Solutia must make a demonstration that emissions have been calculated based upon the maximum design or achievable capacity.

Solutia has asserted that its Adipic acid production capacity will be physically limited so no permit limitation is required to limit PTE. Solutia's burden in this analysis is that it shows the PTE is based on the maximum design capacity. Solutia has met its burden by demonstrating the physical limitations on the production capacity and by basing its emissions calculations on that capacity. As mentioned previously, from the practical perspective, it makes little difference for a source with PTE calculated at maximum production capacity, whether a permit condition reiterates that capacity or not. EPA is clear that such a permit condition is not required to limit PTE, but the Department may have reasons to write such a condition. In the case at hand, Solutia can only increase production in the future by performing a physical change; it cannot increase production solely by relaxing a limit on production capacity. A physical change that increases emissions is considered a modification, and that modification would itself be subject to PSD review with, for example, a related major threshold for PM_{10} of 15 tons per year. The only caveat is that a future project to expand production capacity cannot be part of a deliberate attempt to avoid PSD review via project splitting, as discussed below.

PROJECT SPLITTING

As described previously, a source engages in project splitting when it obtains a minor source permit, only to quickly obtain another minor source permit to further expand its production capacity (and its emissions). The issue of project splitting is addressed in the 1989 memo Limiting Potential To Emit In New Source Permitting, which reads: "Permits with conditions that do not reflect a source's planned mode of operation are void ab initio and cannot act to shield the source from the requirement to undergo preconstruction review." [p. 12.] And, "[I]mplicit in that application of these limitations is the understanding that they comport with the true design and intended operation of the project." A minor source permit would be discovered to be a sham if the source subverts PSD by coming in shortly after issuance for another minor source permit to construct additional production capacity. In a memo dated September 18, 1989, Request for Clarification of Policy Regarding the "Net Emissions Increase", EPA writes, "Of course, attempts by applicants to avoid PSD review by splitting a modification into two or more minor modifications constitutes circumvention of the PSD requirements." [p. 2.] It is clear that project splitting is not allowed.

The Department must evaluate project splitting by looking to the intent of the source. Solutia's burden is that it demonstrate that it does not intend to subvert PSD review by project splitting. Solutia has made this demonstration by reviewing the previous expansion and by evaluating the likelihood of future expansion. Solutia believes the proposed expansion is an independent project from the 1994 project because the current projects were not contemplated in 1994, because the previous expansion was undertaken by a different owner (Monsanto) and because the Area 471 process is completely new and unrelated to the existing Area I KA process. It seems reasonable that this new chemical process was not considered in 1994, so Solutia's reasoning seems valid. Bruce McLeod of Solutia has confirmed that Solutia has no plans for further expansion of its Adipic acid production capacity within the scope of its planning horizon. Solutia has confirmed that its planning horizon is coincident with the term of the requested construction permit: five years. This is a reasonable length of time for a company to forecast its plans. Of course, the issue of project splitting may need to be evaluated in the future, particularly if another project to expand Adipic acid production capacity is proposed shortly after this project is permitted.

RISKS AND BENEFITS TO THE DEPARTMENT AND SOLUTIA

There is some risk, both to the Department and Solutia, involved in determining potential emissions based on maximum physical capacity. The risk to the Department is easier to understand, and, simply stated, it is the risk that the actual emissions will be greater than the estimated emissions. This could result from a number of variables in the emissions estimate. The assumptions or factors used to develop the estimate could be incorrect or the methodology could be flawed; insufficient information could be presented to properly estimate emissions or to reasonably account for all potential emissions; or an alternate approach could yield a much different emissions estimate. With the proposed projects, where PM_{10} emissions are so closely tied, via the emission factors, to the Adipic acid production rate, improperly estimating the production rate could result in a different emission rate.

EPA's 1995 memo, Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act (Act), refers to just this problem: "For larger sources involving multiple emissions units and complex operations, EPA believes it can be more problematic to identify the inherent limitations that may exist." Thus, for a complex operation such as Solutia's, EPA recognizes that it will be difficult for both the source and the Department to determine variables related to actual physical capacity, and thus, to quantify the limitations

on potential emissions. The Department can minimize the risk that the source's emissions estimate is incorrect by scrutinizing the assumptions made in the estimate, by soliciting clarification and additional information, and by independently estimating emissions where possible.

Once that is done, the remaining risk in this case is that the actual physical capacity of the Adipic acid process turns out to be greater than Solutia's target capacity of 1100 million pounds per year (annual rate or MAR). In a telephone conversation with Joe Kahn on August 12, 1998, Bruce McLeod described that the process of physically expanding the Area II capacity would be one of adding equipment and making physical changes, then determining the bottlenecks in the Adipic acid process and correcting them until the capacity reaches the target of 1100 million pounds per year. Because the production process is complex, Solutia cannot precisely determine beforehand what exact equipment is needed to meet the target capacity, although it can identify the number of major components such as process vessels and pumps it must install. The production of Adipic acid is also limited by the production capacities of the Area I and Area 471/480 processes, and by the capacity of the AGS by-product removal system, which are easier for Solutia to define according to Bruce McLeod. Thus, there are some uncertainties with construction of the Area II expansion that could result in exceeding the target capacity. This risk is fairly easy to control. The Department can impose a production limit that is the same as Solutia's target capacity, and can require a compliance demonstration by keeping records of the rolling 12-month total Adipic acid production.

Both the Department and Solutia benefit from the above approach. Both are assured that the emissions estimate is reasonably accurate and that the conclusion, that PSD does not apply, is correct. Both benefit from the imposition of a production limitation, although this is less intuitive. Without a production limitation, Solutia has the burden of affirmatively demonstrating that its physical production capacity will be physically limited, an intricate affair for its Adipic acid production process. By accepting a limit on Adipic acid production, Solutia does not need to elaborately demonstrate that its capacity will be limited. Solutia needs only to make a reasonable attempt at defining the Adipic acid production capacity, which it has done. Its burden is lessened, although Solutia still bears some risk.

The primary risk to Solutia is that it has underestimated its future production capacity. The effect of a limitation on production capacity will be to indefinitely limit the Adipic acid production capacity unless Solutia does one of two things: it applies for a construction permit to increase capacity by making a physical change, or it asks for a relaxation of the production limitation to accommodate an increase in Adipic acid production without physical changes. The first approach, a physical modification, poses no undue risk on Solutia. Provided that Solutia has not engaged in project splitting (discussed in more detail previously), it would simply apply for a new construction permit, and determine if increases in emissions exceed major source significance thresholds. For PM_{10}, Solutia could again increase emissions up to less than 15 tons per year as a result of a modification without triggering PSD. The second approach, a relaxation on the production limitation, could easily trigger PSD for the currently proposed projects as though construction had not yet commenced on them. At that time, presuming the requested relaxation on production capacity will result in an emissions increase of PM_{10} that is greater than or equal to 0.3 TPY (15 TPY - 14.7 TPY), the relaxation and the Area I and Area 471/480 processes will be subjected to PSD review. This is part of the source obligation requirements codified in Rule 62-212.400(2)(g), F.A.C. (40 CFR 52.21(r)(4)) which were discussed previously.

Other risks to Solutia are that it has used incorrect assumptions or factors to estimate emissions and that it has not accounted for all potential emissions. The Department shares these risks with Solutia, and reduces them as discussed above. Solutia has minimized these risks by making a reasonable attempt to identify all affected emissions sources and estimating potential emissions.

In summary, a permit limitation on Adipic acid production should be included to enhance the assurance that the PM_{10} emissions increase associated with the Area II expansion is limited to maintain the overall emissions increase below the 15 TPY major source threshold. This limitation should be the same as Solutia's target production rate of 1100 million pounds of Adipic acid per year (which is the intended physical capacity), although the limit should be expressed as a rolling 12-month total limitation with compliance by record keeping. That suggestion is reiterated below.

REASONABLE ASSURANCE

The NW District office should impose federally enforceable permit conditions on Solutia and Air Products to provide or enhance reasonable assurance, pursuant to Rule 62-4.070, F.A.C. Such conditions may include the following.

To address the issue of common control of the Air Products plant:

- Require Air Products, in its permit, to connect the hydrogen plant to its pipeline as part of the Air Products construction permit.
- Require Air Products, in its permit, to report the amount of hydrogen produced each month and the amounts sold to Solutia and delivered to the pipeline each month.
- Require Solutia to secure one or more back-up disposal options for the Area 480 liquid waste prior to startup of the Area 480 process.

To confirm the estimated reductions in NOx:

- Require testing to verify the NOx emission rate from OBUD while firing process gas, and require installation of additional controls if necessary to meet an equivalent annual NOx emission rate from this device of approximately 99 TPY.

To enhance reasonable assurance that the PM_{10} emissions increase is below the PSD threshold:

- Limit Adipic acid production in the permit to Solutia's target production rate of 1100 million pounds per year. The permit should specify the limit as a rolling consecutive 12 month total. The permit must specify a means of demonstrating compliance with this limit, such as making and maintaining records of the monthly and rolling 12-month total amounts of Adipic acid produced.

To ensure that the control equipment will be operated to meet the emission rates proposed in Solutia's application:

- Identify in the permit the control equipment associated with each project and require that the control equipment for each project be operational upon startup of that project.

CONCLUSION

Assuming the imposition of permit limitations such as those described above, and given the assumptions detailed in this analysis, it is reasonable to conclude that the proposed Area II, Area 471 and Area 480 projects will not be subject to PSD requirements.

Date: 08/28/1998 11:40:17 AM
From: Joseph Kahn TAL
Subject: Clarification
To: bpmcle@solutia.com@in
CC: Andy Allen PEN

Bruce,

As we discussed yesterday, I wanted to write to clarify the second bulleted item in my e-mail of August 25, 1998. That item is related to demonstrating that the production capacity of the Adipic acid process will be physically limited to the 1100 MAR design. Since the Department will include a limitation on Adipic acid production (most likely on a 12-month rolling total basis), Solutia's burden of demonstrating the physical limitation is lessened. I would still like a response to this item, but it need not include confidential details about the process design. The permit limitation will not unduly subject Solutia to future PSD consequences under the source obligation requirements because a future production increase at a source that is physically limited will require a physical change (a modification). The source obligation requirements only apply when a source increases production solely by relaxing a permit limitation (in other words, without a physical change or modification). I will include a discussion of this in my applicability analysis.

-Joe

8/13 Joe
Trendid pay a substantial penalty and put on backup equipment. EPA liked this settlement.
Clair

NEW ASBESTOS NESHAP ENFORCEMENT CASES

Northwest District, Fort Walton County, Ramada Beach Resort. A warning letter was issued to the owners of Ramada Beach Resort, Fred Tolbert and Joe Brown, due to violations found during an inspection of a demolished two story wing of the hotel on January 21, 1998. Violations found were: no notification of a demolition had been received prior to the demolition; and no asbestos survey had been conducted.

Southeast District, Dade County, Sagamore Hotel. Dade County issued a warning letter to four parties - the facility operator, Mark Gardner, the owner, Kane Concourse Partnership, and the abatement contractors: Silvers Design Building Corp. and South Florida Salvage Systems. The violations consisted of improper handling and removal of asbestos containing materials during renovation of the hotel.

Southeast District, Palm Beach County, Former Greatwestern Bank. Palm Beach opened an enforcement case for owner, Carl Desantis, for violations including: no notification and improper removal and disposal of approximately 14,000 square feet of RACM during a renovation.

RESOLVED ASBESTOS NESHAP ENFORCEMENT CASES

There were no Asbestos enforcement cases resolved during the month.

NEW STATIONARY SOURCE ENFORCEMENT CASES

Southwest District, Hillsborough County, Tampa Steel Erecting Company. Hillsborough County issued a warning letter to Tampa Steel Erecting Company for exceedance of the VOC RACT content of coating.

Central District, Brevard County, Patrick Air Force Base. Central District issued a warning letter to Patrick Air Force Base for not conducting visible emissions tests for four boilers during fiscal year 1997.

Northwest District, Wakulla County, Stratus Petroleum Corporation. Northwest District issued a warning letter after an inspection on January 28, 1998 found operation of the terminal loading rack without the required pollution control equipment.

Northwest District, Gadsden County, Quincy Joist Company. An inspection determined that Quincy Joist was operating a surface coating operation which has the potential to emit VOC's in excess of 100 tons per year without a construction or operation permit. A warning letter was issued.

Central District, Brevard County, Orlando Utilities Commission - Indian River Plant. A warning letter was issued to Orlando Utilities Commission for stack test failures for NOx at turbines C and D.

Central District, Marion County, Asphalt Pavers. A warning letter was issued in June, 1997, after a complaint inspection revealed excessive emissions escaping from the facility's process equipment and shake assembly.

Central District, Orange County, Winter Garden Citrus. Orange County issued a warning letter to Winter Garden Citrus for construction of a peel dryer and boiler without a permit.

Northeast District, Duval County, Anheuser Busch. Duval issued a warning letter to Anheuser Busch for late submittal of test reports for NO_x and VE. The tests results for the turbine and the duct burner were 24 days late.

RESOLVED STATIONARY SOURCE ENFORCEMENT CASES

Southeast District, Dade County, Tarmac America, Inc. Tarmac signed a consent order and was assessed a penalty of $200,000 resolving the NO_x PSD violations at kiln 2. Tarmac has paid $150,000 of the penalty, with the remaining amount to be used towards offsetting the costs of continuous emission monitoring installation at kiln #2. Until installation of the CEMS, Tarmac will conduct monthly NO_x emission verification testing. As part of the consent order, Tarmac has submitted an application to convert to technology that meets the BACT NO_x limits in their permit.

Central District, Marion County, Asphalt Pavers. Asphalt Pavers signed a consent order and paid a penalty of $1,200 for excess emissions. Corrective actions included repairs to the facility's process equipment and shaker assembly; installation of fabric seals and sealant to the shaker; and conducting a Method 9 visible emission test. DEP observed the VE test and found the source to be back in compliance.

Southwest District, Polk County, Lakeland Drum Service, Inc. The case cited against Lakeland Drum Service for various recordkeeping discrepancies noted during a joint DEP/EPA inspection was resolved through compliance without formal enforcement. The facility will manually insure the correct number of operating hours are recorded until implementing a new Environmental Tracking System.

Southwest District, Polk County, IMC-Agrico, Nichols Plant. Southwest District determined no violations occurred at the Nichols facility regarding the installation of a differential pressure measuring and recording device on one of two scrubbers. The District determined the current system met the NSPS requirement. Violations against the New Wales (late testing: VE and PM) and South Pierce (late testing: VE) facilities are still to be resolved.

Northeast District, Nassau County, Rayonier. Rayonier signed a consent order and was assessed a penalty of $43,875.14 for three stack test failures for PM at the recovery boiler. Costs already incurred, $19,500, will be applied as credit towards the penalty amount for installation of additional compliance assurance equipment for the recovery boiler.

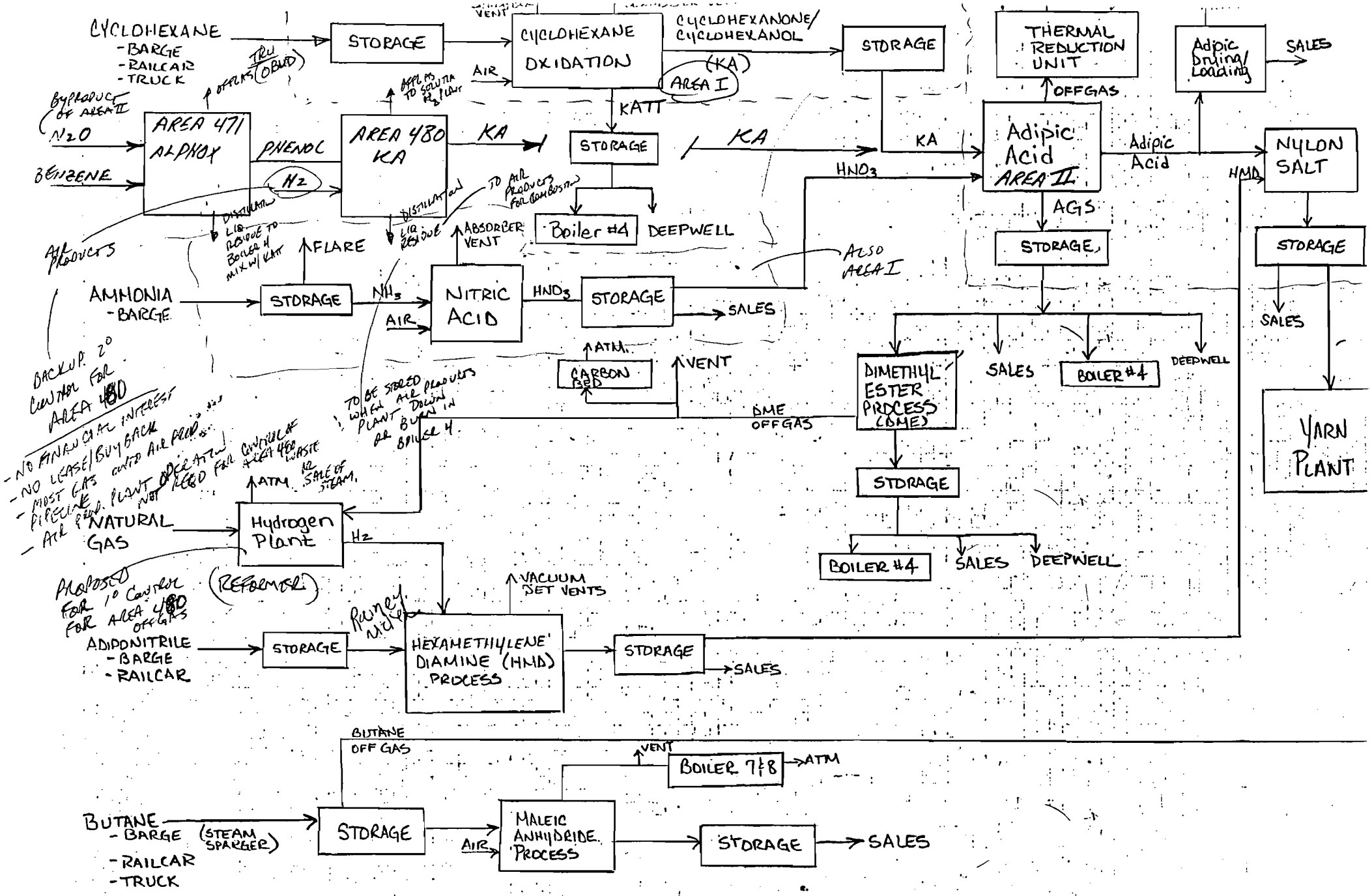
Northwest District, Escambia County, Solutia Inc. Solutia signed a consent order and paid a penalty of $208,375 for NO_x emissions above the 500 ppm limit at the adipic acid manufacturing plant thermal reduction unit. Emissions were actually 2049 ppm determined through a continuous emission monitor and testing. Additionally, the NO_x compressor system was inoperative, and released NO_x emissions which normally are collected. Testing protocol, loading rate exceedances, and not maintaining the dryer scrubber were also noted. Under the consent order, NO_x emissions are not to exceed the limit; corrective actions include backup systems for the reduction unit and the compressor to be installed.

Northeast District, Duval County, Ameristeel. Ameristeel signed two consent orders, one for the March 1997 violation of a failed stack test for VOC at the electric arc furnace. The penalty amount of $54,080 has been paid and the unit has tested back in compliance. Additionally, Ameristeel signed a consent order for violations at the same unit for late test submittal of NO_x and VOC test reports. A penalty of $3,680 was paid.

Northeast District, Duval County, Jefferson Smurfit. Jefferson Smurfit signed two consent orders and paid a penalty of $1,920 for failure to maintain pollution control equipment in August 1997 at the power boiler. Additionally, a $960 penalty was paid for failure to maintain pollution control equipment in July 1997, at the bark/coal boiler.

Southwest District, Polk County, Shell Chemical Company. Shell Chemical signed a consent order and paid a $1,000 penalty for improper operation when two chemicals were inadvertently mixed at a tanker-trailer. Improved markings on the storage trailers and construction of a new raw material tank will prevent a reoccurrence.

Central District, Indian River County, City of Vero Beach Power Plant. The City of Vero Beach signed a consent order and paid a penalty of $1,300 for excess opacity due to improper operation at unit 4.



- OBUD IS FOR CO/VOC BACKUP CONTROL FOR TRU - FLOWS AREA I, 471

PENSACOLA INTERMEDIATES FLOW DIAGRAM

8/11/98

- ADDING 2° COMPRESSOR IN AREA II FOR NO_x RECIRC.
ADDING SCR SYSTEM FOR TRU.

AREA II EXPANSION INCLUDES SCR. REQ NOx FROM 500ppm TO 150 ppm.

AREA II EXP. RESULTS IN DECR. VOC BY INSTALLATION OF OBUD AT AREA 471, FOR AREA I OFFGAS. REQ. FROM 209.7 TO 22.9 TPY.

CHECK AREA II VOCs WHEN THRU DOWN — ACCOUNTED FOR AS "PROCESS OFFGAS OXIDATION REACTION VOC".

AREA 471 NO_x EMISS. FACTOR BASED ON BURNER SELECTION. ESTIMATED BASED ON 2x ENG. ESTIMATE. NOT AT POINT YET TO OBTAIN GUARANTEED MAX EMISS.

OBUD - PROCESS GAS NO_x EST. FROM DUPONT PAPER → WHICH SUGGESTS 15% CONV. FROM N_2O TO NO_x (NO). CAN THIS NO_x BE TESTED? 1500°F GAS. INITIAL DEMONSTRATION TESTING TO DETERMINE/CONFIRM CONV. EFFICIENCY. AUGMENT W/ SCR IF REQD TO MEET 99.37 TPY.

EXPANDING AREA II

→ PM_{10} EMISSIONS FROM AP-42 ADIPIC ACID REFINING & NAT. GAS COMBUSTION. 14.7 TPY INCREASE.

AIR PRODUCTS HYDROGEN PLANT
- NOT A SUPPORT FACILITY
- MANAGES SOLUTIA WASTE STREAM — CONTINGENCIES IF AP PLANT DOWN.
- 2° CONTROL FOR EMISSIONS
- NO FINANCIAL INTEREST

→ 1994 EXPANSION IN AREA I KA PROCESS DURING MONSANTO — SEPARATE BUSINESS DECISION. DIFFERENT PROCESS.

SOLUTIA:
- NEW CHEMISTRY
- NOT PART OF A SINGLE PROJECT.

↓ INCR AREA II

631 MILLION LBS/YR TO 850 MILL LB/YR

NEED RESPONSE TO NWD BEFORE AUG 21ST.

DEP Memorandum; Solutia Response

From: Bruce McLeod, P.E.
Solutia Inc.
Sent Via E-Mail

To: Joe Kahn, P.E.
DEP, DARM
Bureau of Air Regulation, New Source Review Section

Copy: Andy Allen, P.E.
NW District Office, Air Permitting
Sent Via E-Mail

Date: August 19, 1998

Re: PSD Applicability Analysis
Area II, Area 471 and Area 480 Projects

Solutia response to DEP Tallahassee 8/14/98 Email items (**bullet items, shown in bold**) needed in order to conclude the PSD applicability analysis.

DEP Item:

- **Please evaluate the upstream and downstream collateral emission changes associated with producing more adipic acid for nylon salt production. Evaluate the impacts on the nylon process, the Heaxamethylene Diamine process, Solutia's hydrogen plant, increased AGS byproducts storage and combustion, increased Dimethyl Ester production, and any other relevant process unit.**

Solutia Response:
An increment of Nylon polymerization capacity increase is being planned. The nylon polymerization process is considered a VOC source, but not a not a PM10 source. VOC emissions of approximately 20-30 tons per year would be the potential emissions impact of the likely nylon polymerization expansions. This amount of VOC emissions increase is still well below the expected VOC reductions from the nylon intermediate expansions projects.

The existing hydrogen Plant is currently operating under an existing construction permit which will bring it to its maximum capacity. No further expansion is planned.

The Hexamethylene Diamine process is considered a VOC source, but not a PM10 source. VOC compounds only and these emissions occur primarily from the distillation columns vacuum systems. Vacuum system emissions are considered to be independent of column operating rate. No additional distillation columns are expected at this time.

The existing nitric acid plant is currently operating under a construction permit to bring it to its maximum capacity. Additional nitric acid will be needed to allow Adipic acid manufacturing up to 1100 MAR capacity. Current plans are to buy nitric acid. As production rates increase, the economic justification increases to produce additional nitric acid through means, such as, constructing a new

Solutia nitric acid plant, a joint venture nitric acid plant or obtaining nitric acid from a 3rd party nitric acid plant (with all options potentially occurring on Solutia property). Therefore it is conceivable that Solutia may submit a construction permit for a new nitric acid plant during the term of the Area II construction permit. Nitric acid plants are considered to be a NOx source but not a PM10 source.

The DME production unit is considered to be a VOC source but not a PM10 source. Although no expansion in this area is currently planned, if expanded, the result would be minimal VOC emissions, since the process off-gas is routed to the existing Solutia hydrogen plant reformer furnace for destruction. No additional natural gas would be needed to combust the DME off-gas.

Increased AGS by-product production will occur as a result of the Adipic 1100MAR expansion. AGS handling emissions are accounted for by the Adipic acid refining AP-42 factors, These emission estimates have been included in the construction permit application for Area II Nylon Intermediates. AGS by-product fuel combustion has been recently suspended, since implementation of the Dimethyl Ester production facility. Additional AGS produced as a waste stream from the Area II Purge system , if not used in the DME process, will be disposed in the plant process waste system. As an alternative to AGS by-product fuel burning in Boiler 4, residue burning from Area 471 and possibly from Area 480, is being considered.

DEP Item:

- **Please provide an affirmative demonstration that the total adipic acid production capacity will be no greater than the target 1100 MAR that is used as the basis for the PM_{10} estimates. This demonstration may be based on the adipic acid expansion design specifications and/or the design capacity specifications of the Area 471/480 process and the existing capacities of Area I and nitric acid processes.**

Solutia Response:
The Adipic acid production capacity will be limited to 1100 MAR based on two primary factors.

First, the ability of the low temperature converters, which react KA to produce Adipic acid, will be designed to allow instantaneous KA feedrates in conformance with the maximum KA processing rates specified in the Adipic acid construction permit application for the 1100 MAR expansion project.

Second, the AGS by-product removal system (Purge system) will be redesigned to allow sustained AGS removal, on a long-term basis, to support 1100 MAR Adipic acid production rate. This by-product AGS must be removed to ensure Adipic acid of acceptable quality.

The above two factors; the ability of the converters to process the KA and the ability of the Purge system to remove AGS by-product waste, will been the primary constraints to operation above 1100 MAR Adipic acid production.

It is anticipated that the Area II construction permit will require TRU emissions testing while feeding the maximum KA to the low temperature converters while measuring NOx emissions from the SCR treating the TRU stack gas. This will be a short-term measure of maximum production capacity. The Solutia measure of Adipic acid production rate would be determined from accounting information for the December 31, year end total. An acceptable alternative would be a rolling 12 month total of Adipic acid accounting production information.

DEP Item:

- **Please provide any information supporting Solutia's assertion that a physical production limitation need not be included as a federally enforceable limitation in the permit.**

Solutia Response:
The Area II Nylon Intermediates expansion permit (1100MAR) is expected to fulfill the projected Adipic acid demand through the term of the construction permit, based on the information available at this time.

DEP Item:

- **Please provide information about the percent of hydrogen plant capacity that Solutia will use from the Air Products plant to confirm that Solutia is not the sole user of hydrogen from the plant.**

Solutia Response:
Solutia is currently planning to utilize about one third of the expected Air Products hydrogen plant maximum capacity. The fact that Air Products will install a pipeline to transport hydrogen between the Solutia plant and the Air Products Pace plant, should be clear evidence that Solutia is not intended to be the sole user of the planned Air Products hydrogen plant output.

DEP Item:

- **Please provide information about the relationship between Air Products and Solutia to confirm Solutia's representations that it does not have a financial interest in the plant now, nor will it acquire the plant in the future.**

Solutia Response:
Solutia is not pursuing a financial interest in the Air Products hydrogen plant, now or in the foreseeable future. Solutia will be a customer of Air Products, who will supply other customers from this unit through the Air Products Pace site. In the event that the Department wishes to review the relevant portions of the contract between Solutia and Air Products a company confidential copy can be made available for review, assuming Air Products approves of the action.

DEP Item:

- **Please confirm that Solutia will provide backup control for the Area 480 liquid waste if the Air Products plant shuts down, and describe how quickly Solutia can implement its secondary options.**

Solutia Response:
Solutia has a number of options in the event that the Air Products hydrogen plant cannot burn the liquid waste from the Area 480 process. Some of these options include off-site contract incineration or fuel use in boiler 4. If desired, a permit condition could be written so that prior to startup Solutia would inform the Department that a backup residue disposal option has been secured. Contract disposal is a routine activity at the Solutia Pensacola plant and this option can be implemented in a few weeks if needed. Storage tank capacity for the residue will be designed to allow a minimum of one tank truck volume to be stored for off-site shipment, if necessary.

DEP Item:

- **Please estimate any PM_{10} emissions increase resulting from the firing of liquid waste streams from Areas 471 and 480 in Boiler #4. This should be a past actual to future potential emissions comparison.**

Solutia Response:
There is no expected increase in PM10 emissions from boiler 4 as a result of burning of the liquid residue streams from Areas 471 and 480, based on the emissions that would be expected if the boiler was burning and equal amount of No. 6 fuel oil, for which it is currently permitted. This is because the composition of the residue streams will be comparable to or better than No. 6 fuel oil. The process residue streams will contain relatively low ash, metals, halogens, and sulfur as compared to No. 6 fuel oil.

The total amount of residue burning in boiler 4 should remain relatively constant because the amount of decrease of AGS and Fuel oil burning (1994 basis) is comparable to the expected amount of Area 471 and 480 residue. More recent time periods are not representative of AGS/Fuel Oil burning rates, because the Start-up of the DME process in 1994 began a shift of AGS to away from fuel use to raw material supply for DME manufacture. Additionally it is believed that burning of these residues would not be a modification for PSD purposes because the boiler was equipped to handle residual fuels (No. 6 fuel oil) before January 6, 1975, as addressed in Florida regulation 62-212.400(c)(4)

Additional Solutia notes:
Although the Adipic acid construction permit does not contain any planned dry Adipic acid capacity increase, it should be noted that in the event that business conditions make this necessary, Solutia would expect to offset any new Adipic dryer PM10 emissions by an offsetting reduction in Adipic acid bulk loading facility PM10 emissions. If acceptable to the Department, this would potentially allow a component of dry Adipic acid expansion without triggering any of the PSD review premises or conflicting with any emissions information contained in the Area II Nylon Intermediates construction permit application.

In order to conform to the emission rate estimates in the Area 471, Area 480 and Area II Nylon Intermediates construction permit applications, pollution control devices will be placed in service no latter than the startup of area expansion emission units.

August 19, 1998

J. C. Ochsner, Facility Manager
Solutia, Inc.
P O Box 97
Gonzalez FL 32560-0097

Dear Mr. Ochsner:

This is in response to the Air Construction Permit Applications that you recently submitted and the additional information letter of July 17, 1998 for the proposed Nylon Intermediates Expansion at your Pensacola facility with the following file numbers:

Area II Expansion	0330040-011-AC
Area 471 Expansion	0330040-010-AC
Area 480 Expansion	0330040-012-AC

This letter requests clarification on issues raised from your response letter and the recent meetings we have held with your staff. The applications remain incomplete. Please provide the information listed below promptly. Further action regarding these applications will be delayed until the information has been received.

1. Please provide the following information to verify PSD applicability in the analysis of these expansions, including the hydrogen plant.

1.a. Please evaluate the upstream and downstream collateral emission changes associated with producing more adipic acid for nylon salt production. Evaluate the impacts on the nylon process, the Hexamethylene Diamine process, Solutia's hydrogen plant, increased AGS byproducts storage and combustion, increased Dimethyl Ester production, and any other relevant process unit.

1.b. Please provide an affirmative demonstration that the total adipic acid production capacity will be no greater than the target 1100 MAR that is used as the basis for the PM_{10} estimates. This demonstration may be based on the adipic acid expansion design specifications and/or the design capacity specifications of the Area 471/480 process and the existing capacities of Area I and nitric acid processes.

1.c. Please provide any information supporting Solutia's assertion that a physical production limitation need not be included as a federally enforceable limitation in the permit.

1.d. Please provide information about the percent of hydrogen plant capacity that Solutia will use from the Air Products plant to confirm that Solutia is not the sole user of hydrogen from the plant. What are future plans for increased use of plant output by Solutia?

1.e. Please provide information about the relationship between Air Products and Solutia to confirm Solutia's representations that it does not have a financial interest in the plant now, nor will it acquire the plant in the future. What is the contractual relationship between Air Products and Solutia?

1.f. Please confirm that Solutia will provide backup control for the Area 480 liquid waste if the Air Products plant shuts down, and describe how quickly Solutia can implement its secondary options.

1.g. Please estimate any PM_{10} emissions increase resulting from the firing of liquid waste streams from Areas 471 and 480 in Boiler 4. This should be a past actual to future potential emissions comparison.

1.h. How will the hydrogen plant manage a residue stream and serve as a back-up control for VOCs for Solutia?

2. Please provide, for each emission unit in Areas 471, 480, and II, the pollutant detail information in the appropriate application form pages for Cyanide compounds (H054), Benzene (H017), and Phenol (H144).

3. Please provide a summary of the expansion schedule including the hydrogen plant, and identify all new pollution control equipment and appropriate parameters to ensure that the equipment is operating properly.

3.a. Provide an expansion schedule showing when each pollution control device will be place in service including the role of the Hydrogen Plant regarding emission controls. Pollution control devices must be in service prior to starting area expansion emission units.

3.b. We need some conceptual understanding of all the emission control devices and the operating parameters that will be used to provide assurance that the facility is being properly operated to comply with the commitment that emissions are going to be reduced. Please include information for reasonable assurance as to the design, function and effectiveness of the proposed Organic Back-Up Device (OBUD).

When referring to these projects, please use the appropriate file numbers indicated above. If you have any questions, please contact Armando Sarasua at (850) 595-8364.

Sincerely,

Ed K. Middleswart, P.E.
Air Program Administrator

EKM:asc
cc: DEP Division of Air Resources Management, Tallahassee

Memorandum

To: Bruce McLeod, P.E.
Solutia Inc.
Sent Via E-Mail

From: Joe Kahn, P.E.
DEP, DARM
Bureau of Air Regulation, New Source Review Section

Copy: Andy Allen, P.E.
NW District Office, Air Permitting
Sent Via E-Mail

Date: August 14, 1998

Re: PSD Applicability Analysis
Area II, Area 471 and Area 480 Projects

Bruce,

Thank you for taking the time to clarify issues by telephone the last few days. As we discussed, in order to conclude the PSD applicability analysis, I will need the following information.

- Please evaluate the upstream and downstream collateral emission changes associated with producing more adipic acid for nylon salt production. Evaluate the impacts on the nylon process, the Heaxamethylene Diamine process, Solutia's hydrogen plant, increased AGS byproducts storage and combustion, increased Dimethyl Ester production, and any other relevant process unit.
- Please provide an affirmative demonstration that the total adipic acid production capacity will be no greater than the target 1100 MAR that is used as the basis for the PM_{10} estimates. This demonstration may be based on the adipic acid expansion design specifications and/or the design capacity specifications of the Area 471/480 process and the existing capacities of Area I and nitric acid processes.
- Please provide any information supporting Solutia's assertion that a physical production limitation need not be included as a federally enforceable limitation in the permit.
- Please provide information about the percent of hydrogen plant capacity that Solutia will use from the Air Products plant to confirm that Solutia is not the sole user of hydrogen from the plant.
- Please provide information about the relationship between Air Products and Solutia to confirm Solutia's representations that it does not have a financial interest in the plant now, nor will it acquire the plant in the future.
- Please confirm that Solutia will provide backup control for the Area 480 liquid waste if the Air Products plant shuts down, and describe how quickly Solutia can implement its secondary options.
- Please estimate any PM_{10} emissions increase resulting from the firing of liquid waste streams from Areas 471 and 480 in Boiler #4. This should be a past actual to future potential emissions comparison.

Memorandum

To: Bruce McLeod, P.E.
Solutia Inc.
Sent Via E-Mail

From: Joe Kahn, P.E.
DEP, DARM
Bureau of Air Regulation, New Source Review Section

Copy: Andy Allen, P.E.
NW District Office, Air Permitting
Sent Via E-Mail

Date: August 25, 1998

Re: PSD Applicability Analysis
Area II, Area 471 and Area 480 Projects

Bruce,

Thank you for taking the time to respond by e-mail to my previous memo. After reviewing your response, I have the following comments and need some further information on a few of these. My comments are in the order originally presented. Note that you will have to address the questions presented in the district's request for additional information in a formal written response to them. You should include in that response information that results from our e-mail correspondence. Again, I've copied Andy Allen on this to keep the district informed.

- Future changes that will result in emissions increases will be modifications and require construction permits. If those changes are directly related to the proposed project, the emissions increases should then be evaluated with consideration for the emissions increases or decreases associated with this project. If increases in nitric acid production or nylon polymerization are not directly related to the proposed project, contemporaneous emissions increases or decreases need be considered only if the future emissions increases exceed the PSD thresholds for major modifications at existing major facilities, in accordance with EPA guidance. (I will cite the guidance on contemporaneous emissions changes in my analysis.) Since the nitric acid and nylon polymerization processes are not associated with PM_{10} emissions, expansions of these processes will not materially affect the issue of PSD applicability for the proposed Area 471, Area 480 and Area II projects, so your answer is satisfactory for the current analysis.

- If Solutia can satisfy the Department that the production capacity of the Adipic acid process (Area II) will be physically limited to 1100 million pounds annual rate (MAR), then no limitation would be required in the permit for the purpose of synthetically limiting the project's emissions below PSD thresholds. The Department's district office may opt to include an Adipic acid production limit (on a rolling 12-month total basis, for example) to establish capacity for testing purposes. Such a limitation would not be to establish a limitation on pollutant emitting capacity, and presumably would not subject Solutia to the burden of PSD review under Rule 62-212.400(2)(g), F.A.C. (part of the "source obligation" requirements also found at 40 CFR 52.21(r)(4)) if the facility were expanded in the future as a result of a separate project, not associated with the proposed project.

However, more detailed information is required to demonstrate that Solutia can design the expansion so that the capacity is physically limited. Please describe what will physically limit the low temperature converters, and what instantaneous feedrates will equate to the 1100 MAR design capacity. Similarly, please describe what will physically limit the AGS removal rates. How much variability is inherent in the design of the process equipment? What is the possibility that the actual capacity could be greater than the design capacity? If Solutia is relying on a operating capacity factor in determining its capacity, please provide the basis for that factor. Note that according to our legal counsel Solutia must make the demonstration of a physical limitation before it receives a permit, so demonstrating the production rate after construction is not an option.

- Although the response that the proposed project will fulfill Adipic acid demand addresses the term of the construction permit, Solutia should certify that it does not intend another expansion within its planning horizon. The term of the permit is not fixed, given that construction permits are issued for the length of time necessary to construct the project. EPA guidance suggests that an important aspect of a major source applicability analysis (in addition to the review of the emissions estimation) is consideration of the intention of the applicant regarding avoiding PSD. Obviously, the closer a projected project is to the major source significance criteria, the more important it is to determine if an applicant is seeking a sham permit to escape major source review. The Department needs to consider if a source seems to intend to subvert PSD review by obtaining a minor source permit now, only to obtain another minor source permit relatively soon to expand.

  The information you provided addresses this point well, but the timeframe needs to be Solutia's planning horizon. Please confirm that your response covers that timeframe. Your formal response to the district office should include a certification by the authorized representative that further expansion of Solutia's Adipic acid production capacity is not being planned within the scope of Solutia's planning horizon.

- The response regarding the percent of the Air Products hydrogen plant is satisfactory.

- Contract documents are not required to establish the relationship between Solutia and Air Products. Solutia can submit them if it is in its interest to do so. The authorized representative for Solutia should affirm that no financial interest exists or is contemplated. This should be done as part of Solutia's response to the district's request for additional information.

- Backup control for the Area 480 liquid waste can be required as a permit condition. I will make this recommendation to the district office as part of the PSD analysis.

- I am not going to consider whether Rule 62-212.400(2)(c)4., F.A.C., is or is not applicable to boiler #4 for the issue described because that path is fraught with complexity. However, the remainder of the response that emissions are not expected to increase is satisfactory.

Regarding the additional notes in your response:

I agree that Solutia could offset PM_{10} emissions increases from additional dryers by reducing emissions from other sources such as bulk loading. I will make that clear in my analysis.

The control equipment must be operated to meet the emission rates proposed in Solutia's application. Given the interrelationship between the projects and the various control equipment proposed, I would expect that the district will choose to explicitly require in the permit that the control equipment shall be operational upon startup of the proposed projects.

Response Memorandum

To: Joe Kahn, P.E.
DEP, DARM
Bureau of Air Regulation, New Source Review Section
(Sent Via E-Mail)

From: Bruce McLeod, P.E.
Solutia Inc.

Copy: Andy Allen, P.E.
NW District Office, Air Permitting
(Sent Via E-Mail)

Date: September 10, 1998

Re: PSD Applicability Analysis
Area II, Area 471 and Area 480 Projects

Following is the additional information requested in your 8/25/98 Email to me, which is needed to allow completion of the PSD applicability assessment you are preparing for the DEP Northwest District. Each response item relates to a bullet item in the original email from you. I have included the original message text below for reference as well as a relevant clarification memo.

Solutia Response:
The first bullet item did not require a Solutia response.

The second bullet item requested more information regarding how the Adipic acid facility was physically limited:

> A primary rate limitation of the low temperature converters is the converter exit temperature. The KA reaction to Adipic acid is exothermic. To control the reaction, the heat of reaction is removed by means of a heat exchanger. The converter capacity is limited by the heat transfer capability at which the maximum safe converter exit temperature is reached. Operating temperature limitations are specified in plant operating instructions and are referenced as Operation plans in the Solutia Pensacola plant Title V application. These operating instructions are on file and are available for Department inspection.
>
> The physical limitations of AGS removal rates are more complicated, but is related to ion exchange system capacity, di-basic acid crystallization and centrifugation capacities. Maximum operating rate limitations of this equipment is also described in plant operating instructions. These documents are also available for Department inspection.

Production capacity can be highly variable on a daily basis, hence the need for a annual total capacity description. However the instantaneous KA feedrate corresponding to 1100 MAR Adipic design capacity after the application of operating capacity factors has been supplied in the Area II construction permit application. This is supplied for use as a short-term production rate indicator.

The third bullet item requested information with regard to Solutia's planning horizon for the Adipic acid process.

The Area II Nylon Intermediates expansion application to 1100 MAR Adipic acid capacity is a five-year term construction permit. This construction permit term corresponds to Solutia's planning horizon. Therefore at this time, given the predicted capacity needs, expansion to 1100 MAR Adipic acid extends out to Solutia's planning horizon.

The forth bullet item did not require a Solutia response.

The fifth bullet item requested an affirmation that Solutia does not have a financial interest in the Air Products hydrogen plant.

The contract with Air Products has been developed and it has been reviewed by Solutia personnel, which has confirmed that the contract will not provide Solutia any financial ownership interest nor any option to acquire an ownership interest in the Air Products hydrogen plant.

The sixth bullet item discussed the possibility for a permit condition requiring backup control for Area 480 liquid waste.

Solutia has described its plans with regard to backup disposal arrangements for Area 480 liquid waste as part of its expansion planning activities. However, it does not appear necessary for a Departmental construction permit to address this issue. Solutia has indicated it has several options to handle this material, including contract incineration, of necessary. It is suggested that District air permitting personnel should be given discretion regarding the need for such a condition.

Additional note:

Solutia would also like to request a Department comment with regard to natural gas burning emissions. The point of clarification being that an increase of natural usage within one of the construction permit applications (Area II, 471, 480) if compensated for by a decrease in natural gas, such that emissions do not increase, that the PSD determination should remain accurate and valid. This intent was expressed by Solutia in the application spreadsheets with the comment statement " Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations."

Attachment: Original information request memo.

Area II
Nylon Intermediates Expansion

6/11/98

Solutia Inc.

Pensacola, Florida

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: **Solutia Inc.**	
2. Site Name: **Pensacola Plant**	
3. Facility Identification Number: **0330040**	[ ] Unknown
4. Facility Location Information: Street Address or Other Locator: **3000 Old Chemstrand Road** City: **Cantonment** County: **Escambia** Zip Code: **32533**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Owner/Authorized Representative or Responsible Official

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

   Mr. J.C. Ochsner, Site Manager

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

Organization/Firm: **Solutia Inc.**
Street Address: **P.O. Box 97**
City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

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

Telephone: **(850) 968-7000** Fax: **(850) 968-7869**

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 unit.*

J. C. Ochsner — Signature

6-12-98 — Date

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID		Description of Emissions Unit	Permit Type
Unit #	Unit ID		
1R	002	Area II, Nylon Intermediates	AC1E

See individual Emissions Unit (EU) sections for more detailed descriptions.
Multiple EU IDs indicated with an asterisk (*). Regulated EU indicated with an "R".

Purpose of Application and Category

Check one (except as otherwise indicated):

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 renewed: _____

[ ] 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. Also check Category III.

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. Give reason for the revision e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category II: All Air Construction 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. Give reason for revision; e.g.; to address one or more newly constructed or modified emissions units.

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:

[X] 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: _____

#AC17-262486 and See Title V Application for additional facility permit references.

[ ] 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:

[X] Attached - Amount: $ 1,000.00 [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Area II, Nylon Intermediates expansion. A series of modifications to be conducted that will result in incremental increases in production capacities of adipic acid synthesis, regining, nylon salt strike, and auxiliary operations. Modifications to be conducted, or their equivalent, may be pump, valve, and piping increases or upgrades; as well as, process equipment installation or modifications and tankage. Construction will commence upon permit receipt and completion is expected within 5 years.

2. Projected or Actual Date of Commencement of Construction :

1 Oct 1998

3. Projected Date of Completion of Construction :

1 Oct 2003

Professional Engineer Certification

1. Professional Engineer Name: **Mr. Bruce P. McLeod**
   Registration Number: **26956**

2. Professional Engineer Mailing Address:
   Organization/Firm: **Solutia Inc.**
   Street Address: **P.O. Box 97**
   City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

3. Professional Engineer Telephone Numbers:
   Telephone: **(850) 968-8725** Fax: **(850) 968-7869**

4. Professional Engineer's 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 pollution 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 [X] 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 unit 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.

Bruce B McLeod — 6/12/98

Signature — Date

(seal)

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:

   Mr. Bruce P. McLeod, Fellow Environmental Prg Management

2. Application Contact Mailing Address:

   Organization/Firm: **Solutia Inc.**
   Street Address: **P.O. Box 97**
   City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

3. Application Contact Telephone Numbers:

   Telephone: **(850) 968-8725** Fax: **(850) 968-7869**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates:
   Zone: 16 East (km): 476 North (km): 3385

2. Facility Latitude/Longitude:
   Latitude (DD/MM/SS): 30 / 35 / 56 Longitude: (DD/MM/SS): 87 / 15 / 1

3. Governmental Facility Code:	4. Facility Status Code:	5. Facility Major Group SIC Code:	6. Facility SIC(s):
0	A	28	2869

7. Facility Comment (limit to 500 characters):

Facility Contact

1. Name and Title of Facility Contact:
   Mr. John Wiley, Team Leader, Env. Health & Safety

2. Facility Contact Mailing Address:
   Organization/Firm: Solutia Inc.
   Street Address: P.O. Box 97
   City: Gonzalez State: FL Zip Code: 32560-0097

3. Facility Contact Telephone Numbers:
   Telephone: (850) 968-7582 Fax: (850) 968-7869

Facility Regulatory Classifications

1. Small Business Stationary Source? [ ] Yes [x] No [ ] Unknown
2. Title V Source? [x] Yes [ ] No
3. Synthetic Non-Title V Source? [ ] Yes [x] No
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? [x] Yes [ ] No
5. Synthetic Minor Source of Pollutants Other than HAPs? [ ] Yes [x] No
6. Major Source of Hazardous Air Pollutants (HAPs)? [x] Yes [ ] No
7. Synthetic Minor Source of HAPs? [ ] Yes [x] No
8. One or More Emissions Units Subject to NSPS? [x] Yes [ ] No
9. One or More Emissions Units Subject to NESHAP? [x] Yes [ ] No
10. Title V Source by EPA Designation? [ ] Yes [x] No
11. Facility Regulatory Classifications Comment (limit to 200 characters):

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment SO-FI-B

ATTACHMENT SO-FI-B

Regulatory Applicability

FACILITY APPLICABLE REQUIREMENTS

Chapter 4 Permits	
62-4.030	General Prohibition.
62-4.100	Suspensions and Revocation.
62-4.130	Plant Operations - Problems.

Chapter 210 Stationary Sources -- General Requirements	
62-210.300	Permits Required.
	(2) Air Operation Permits
	(a) Minimum Requirements for All Air Operation Permits
	(5) Notification of Startup.
62-210.370	Reports.
	(3) Annual Operating Report for Air Pollutant Emitting Facility.
62-210.550	Stack Height Policy
62-210-650	Circumvention
62-210.900	Forms and Instructions

Chapter 213 Operation Permits for Major Sources of Air Pollution	
62-213.205	Annual Operation Licensing Fee.
62-213.400	Permits and Permit Revisions Required.
62-213.410	Changes Without Permit Revision.
62-213.460	Permit Shield.

Chapter 257 Asbestos Removal	
62-257.301	Notification Procedure and Fee.
62-257.350	National Emission Standard for Asbestos.
62-257.400	Fee Schedule.
62-257.401	Enforcement.
62-257.900	Form (1).

FACILITY APPLICABLE REQUIREMENTS

EPA Part 61 - National Emission Standard for Hazardous Air Pollutants.	
Subpart M - National Emission Standard for Asbestos.	
61.145	Standard for demolition and renovation.
61.146	Standard for spraying.
61.148	Standard for insulating materials.
61.149	Standard for waste disposal for asbestos mills; (d) (1)
61.150	Standard for waste disposal for manufacturing, fabricating, demolition, renovation,and spraying operations.
61.152	Air-cleaning.
61.153	Reporting.

EPA Part 82 - Protection Of Stratospheric Ozone	
Subpart C - Ban on Non-Essential Products--Manufactured with Class I Products	
82.66	Non-essential Class I products and exemptions (d)(2)(viii)
Subpart F - Recycling and Emissions Reduction	
82.154	Prohibition.
82.156	Required practices.
82.158	Standards for recycling and recovery equipment
82.162	Certification by owners of recovery and recycling equipment
82.166	Reporting and recordkeeping requirements; (k) and (m)
82.66	Circumvention; (d) (2) (viii)
82.70	HCFC exemption; (a) (2) (v)

Title V Core List

Effective:03/25/97

[Note: The Title V Core List is intended to simplify the completion of the "List of Applicable Regulations" that apply facility-wide (see Subsection II.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List. Requirements that apply to emissions units must be identified in Subsection III.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. Applicants must identify all "applicable requirements" in order to claim the "permit shield" described at Rule 62-213.460, F.A.C.]

Federal:

40 CFR 61: National Emission Standards for Hazardous Air Pollutants (NESHAP)
40 CFR 61, Subpart M: NESHAP for Asbestos.
40 CFR 64; Compliance Assurance Monitoring
40 CFR 82: Protection of Stratospheric Ozone.
40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).
40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State:

CHAPTER 62-4, F.A.C.: PERMITS, effective 10-16-95

62-4.030, F.A.C.: General Prohibition.
62-4.040, F.A.C.: Exemptions.
62-4.050, F.A.C.: Procedure to Obtain Permits; Application
62-4.060, F.A.C.: Consultation.
62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.
62-4.080, F.A.C.: Modification of Permit Conditions.
62-4.090, F.A.C.: Renewals.
62-4.100, F.A.C.: Suspension and Revocation.
62-4.110, F.A.C.: Financial Responsibility.
62-4.120, F.A.C.: Transfer of Permits.
62-4.130, F.A.C.: Plant Operation - Problems.
62-4.150, F.A.C.: Review
62-4.160, F.A.C.: Permit Conditions.
62-4.210, F.A.C.: Construction Permits.
62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-103, F.A.C.: RULES OF ADMINISTRATIVE PROCEDURE, effective 12-31-95

62-103.150, F.A.C.: Public Notice of Application and Proposed Agency Action.
62-103.155, F.A.C.: Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 03-21-96

62-210.300, F.A.C.: Permits Required.
62-210.300(1), F.A.C.: Air Construction Permits.
62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.
62-210.300(3)(a), F.A.C.: Full Exemptions.
62-210.300(3)(b), F.A.C.: Temporary Exemption.

62-210.300(5), F.A.C.: Notification of Startup.
62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.350, F.A.C.: Public Notice and Comment.
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.

62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.

62-210.650, F.A.C.: Circumvention.

62-210.900, F.A.C.: Forms and Instructions.
62-210.900(1) Application for Air Permit - Long Form, Form and Instructions.
62-210.900(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 03-20-96

62-213.205, F.A.C.: Annual Emissions Fee.
62-213.400, F.A.C.: Permits and Permit Revisions Required.
62-213.410, F.A.C.: Changes Without Permit Revision.
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
62-213.420, F.A.C.: Permit Applications.
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
62-213.440, F.A.C.: Permit Content.
62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.
62-213.900(1) Major Air Pollution Source Annual Emissions Fee Form, Form and Instructions.

CHAPTER 62-256, F.A.C.: OPEN BURNING AND FROST PROTECTION FIRES, effective 11-30-94

CHAPTER 62-257, F.A.C: ASBESTOS NOTIFICATION AND FEE, effective 03/24/96

CHAPTER 62-281, F.A.C: MOTOR VEHICLE AIR CONDITIONING REFRIGERANT RECOVERY AND RECYCLING, effective 03-07-96

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-13-96

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.
62-296.320(3), F.A.C.: Industrial, Commercial, and Municipal Open Burning Prohibited
62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter

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C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location:
   [X] Attached, Document ID: SO-FI-E1
   [ ] Not Applicable [ ] Waiver Requested

2. Facility Plot Plan:
   [X] Attached, Document ID: SO-FI-E2
   [ ] Not Applicable [ ] Waiver Requested

3. Process Flow Diagram(s):
   [ ] Attached, Document ID(s): _____
   [X] Not Applicable [ ] Waiver Requested

4. Precautions to Prevent Emissions of Unconfined Particulate Matter:
   [ ] Attached, Document ID: _____
   [X] Not Applicable [ ] Waiver Requested

5. Fugitive Emissions Identification:
   [ ] Attached, Document ID: _____
   [X] Not Applicable [ ] Waiver Requested

6. Supplemental Information for Construction Permit Application:
   [ ] Attached, Document ID: _____
   [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities:
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

8. List of Equipment/Activities Regulated under Title VI:
   [ ] Attached, Document ID: _____
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [ ] Not Applicable

9. Alternative Methods of Operation:
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

10. Alternative Modes of Operation (Emissions Trading):
    [ ] Attached, Document ID: _____
    [ ] Not Applicable

11. Identification of Additional Applicable Requirements:
[ ] Attached, Document ID: _____
[ ] Not Applicable

12. Compliance Assurance Monitoring Plan:
[ ] Attached, Document ID: _____
[ ] Not Applicable

13. Risk Management Plan Verification:

[ ] Plan Submitted to Implementing Agency - Verification Attached
Document ID: _____

[ ] Plan to be Submitted to Implementing Agency by Required Date

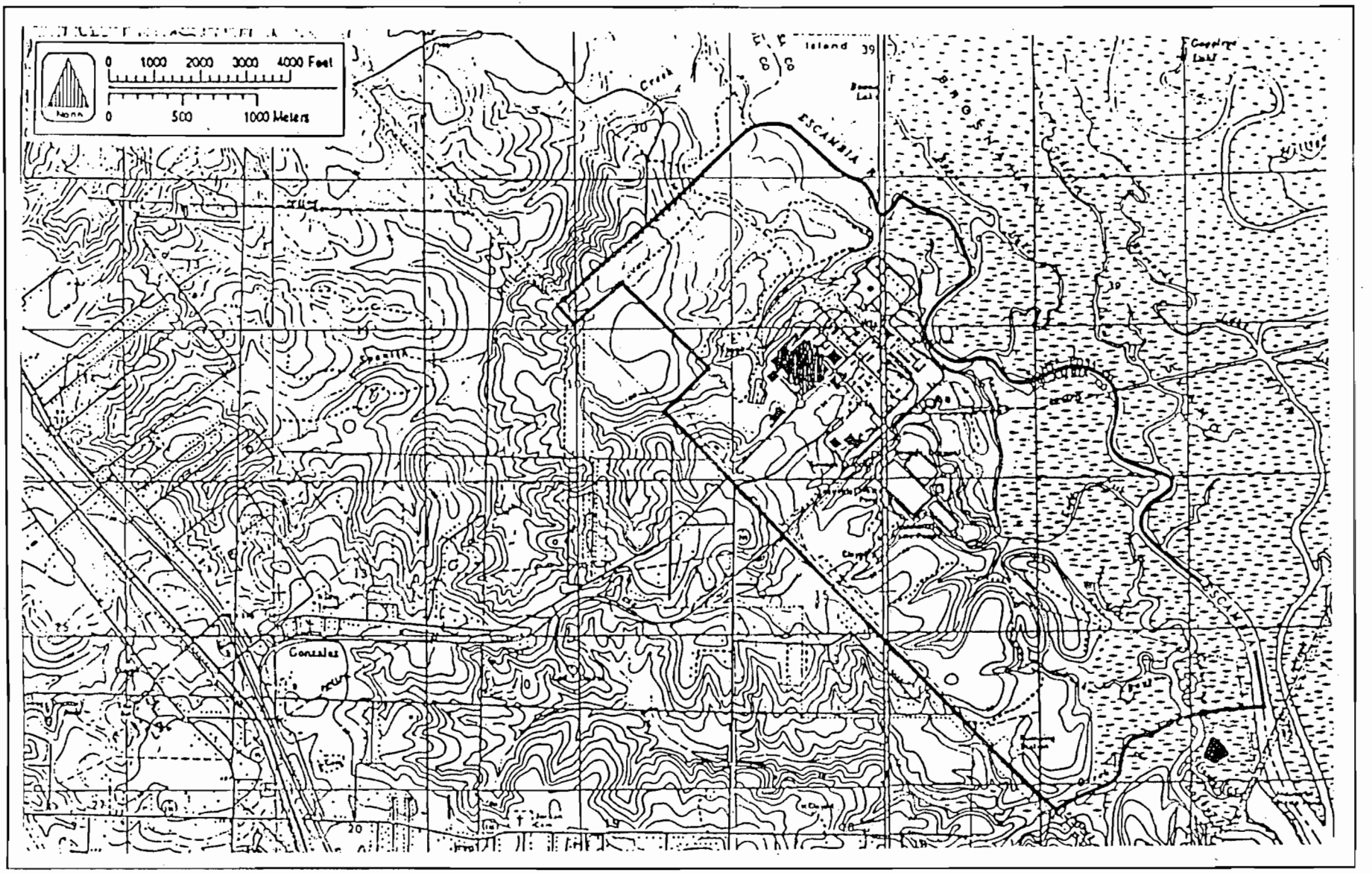
[ ] Not Applicable

14. Compliance Report and Plan
[ ] Attached, Document ID: _____
[ ] Not Applicable

15. Compliance Statement (Hard-copy Required)
[ ] Attached, Document ID: _____
[ ] Not Applicable

ATTACHMENT SO-FI-E1

Area map



Attachment SO-FI-E2
Facility Plot Plan

Solutia, Inc. - Pensacola, Florida

Drawing: PLOTP1.VSD

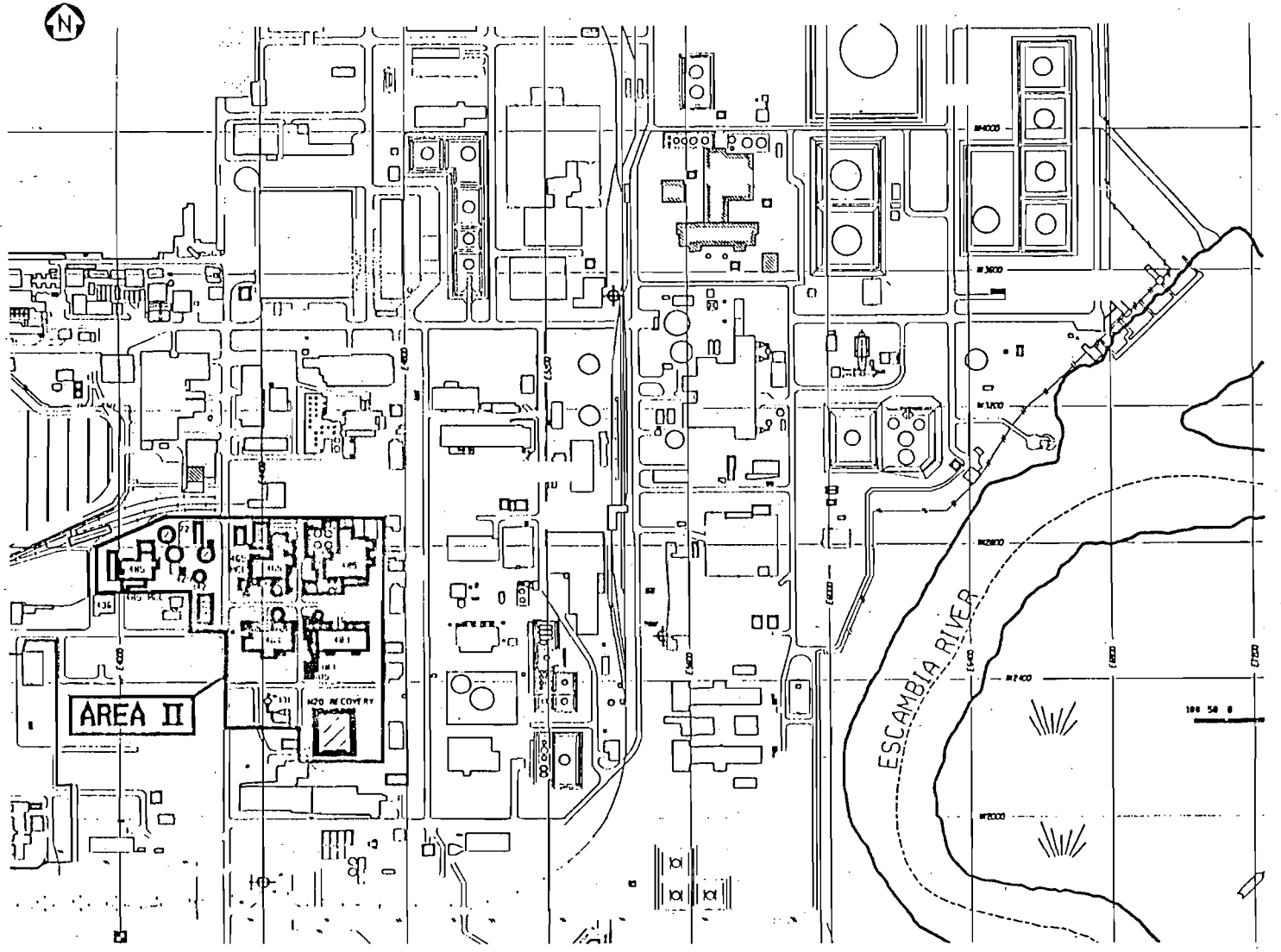
Project #: 9837535Y/F2/BLANKS.VSD

Date: 06/10/98

Golder Associates

ATTACHMENT SO-FI-E2

Facility Plot Plan



Attachment SO-FI-E1
Site Area Map

Solutia, Inc. - Pensacola, Florida

Drawing: SITEMAP1.VSD

Project #: 9837535Y/F2/BLANKS.VSD

Date: 06/10/98

Golder Associates

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

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

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).

[X] 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.

[ ] 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.

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

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Area II, Nylon Intermediates**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **002**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **28**
6. Emissions Unit Comment (limit to 500 characters): **The source currently operates under permit #AC17-262486. The current modification proposes an increase in production from 850 Million Pounds Annual Rate (MAR) to 1,100 MAR and does not require PSD review per 62-212.400, F.A.C.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

Thermal Reduction Unit (TRU) firing natural gas, ethane or butane.

2. Control Device or Method Code: 99

B.

1. . Description (limit to 200 characters):

SCR or equivalent

2. Control Device or Method Code: 65

C.

1. Description (limit to 200 characters):

Backup SCR for adipic offgasses.

2. Control Device or Method Code: 65

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

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: Dwell Time: Incinerator Afterburner Temperature:	 °F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:			mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr		tons/day
3. Maximum Process or Throughput Rate:		119,059	pph feed
4. Maximum Production Rate:	550,000	TPY	
5. Operating Capacity Comment (limit to 200 characters): **This project will increase adipic acid production from 425,000 TPY to 550,000 TPY.**			

Emissions Unit Operating Schedule

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

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment SO-E01-D

ATTACHMENT SO-E01-D

Regulatory Applicability

AREA II NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

Chapter 210 Stationary Sources - 2General Requirements	
62-210.700	Excess Emissions (1), (4) and (6)

Chapter 296 Stationary Sources – Emission Standards	
62-296.320	(1) VOC Vapor Emission Control Devices
	(2) Objectionable Odor Prohibited
	(4) General Particulate Emission Limiting Standards.

EPA Part 60 - Standards of Performance for New Stationary Sources	
Subpart A - General Provisions	
60.1	Applicability
60.7	Notification and Recordkeeping
	(a) Furnish Administrator written notification
	(b), (f) Maintain records
60.8	Performance Tests
60.11	Compliance With Standards and Maintenance Requirements
60.12	Circumvention
60.13	Monitoring Requirements
60.14	Modification
60.18	General Control Device Requirements
	(b) Flares
60.19	General Notification and Reporting Requirements
Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (including liquid storage vessels) For Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.	
60.110b	Applicability
	(a) Applies to storage vessel with a capacity greater than or equal to 40 cubic meters storing volatile organic liquid for which construction, reconstruction or modification is commended after July 23, 1984.
	(b) Except as specified in 60.116b (a) and (b), storage vessels with a design capacity less than 75 cubic meters are exempt from the general provisions of Subpart A and the provisions of this part.

AREA II NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

	(c) Except as specified in 60.116b (a) and (b), vessels either with a capacity greater than or equal to 151 cubic meters storing a liquid with a maximum true vapor pressure less than 3.5 kPa or with a capacity greater than or equal to 75 cubic meters but less than 151 cubic meters storing a liquid with a maximum true vapor pressure less than 15.0 kPa are exempt from the General Provisions (Part 60 Subpart A) and from the provisions of this subpart.
60.112b	Standard for Volatile Organic Compounds
60.113b	Testing and Procedures
60.115b	Reporting and Recordkeeping Requirements
60.116b	Monitoring of Operations
Subpart RRR - Standards of Performance for Volatile Organic Compound Emissions From the SOCMI - Reactor Processes	
60.700	Applicability and Designation of Affected Facility
60.702	Standards
	Initial performance test required per 60.8 and 60.704 then facility shall either:
	(a) Reduce emission of TOC (less methane and ethane) by 98% or concentration of 20ppmvd (@ 3% O2)
	(b) Combust the emissions in a flare that meets the requirements of 60.18
	(c) Maintain a TRE index value greater than 1.0 without the use of a VOC emission control device.
60.703	Monitoring of Emissions and Operations
60.704	Test Methods and Procedures
60.705	Reporting and Recordkeeping Requirements
	(a) Notification
	(b) - (t) Recordkeeping

EPA Part 61 - National Emission Standard for Hazardous Air Pollutants.	
Subpart A - General Provisions	
61.05	Prohibited activities
61.06	Determination of Construction or Modification
61.07	Application for Approval of Construction or Modification
61.12	Compliance with Standards and Maintenance Requirements
	(a) Compliance with numerical emission limits

AREA II NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

	(b) Compliance with design, equipment, work practice or operational standards
	(c) Good air control practice for minimizing emissions
61.13	Emission Tests and Waiver of Emission Tests
	(a) - (i) Requirements for emission testing
61.14	Monitoring Requirements
	(a) - (g) Sections apply to monitoring systems required under each subpart that requires monitoring.
61.15	Modification (a)-(c)
61.19	Circumvention
Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources)	
61.240	Applicability and Designation of Sources
	(a) Provisions apply to following sources in volatile hazardous air pollutant (VHAP) service : pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels, and control devices or systems required by this subpart.
	(c) A source to which this subpart applies that is also subject to the provisions of 40 CFR Part 60 will only be required to comply with provisions of Subpart V.
61.242-1	Standards: General (a) - (e)
61.242-2	Standards: Pumps
	(a) Monitoring
	(b) Leak detection threshold
	(c) Leak detection procedures
	(d) - (g) Additional pump characteristic specific requirements
61.242-3	Standards: Compressors (a) - (i)
61.242-4	Standards: Pressure relief devices in gas/vapor service (a) - (c)
61.242-5	Standards: Sampling Connection Systems (a) - (c)
61.242-6	Standards: Open-ended valves or lines (a) - (c)
61.242-7	Standards: Valves (a) - (h)
61.242-8	Standards: Pressure relief devices in liquid service and flanges and other connectors (a) - (d)
61.242-9	Standards: Product accumulator vessels
61.242-10	Standards: Delay of repair (a) - (e)
61.245-11	Standards: Closed-vent systems and control devices (a) - (g)

AREA II NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

61.245	Test Methods and Procedures
	(a) Source to comply with test methods as appropriate
	(b) Monitoring
	(c) Requirements for no detectable emissions
61.246	Recordkeeping Requirements (a) - (j)
61.247	Reporting Requirements (a) - (e)

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: TRU/SCR
2. Emission Point Type Code: [ ] 1 [x] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Thermal Reduction Unit (TRU)/SCR - Stack**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **020 Cyclohexane Oxidation, Area 471 nylon intermediates**
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W
6. Stack Height: **60** feet
7. Exit Diameter: **4** feet
8. Exit Temperature: **500** °F

9. Actual Volumetric Flow Rate:	**45,100** acfm
10. Percent Water Vapor:	**25.7** %
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **Adipic acid process gas directed to thermal reduction unit with SCR (or equivalent). Back-up SCR (or equivalent) utilized as necessary to control emissions. Line 8 may range from 400-500 deg. F.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Area II, nylon intermediates expansion. A ketone and alcohol mixture is oxidized to produce adipic acid.**
2. Source Classification Code (SCC): **3-01-001-04**
3. SCC Units: **Tons of Product**

4. Maximum Hourly Rate:	5. Maximum Annual Rate: **550,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	

10. Segment Comment (limit to 200 characters): **Maximum annual rate based on 1,100 million pounds (MAR).**

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):	
2. Source Classification Code (SCC):	
3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters):	

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

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOx	099	065	EL
PM			WP
VOC	099		WP
CO			NS
H054			WP

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

Pollutant Detail Information:

1. Pollutant Emitted: NOx
2. Total Percent Efficiency of Control: %
3. Potential Emissions: lb/hour 447.5 tons/year
4. Synthetically Limited? [ ] Yes [x] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: Reference:
7. Emissions Method Code: [ ] 0 [ ] 1 [ ] 2 [x] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See calculation summary Attachment SO-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **NOx total emissions include TRU, NOx compressor and Adipic acid refining.**

Emissions Unit Information Section 1 **of** 1

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: OTHER
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 150 ppm NOx
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): CEM; (24 hr average, for the TRU Stack)
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): Basis for allowable emissions code: previous facility committment to control NOx to 150 ppm.

B.

1. Basis for Allowable Emissions Code:
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

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

Pollutant Detail Information:

1. Pollutant Emitted: PM
2. Total Percent Efficiency of Control: %
3. Potential Emissions: lb/hour **30.2** tons/year
4. Synthetically Limited? [ ] Yes [x] No
5. Range of Estimated Fugitive/Other Emissions: [ ]1 [ ]2 [ ]3 _____ to _____ tons/yr
6. Emission Factor: Reference:
7. Emissions Method Code: [ ]0 [ ]1 [ ]2 [x]3 [ ]4 [ ]5
8. Calculation of Emissions (limit to 600 characters): **See calculation summary Attachment SO-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Total PM emissions based on TRU and Adipic acid refining.**

Emissions Unit Information Section 1 **of** 1

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

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

Pollutant Detail Information:

1. Pollutant Emitted: VOC
2. Total Percent Efficiency of Control: %
3. Potential Emissions: lb/hour 378.6 tons/year
4. Synthetically Limited? [ ] Yes [x] No
5. Range of Estimated Fugitive/Other Emissions: [x] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: Reference:
7. Emissions Method Code: [ ] 0 [ ] 1 [ ] 2 [x] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See calculation summary Attachment SO-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Total VOC emissions based on TRU, Adipic fume sweep, and Adipic acid refining.**

Emissions Unit Information Section 1 **of** 1

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

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

Pollutant Detail Information:

1. Pollutant Emitted: CO
2. Total Percent Efficiency of Control: %
3. Potential Emissions: lb/hour **309.4** tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: Reference:
7. Emissions Method Code: [ ] 0 [ ] 1 [ ] 2 [X] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See calculation summary Attachment SO-E01-H8**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Total CO emissions based on TRU, Adipic fume sweep, and Adipic acid refining.**

Emissions Unit Information Section 1 **of** 1

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 3

1.	Visible Emissions Subtype: VE05
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: EPA Method 9
5.	Visible Emissions Comment (limit to 200 characters): Opacity limit of 5% by permit for the TRU vent.

Visible Emissions Limitations: Visible Emissions Limitation 2 of 3

1.	Visible Emissions Subtype: VE20
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: EPA Method 9
5.	Visible Emissions Comment (limit to 200 characters): General visible emissions standards per 62-296.320(4)(b).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 3 of 3

1.	Visible Emissions Subtype: VE99
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour
4.	Method of Compliance: EPA Method 9
5.	Visible Emissions Comment (limit to 200 characters): Exceptional conditions per 62-210.700 for start-up, shutdown and malfunctions (2 hrs per 24 hr period).

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor 1 of 1

1. Parameter Code: EM	2. Pollutant(s): NOx
3. CMS Requirement: [ ] Rule [X] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

[ ] 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 the 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 the 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.

[x] 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?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] 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 the source 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 the source 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 the emissions unit consumes increment.

[x] 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	[ ] C	[ ] E	[x] Unknown
	SO_2	[ ] C	[ ] E	[x] Unknown
	NO_2	[ ] C	[ ] E	[x] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

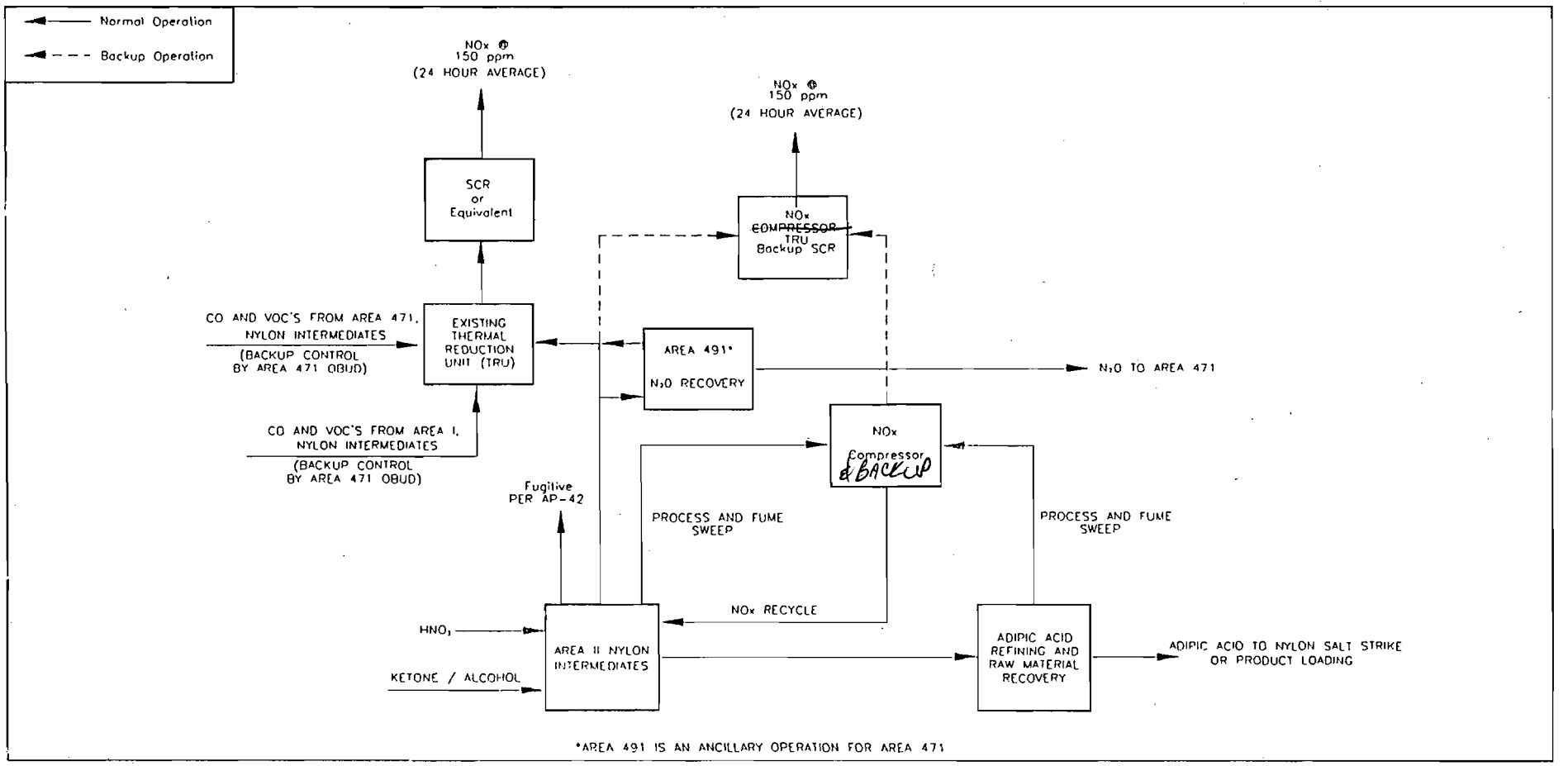
1.	Process Flow Diagram	
	[X] Attached, Document ID: SO-E01-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[ ] Attached, Document ID: _____	
	[ ] Not Applicable	[X] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[X] Attached, Document ID: SO-E01-L4	
	[ ] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[X] Not Applicable
	[ ] Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: SO-E01-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[X] Attached, Document ID: SO-E01-L7	[ ] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[X] Attached, Document ID: SO-E01-L8	[ ] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10.	Alternative Methods of Operation [ ] Attached, Document ID: _____ [ ] Not Applicable
11.	Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ ] Not Applicable
12.	Identification of Additional Applicable Requirements [ ] Attached, Document ID: _____ [ ] Not Applicable
13.	Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ ] Not Applicable
14.	Acid Rain Permit Application (Hard Copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Not Applicable

ATTACHMENT SO-E01-L1

Process Flow Diagram



Company: Solutia Inc.
File Name: ADIPIC2.DWG
Revision Date: 05/27/98
Developed By: Golder Associates

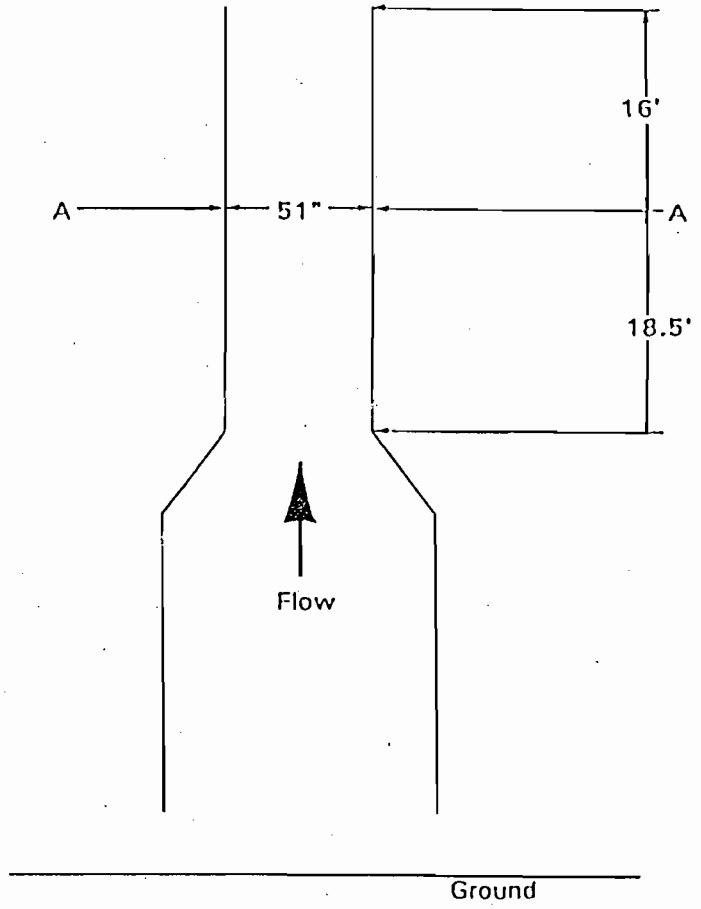
SOLUTIA, INC. PENSACOLA PLANT
AREA II, NYLON INTERMEDIATES

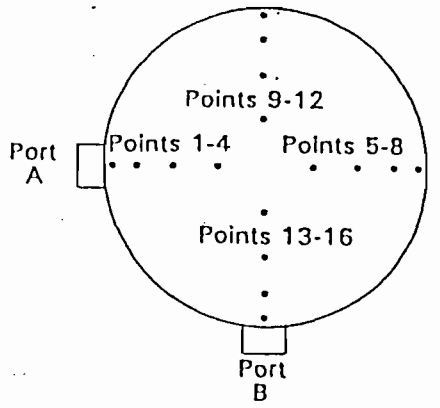
ATTACHMENT SO-E01-L4

Stack Sampling Activities

DESCRIPTION OF STACK SAMPLING FACILITIES
Thermal Reduction Unit (TRU)

The TRU stack is a circular duct with an inside diameter of 51 inches and a height of 60 feet. The gas stream sampling ports are over 221 inches after the nearest disturbance (Stack breaching) and over 190 inches before the nearest disturbance (stack discharge). A schematic of the sampling location for the TRU stack is shown on the following page.





Section AA

Traverse Point	Distance Into Stack
1	1.625"
2	5.375"
3	9.875"
4	16.500"
5	34.500"
6	41.125"
7	45.625"
8	49.375"

Attachment SO-E01-L4
Stack Sampling Location

Solutia, Inc. - Pensacola, Florida

Drawing: SAMPLE1.VSD

Project #: 9837535Y/F2/BLANKS.VSD

Date: 06/10/98

Golder Associates

ATTACHMENT SO-E01-L6

Procedures for Start-up and Shutdown

PROCEDURES FOR STARTUP AND SHUTDOWN

Solutia, Inc. assures that best management practices are employed during startup and shutdown by the use of Specific Practice Instructions (SPIs) and Operating Instructions (OIs). These document are developed and maintained in a computerized document management system for each manufacturing operation at the Pensacola Plant. This document management system assures that the information is available to operations and maintenance personnel as needed. The documents are also available for Department inspection upon request.

The SPIs are written to facilitate safe and efficient startup and shutdown. They detail the sequence and timing of all operational steps to accomplish the intended action. The OIs establish optimum operating ranges, including process operations affecting control of environmental compliance.

ATTACHMENT SO-E01-L7

Operation and Maintenance Plan

OPERATION AND MAINTENANCE PLANS

Solutia, Inc. assures that best management practices are employed during operation and maintenance by the use of Specific Practice Instructions (SPIs) and Operating Instructions (OIs). These document are developed and maintained in a computerized document management system for each manufacturing operation at the Pensacola Plant. This document management system assures that the information is available to operations and maintenance personnel as needed. The documents are also available for Department inspection upon request.

The SPIs are written to facilitate safe and efficient operation and maintenance. They detail the sequence and timing of all operational steps to accomplish the intended action. The OIs establish optimum operating ranges, including process operations affecting control of environmental compliance.

ATTACHMENT SO-E01-L8

Emission Calculation Methodology

AREA II NYLON INTERMEDIATES EMISSION ESTIMATES					
1.1 BAR Adipic Acid case					
EPA AP-42 factors, Adipic mfg. Lb/ton adipic	VOC (1)	CO	NOx	PM	
Oxidation reactor, process offgas	0.55	0.49	14	na	
Nitric acid tank fume sweep, (NOx Comp or equiv,all process fugitives)	0.014	0.28	1.6	na	
Adipic acid refining	0.5	0	0.6	0.1	
Comments: Bar Adipic Acid Case					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(1) TNMOC, total non methane organic compounds					

NOX Emissions:	Actual	Potential			
Adipic annual production rate MAR	**850**	**1100**			
TRU online NOx, tons/yr. Potential includes SCR (3) (9)	575.8	235.8			
TRU downtime NOx tons/yr. (4), (9)	102.4	0.0			
NOx leaks and spills (5)	10.0	10.0			
NOx Compressor or equiv, includes all process fug.emissions (6)(9)	28.3	36.7			
Adipic acid refining NOx (7)	127.5	165.0	**Diff.**		
TOTAL NOx emissions, tons/year	**844.1**	**447.5**	**-396.6**		

Comments: Area II NOx Emissions

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.

Footnotes:

(3) See Calculation below, TRU emissions 850 MAR & 1100MAR, No N2O purif., Area 471 not on-line.

	Adipic A MAR	Area II k Lb/hr	Halcon k Lb/hr	TRU ppm	NOx (tons/yr)
Maxium Emission Rate Authorized in 850 MAR Construction Permit @ 878	850	70	66	878	1196
Maxium Emission Rate Authorized in Consent Order for 850 MAR @ 500 ppm	850	70	66	500	681
Actual Emissions: 681 x (63+52)/(70+66) = 576 tpy	850	63	52	500	576
Potential Emissions at 1,100 MAR: 576 tpy x 150 ppm/500 ppm x (91+66)/(70+66)	1100	91	66	150	236

(4) Actual Emissions (for 1995 through 1997); Adipic Off-gases and NOx Compressor to go to backup SCR when TRU down and/or NOx compressor malfunctions; emission rate will be 150 ppm in either case. Therfore TRU backup emissions accounted for in TRU emissions because TRU calculation basis is 8760 hrs/yr.
Actual emissions based annual operating reports (AOR) for three years to account for process varaibles and therefore representative:
From AORs - 1995 = 59.5 tons; 1996 = 12.9 tons and 1997 = 234.9 tons; Average = 307.3/3 = 102.4

(5) Leaks and spills not to exceed 1000 lbs per 24 hour period.

(6) Calculated fugitive NOx using EPA tank fume factor, includes NOx Comp. backup emissions at 150 ppm NOx.

(7) Adipic MAR X AP-42 NOx factor/2000 = tons/yr NOx

(8) reserved

(9) Excess emissions not included (2 hr/24 hr for SU, SD and malfunc); not subject to PSD NSR review

Particulate, PM10, emissions:	Actual	Potential			
Adipic annual production rate MAR	850	1100			
TRU Gas Usage (@ 1.8 - 850, 1.1 -1100 scfh/Lb TRU feed-Area II); Kscfh (14)	113.4	100.1			
Emission factor (AP-42; Table 1.4-2; 10-100Mbtu/hr); Lb/Mscf	6.2	6.2			
TRU online Particulate, tons/yr. (10)	3.1	2.7			
TRU downtine Particulate, tons/yr.(11)	0.0	0.0			
NOx Compressor downtime Particulate, tpy (12)	0	0			
Adipic acid refining Particulate, tons/yr.(13)	21.3	27.5	Diff.		
TOTAL Particulate emissions	24.3	30.2	5.9		
Comments: Area II Particulate Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(10) TRU gas usage x TRU feed x AP-42 Natural gas factor; 1.8 x 113.4 x 6.2/10^6 x 8,760 / 2,000 = 3.1 tons/yr.					
(11)TRU backup operational,SU, SD and malf. excess emissions not subject to PSD NSR and not included					
SCR or equivalent will have steam heat exchanger if necessary; therefore no fuel combustion.					
(12) No applicable EPA AP-42 factor					
(13) Based on EPA AP-42 factor of 0.1 lb part./ton adipic					
(14) Annual average basis.					

VOC Emissions:					
Fugitive emissions, (valves, flanges, etc.) (15)	5	5			
Adipic annual production rate MAR	850	1100			
TRU Gas Usage (@ 1.8 - 850, 1.1 - 1100 scfh/Lb TRU feed-Area II); Kscfh	113.4	100.1			
Emission factor (AP-42; Table 1.4-2; 10-100Mbtu/hr); Lb/Mscf	2.8	2.8			
TRU on-line VOC, natural gas AP-42, tons/yr.(16)	1.4	1.2			
TRU downtime VOC, tons/yr.(17),(21)	209.7	22.9			
Process Offgas Oxidation Reaction VOC, (tons/yr) (20)	116.9	151.3			
EPA AP42 "fume sweep" factor for VOC, tons/yr.(18)	3.0	3.9			
Adipic acid refining AP42 factor for VOC, tons/yr.(19)	106.3	137.5	**Diff.**		
VOC from Area 471 (1300 Lb/hr); 99+% efficient (22)		56.9			
TOTAL VOC emissions	**442.2**	**378.6**	**-63.6**		

Comments: Area II VOC Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(15) Engineering estimate					
(16) TRU gas usage x TRU feed x AP-42 Natural gas factor; 1.8 x 113.4 x 2.8/10^6 x 8,760 / 2,000 = 1.4 tons/yr.					
(17) See calculation below, 850 MAR=Halcon off-gas 1995-97 VOC emissions when TRU down					
	1995	1996	1997	Average	
Cyclohexane Oxidation Air Vented (off-gas), M lb/yr	49.5	30.6	67.278		
Total Cyclohexane Oxidation Air Used, M lb/yr	514.9	562.8	620.6		
Cyclohexane Oxidation Venting, hours (Air Vented/Total Air x 8,000 hr)	769.1	435.0	867.3		
TRU Downtime, hours	636.1	225.3	589.9		
Cyclohexane venting due to TRU, percent	83%	52%	68%		
Total VOC Vented, tons/yr (from AOR)	329.0	193.0	378.0		
VOC Vented due to TRU Downtime, tons (% TRU down x VOC vented)	272.1	100.0	257.1	209.7	
(18) MAR x AP-42 factor (0.014 lb VOC/ton Adipic) x 8,760/2,000					
(19) MAR x AP-42 factor (0.5 lb VOC/ton Adipic) x 8,760/2,000					
(20) VOC emissions, including HCN, are calculated using AP-42 emission factor of 0.55 lb/ton adipic.					
Solutia will be attempting to document through emissions testing that the oxidation reactors off gas					
contains less than 300 ppm VOC and therefore qualify for an exemption form NSPS Subpart RRR.					
It has not been determined that this will be inconsistent with the AP-42 VOC factor.					
(21) 1100MAR case = Backup afterburner, 90% capture and 99+% VOC destruction of Halcon VOC:					
209.7 x (1-0.90) + (209.7 -20.97)x (1-0.99) = 22.9 TPY					
(22) VOC emissions (TPY) = 1300 lb/hr * 0.01 * 8760/2000 = 56.9 TPY					

CO Emissions:					
Adipic annual production rate MAR	**850**	**1100**			
TRU Gas Usage (@ 1.8 - 850, 1.8 - 1100 scfh/Lb TRU feed-Area II); Kscfh	113.4	100.1			
Emission factor (AP-42; Table 1.4-2; 10-100Mbtu/hr); Lb/Mscf	35	35			
TRU online CO, tons/yr.(23)	17.4	15.3			
TRU downtime CO, tons/yr.(24) (27)	252.1	29.7			
Process Offgas Oxidation Reaction CO, (tons/yr) (28)	104.1	134.8			
Adipic Fume sweep CO per AP42 factor, tons/yr.(25)	59.5	77.0			
Adipic acid refining CO, tons/yr.(26)	0.0	0.0	**Diff.**		
CO from Area 471 (600 lb/hr; 98+% destruction) (29)		52.6			
TOTAL CO emissions	**433.1**	**309.4**	**-123.7**		

Comments: Area II CO Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(23) TRU gas feed factor x TRU feed rate x Natural gas CO factor (35 lbs CO/M cu ft gas)					
(24) See calculation below, 850 MAR=Halcon off-gas 1995-97 CO emissions when TRU down					
	1995	1996	1997	Average	
Cyclohexane Oxidation Air Vented, M lb/yr	49.5	30.6	67.278		
Total Cyclohexane Oxidation Air Used, M lb/yr	514.9	562.8	620.6		
Cyclohexane Oxidation Venting, hours (Air Vented/Total Air x 8,000 hr)	769.08138	434.968	867.263938		
TRU Downtime, hours	636.1	225.3	589.9		
Cyclohexane venting due to TRU, percent	83%	52%	68%		
Total CO Vented, tons/yr (from AOR)	308.0	217.0	572.0		
CO Vented due to TRU Downtime, tons (% TRU down x CO vented)	254.7	112.4	389.1	252.1	
1100MAR case = TRU backup afterburner, 98+% CO abatement of Halcon CO only (185 X 0.02 = 3.7)					
Potential BTOP CO afterburner emissions offset of (185 - 3.7 = 181.3 tpy CO) for use in BTOP summary					
(25) AP-42 = 0.28 lb CO/ton adipic					
(26) AP-42 factor = 0					
(27) 1100MAR case = Backup afterburner, 90% capture and 98+% CO destruction of Halcon CO:					
252.1 x (1-0.90) + 252.1-25.1 * 0.02 = 29.75					
(28) Process offgas oxidation CO (tpy) = MAR /2000 * 0.49 (AP-Emission factor lb/ton adipic) /2000					
(29) CO emissions (TPY) = 600 lb/hr * 0.02 * 8760/2000 = 52.6 TPY					

AREA II NYLON INTERMEDIATES EMISSION ESTIMATION SUMMARY					
Pollutant	Actual	Potential	Net change	PSD level	PSD
NOx	844.1	447.5	-396.6	40	No
PM10	24.3	30.2	5.9	15	No
VOC	442.2	378.6	-63.6	40	No
CO	433.1	309.4	-123.7	100	No

Comments:

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.

what will be short term emissions

Area 471
Nylon Intermediates Expansion

6/11/98

Solutia Inc.

Pensacola, Florida

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: **Solutia Inc.**	
2. Site Name: **Pensacola Plant**	
3. Facility Identification Number: **0330040**	[ ] Unknown
4. Facility Location Information: Street Address or Other Locator: **3000 Old Chemstrand Road** City: **Cantonment** County: **Escambia** Zip Code: **32533**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Owner/Authorized Representative or Responsible Official

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

   Mr. J.C. Ochsner, Site Manager

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

Organization/Firm: **Solutia Inc.**
Street Address: **P.O. Box 97**
City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

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

Telephone: **(850) 968-7000** Fax: **(850) 968-7869**

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 unit.*

J. C. Ochsner — 6-12-98

Signature Date

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID		Description of Emissions Unit	Permit Type
Unit #	Unit ID		
1R	---	Area 471, Nylon Intermediates	AC1B

See individual Emissions Unit (EU) sections for more detailed descriptions.
Multiple EU IDs indicated with an asterisk (*). Regulated EU indicated with an "R".

Purpose of Application and Category

Check one (except as otherwise indicated):

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 renewed: _____

[ ] 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. Also check Category III.

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. Give reason for the revision e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category II: All Air Construction 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. Give reason for revision; e.g.; to address one or more newly constructed or modified emissions units.

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:

[X] 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: _____

See Title V Application for facility permits.

[ ] 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:

[X] Attached - Amount: $ 5,000.00 [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Area 471, nylon intermediates. Phased construction of a production unit to supply additional nylon intermediates to support increased adipic acid production. Construction will commence upon permit receipt and completion is expected within 5 years.

2. Projected or Actual Date of Commencement of Construction :

1 Oct 1998

3. Projected Date of Completion of Construction :

1 Oct 2003

Professional Engineer Certification

1. Professional Engineer Name: **Mr. Bruce P. McLeod**
   Registration Number: **26956**

2. Professional Engineer Mailing Address:
   Organization/Firm: **Solutia Inc.**
   Street Address: **P.O. Box 97**
   City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

3. Professional Engineer Telephone Numbers:
   Telephone: **(850) 968-8725** Fax: **(850) 968-7869**

4. Professional Engineer's 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 pollution 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 [X] 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 unit 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.

Bruce P. McLeod — 6/12/98

Signature (seal) — Date

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:

   Mr. Bruce P. McLeod, Fellow Environmental Prg Management

2. Application Contact Mailing Address:

   Organization/Firm: **Solutia Inc.**
   Street Address: **P.O. Box 97**
   City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

3. Application Contact Telephone Numbers:

   Telephone: **(850) 968-8725** Fax: **(850) 968-7869**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates:
   Zone: 16 East (km): 476 North (km): 3385

2. Facility Latitude/Longitude:
   Latitude (DD/MM/SS): 30 / 35 / 56 Longitude: (DD/MM/SS): 87 / 15 / 1

3. Governmental Facility Code:	4. Facility Status Code:	5. Facility Major Group SIC Code:	6. Facility SIC(s):
0	A	28	2869

7. Facility Comment (limit to 500 characters):

Facility Contact

1. Name and Title of Facility Contact:
   Mr. John Wiley, Team Leader, Env. Health & Safety

2. Facility Contact Mailing Address:
   Organization/Firm: **Solutia Inc.**
   Street Address: **P.O. Box 97**
   City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

3. Facility Contact Telephone Numbers:
   Telephone: **(850) 968-7582** Fax: **(850) 968-7869**

Facility Regulatory Classifications

1. Small Business Stationary Source? [ ] Yes [x] No [ ] Unknown
2. Title V Source? [x] Yes [ ] No
3. Synthetic Non-Title V Source? [ ] Yes [x] No
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? [x] Yes [ ] No
5. Synthetic Minor Source of Pollutants Other than HAPs? [ ] Yes [x] No
6. Major Source of Hazardous Air Pollutants (HAPs)? [x] Yes [ ] No
7. Synthetic Minor Source of HAPs? [ ] Yes [x] No
8. One or More Emissions Units Subject to NSPS? [x] Yes [ ] No
9. One or More Emissions Units Subject to NESHAP? [x] Yes [ ] No
10. Title V Source by EPA Designation? [ ] Yes [x] No
11. Facility Regulatory Classifications Comment (limit to 200 characters):

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment SO-FI-B

ATTACHMENT SO-FI-B

Regulatory Applicability

FACILITY APPLICABLE REQUIREMENTS

Chapter 4 Permits	
62-4.030	General Prohibition.
62-4.100	Suspensions and Revocation.
62-4.130	Plant Operations - Problems.

Chapter 210 Stationary Sources – General Requirements	
62-210.300	Permits Required.
	(2) Air Operation Permits
	(a) Minimum Requirements for All Air Operation Permits
	(5) Notification of Startup.
62-210.370	Reports.
	(3) Annual Operating Report for Air Pollutant Emitting Facility.
62-210.550	Stack Height Policy
62-210-650	Circumvention
62-210.900	Forms and Instructions

Chapter 213 Operation Permits for Major Sources of Air Pollution	
62-213.205	Annual Operation Licensing Fee.
62-213.400	Permits and Permit Revisions Required.
62-213.410	Changes Without Permit Revision.
62-213.460	Permit Shield.

Chapter 257 Asbestos Removal	
62-257.301	Notification Procedure and Fee.
62-257.350	National Emission Standard for Asbestos.
62-257.400	Fee Schedule.
62-257.401	Enforcement.
62-257.900	Form (1).

FACILITY APPLICABLE REQUIREMENTS

EPA Part 61 - National Emission Standard for Hazardous Air Pollutants.	
Subpart M - National Emission Standard for Asbestos.	
61.145	Standard for demolition and renovation.
61.146	Standard for spraying.
61.148	Standard for insulating materials.
61.149	Standard for waste disposal for asbestos mills: (d) (1)
61.150	Standard for waste disposal for manufacturing, fabricating, demolition, renovation,and spraying operations.
61.152	Air-cleaning.
61.153	Reporting.

EPA Part 82 - Protection Of Stratospheric Ozone	
Subpart C - Ban on Non-Essential Products--Manufactured with Class I Products	
82.66	Non-essential Class I products and exemptions (d)(2)(viii)
Subpart F - Recycling and Emissions Reduction	
82.154	Prohibition.
82.156	Required practices.
82.158	Standards for recycling and recovery equipment
82.162	Certification by owners of recovery and recycling equipment
82.166	Reporting and recordkeeping requirements; (k) and (m)
82.66	Circumvention; (d) (2) (viii)
82.70	HCFC exemption; (a) (2) (v)

Title V Core List

Effective:03/25/97

[Note: The Title V Core List is intended to simplify the completion of the "List of Applicable Regulations" that apply facility-wide (see Subsection II.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List. Requirements that apply to emissions units must be identified in Subsection III.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. Applicants must identify all "applicable requirements" in order to claim the "permit shield" described at Rule 62-213.460, F.A.C.]

Federal:

40 CFR 61: National Emission Standards for Hazardous Air Pollutants (NESHAP)
40 CFR 61, Subpart M: NESHAP for Asbestos.
40 CFR 64; Compliance Assurance Monitoring
40 CFR 82: Protection of Stratospheric Ozone.
40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).
40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State:

CHAPTER 62-4, F.A.C.: PERMITS, effective 10-16-95

62-4.030, F.A.C.: General Prohibition.
62-4.040, F.A.C.: Exemptions.
62-4.050, F.A.C.: Procedure to Obtain Permits; Application
62-4.060, F.A.C.: Consultation.
62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.
62-4.080, F.A.C.: Modification of Permit Conditions.
62-4.090, F.A.C.: Renewals.
62-4.100, F.A.C.: Suspension and Revocation.
62-4.110, F.A.C.: Financial Responsibility.
62-4.120, F.A.C.: Transfer of Permits.
62-4.130, F.A.C.: Plant Operation - Problems.
62-4.150, F.A.C.: Review
62-4.160, F.A.C.: Permit Conditions.
62-4.210, F.A.C.: Construction Permits.
62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-103, F.A.C.: RULES OF ADMINISTRATIVE PROCEDURE, effective 12-31-95

62-103.150, F.A.C.: Public Notice of Application and Proposed Agency Action.
62-103.155, F.A.C.: Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding

Title V Core List Effective:03/25/97

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 03-21-96

62-210.300, F.A.C.: Permits Required.
62-210.300(1), F.A.C.: Air Construction Permits.
62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.
62-210.300(3)(a), F.A.C.: Full Exemptions.
62-210.300(3)(b), F.A.C.: Temporary Exemption.

62-210.300(5), F.A.C.: Notification of Startup.
62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.350, F.A.C.: Public Notice and Comment.
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.

62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.

62-210.650, F.A.C.: Circumvention.

62-210.900, F.A.C.: Forms and Instructions.
62-210.900(1) Application for Air Permit - Long Form, Form and Instructions.
62-210.900(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 03-20-96

62-213.205, F.A.C.: Annual Emissions Fee.
62-213.400, F.A.C.: Permits and Permit Revisions Required.
62-213.410, F.A.C.: Changes Without Permit Revision.
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
62-213.420, F.A.C.: Permit Applications.
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
62-213.440, F.A.C.: Permit Content.
62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.
62-213.900(1) Major Air Pollution Source Annual Emissions Fee Form, Form and Instructions.

CHAPTER 62-256, F.A.C.: OPEN BURNING AND FROST PROTECTION FIRES, effective 11-30-94

CHAPTER 62-257, F.A.C: ASBESTOS NOTIFICATION AND FEE, effective 03/24/96

CHAPTER 62-281, F.A.C: MOTOR VEHICLE AIR CONDITIONING REFRIGERANT RECOVERY AND RECYCLING, effective 03-07-96

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-13-96

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.
62-296.320(3), F.A.C.: Industrial, Commercial, and Municipal Open Burning Prohibited
62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter

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C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location:
   [X] Attached, Document ID: SO-FI-E1
   [ ] Not Applicable [ ] Waiver Requested

2. Facility Plot Plan:
   [X] Attached, Document ID: SO-FI-E2
   [ ] Not Applicable [ ] Waiver Requested

3. Process Flow Diagram(s):
   [ ] Attached, Document ID(s): _____
   [X] Not Applicable [ ] Waiver Requested

4. Precautions to Prevent Emissions of Unconfined Particulate Matter:
   [ ] Attached, Document ID: _____
   [X] Not Applicable [ ] Waiver Requested

5. Fugitive Emissions Identification:
   [ ] Attached, Document ID: _____
   [X] Not Applicable [ ] Waiver Requested

6. Supplemental Information for Construction Permit Application:
   [ ] Attached, Document ID: _____
   [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities:
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

8. List of Equipment/Activities Regulated under Title VI:
   [ ] Attached, Document ID: _____
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [ ] Not Applicable

9. Alternative Methods of Operation:
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

10. Alternative Modes of Operation (Emissions Trading):
    [ ] Attached, Document ID: _____
    [ ] Not Applicable

11. Identification of Additional Applicable Requirements:
[ ] Attached, Document ID: _____
[ ] Not Applicable

12. Compliance Assurance Monitoring Plan:
[ ] Attached, Document ID: _____
[ ] Not Applicable

13. Risk Management Plan Verification:

[ ] Plan Submitted to Implementing Agency - Verification Attached
Document ID: _____

[ ] Plan to be Submitted to Implementing Agency by Required Date

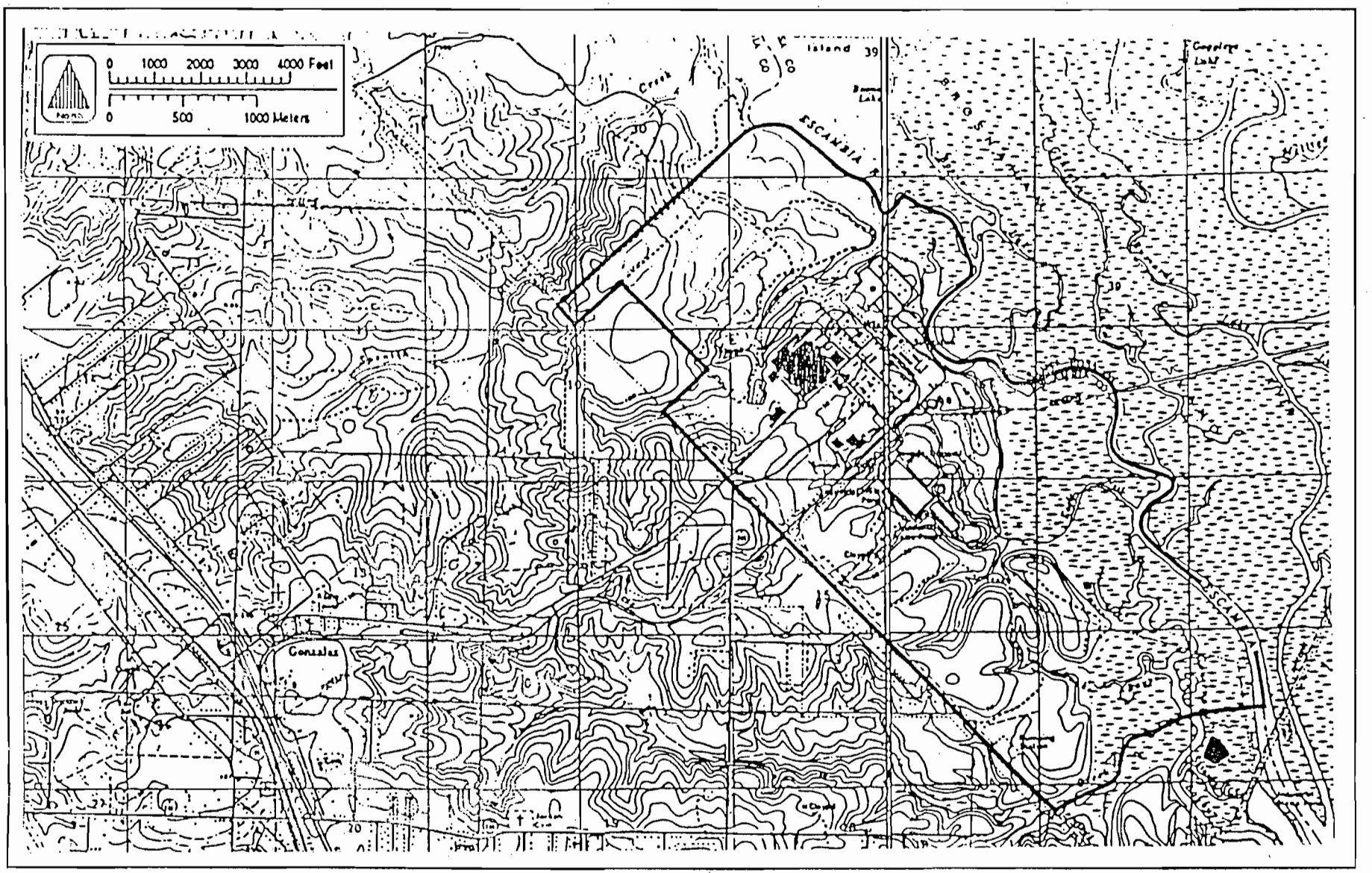
[ ] Not Applicable

14. Compliance Report and Plan
[ ] Attached, Document ID: _____
[ ] Not Applicable

15. Compliance Statement (Hard-copy Required)
[ ] Attached, Document ID: _____
[ ] Not Applicable

ATTACHMENT SO-FI-E1

Area map



Attachment SO-FI-E2
Facility Plot Plan

Solutia, Inc. - Pensacola, Florida

Drawing: PLOTP1.VSD

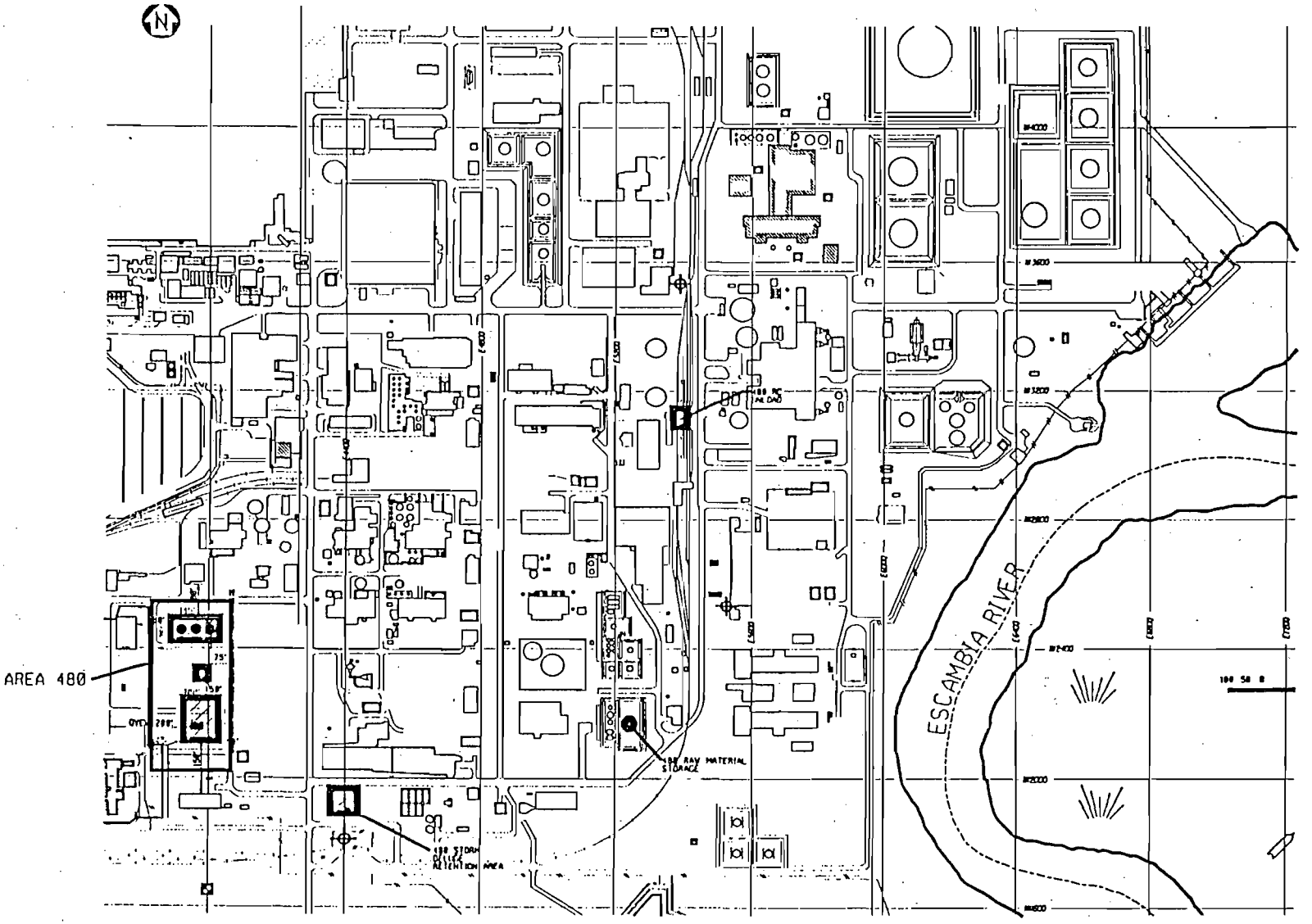
Project #: 9837535Y/F2/BLANKS.VSD

Date: 03/10/98

Golder Associates

ATTACHMENT SO-FI-E2

Facility Plot Plan



Attachment SO-FI-E1
Site Area Map

Solutia, Inc. - Pensacola, Florida

Drawing: SITEMAP1.VSD

Project #: 9837535Y/F2/BLANKS.VSD

Date: 06/10/98

Golder Associates

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

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

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).

[X] 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.

[ ] 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.

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

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Area 471, Nylon Intermediates**		
2. Emissions Unit Identification Number: [X] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: C	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: 28
6. Emissions Unit Comment (limit to 500 characters): **A production unit to supply additional nylon intermediates to support additional adipic acid production.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

Thermal Reduction Unit (TRU) firing natural gas, ethane or butane or equivalent.

2. Control Device or Method Code: 99

B.

1. Description (limit to 200 characters):

Backup Thermal Reduction Unit (TRU) afterburner or equivalent firing natural gas, ethane or butane.

2. Control Device or Method Code: 23

C.

1. Description (limit to 200 characters):

Tank Vent Flares or equivalent.

2. Control Device or Method Code: 23

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

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: Dwell Time: Incinerator Afterburner Temperature:	 °F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		160	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:	200,000	TPY	
5. Operating Capacity Comment (limit to 200 characters): **Heater annual average input rate: 100 MMBtu/hr**			

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

24	hours/day	7	days/week
52	weeks/yr	8,760	hours/yr

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

ATTACHMENT SO-E01-D

Regulatory Applicability

EMISSION UNIT REGULATORY APPLICABILITY
AREA 471

The following section outlines the applicable Federal regulations specific to the emission unit associated with Area 471. The process may be subject to certain provisions of the New Source Performance Standards (NSPS), National Emission Standards For Hazardous Air Pollutants (NESHAPS), and the Hazardous Organic NESHAPS Rule (HON). The facility is currently reviewing final design parameters for Area 471. Upon completion of the final detailed design criteria, Solutia proposes to provide a finalized regulatory applicability assessment for Department review. The design parameters will determine process vent and associated equipment classification as Group I or Group II sources defined pursuant to 40 CFR 63. Generally, only the HON rule will apply to Group I processes . For process defined as Group II, the HON rule is applicable, however, the HON requirements for Group II sources are typically less stringent than the requirements of Group I sources. Generally, if a Group II process is subject to the provisions of both subparts (HON and NSPS or NESHAPS) the facility may have an option of complying completely with the HON Rule or a portion of the HON and a portion of NSPS or NESHAPS requirements for that particular source.

Provided below is a general list of NSPS, and NESHAPS applicable to AREA 471 processes. A detailed list of HON requirements assuming Group I source applicability is provided following the general NSPS / NESHAPS list provided below.

---

40 CFR PART 60	**STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES**
Subpart A	General Provisions
Subpart Kb	Standards of Performance For Volatile Organic Liquid Storage Vessels
Subpart VV	Standards of Performance For Equipment Leaks of VOC in the SOCMI Industry
Subpart NNN	Standards of Performance for Volatile Organic Compound (VOC) Emissions From the SOCMI Industry - Distillation Operations
Subpart RRR	Standards of Performance for Volatile Organic Compounds (VOC) Emissions From the SOCMI Industry - Reactor Operations
40 CFR PART 61	**NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS**
Subpart A	General Provisions
Subpart J	National Emission Standards for Equipment Leaks (Fugitive Emission Sources) of Benzene
Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)
Subpart Y	National Emission Standard for Benzene Emissions from Benzene Storage Vessels
Subpart BB	National Emission Standard for Benzene Transfer Operations
Subpart FF	National Emission Standard for Benzene Waste Operations

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AREA 471 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

Chapter 210 Stationary Sources - General Requirements	
62-210.700	Excess Emissions (1), (4) and (6)

Chapter 296 Stationary Sources – Emission Standards	
62-296.320	(1) VOC Vapor Emission Control Devices
	(2) Objectionable Odor Prohibited
	(4) General Particulate Emission Limiting Standards.

EPA Part 63 - National Emission Standard for Hazardous Air Pollutants for Source Categories	
Subpart A - General Provisions	
63.1	Applicability
63.4	Prohibited Activities and Circumvention
	(a) Prohibited Activities
	(b) Circumvention
63.5	Construction and Reconstruction
	(b) Requirements for existing, newly constructed and reconstructed sources
	(d) Application for construction approval
63.6	Compliance with standards and Maintenance requirements
	(b) Compliance dates for new and reconstructed sources
	(e) Operation and maintenance requirements
	(f) Compliance with non-opacity emission standards
	(h) Compliance with opacity and visible emission standards
63.7	Performance Testing Requirements
	(a) Applicability and performance test dates
	(b) Notification of performance tests
	(c) Quality assurance program
	(d) Performance testing facilities
	(g) Data analysis, recordkeeping, and reporting

AREA 471 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

63.8	Monitoring Requirements
	(b) Conduct of Monitoring
63.9	Notification Requirements
63.10	Recordkeeping and Reporting Requirements
	(b) General recordkeeping requirements
	(d) General reporting requirements
63.11	Control Device Requirements
	(b) Flares
Subpart F - National Emission Standards for Organic Hazardous Air Pollutants From the SOCMI Industry	
63.100	Applicability and Designation of Source
	(a) Applicability provisions, general provisions
	(l) Additional chemical manufacturing process requirements
63.102	General Requirements
	(a) Sources subject to subpart F to comply with subpart G and H
	(f) Obtain Title V permit for source
63.103	General Compliance, Reporting and Recordkeeping Provisions
	(a) Provisions of Subpart A applicability
	(b) Initial performance tests/compliance determinations
	(c) Copies of applicable reports
	(d) Records/postmarks/submittals
63.104	Heat Exchange System Requirements
	(a) Monitor heat exchange system
63.105	Maintenance Wastewater Requirements (a)-(e)
Subpart G - National Emission Standards for Organic Hazardous AIR Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer operations, and Wastewater	
63.110	Applicability
	(a) Subpart applies to all process vents, storage vessels, transfer trucks and wastewater streams within a source subject to subpart F of 40 CFR 63.
	(b)(1) Group 1 or Group 2 storage vessel also subject to provisions of 40 CFR 60 Subpart Kb is required to comply only with the provisions of this subpart.

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	(b)(2) Group 1 storage vessel also subject to 40 CFR Part 61 Subpart Y (National Emission Standard for Benzene Emissions from Benzene Storage Vessels) is required to only comply with the provisions of this subpart.
	(c)(1) Group 1 transfer rack that is also subject to the provisions of 40 CFR Part 61 Subpart BB (National Emission Standard for Benzene Emissions from Benzene Transfer Operations) is required to comply only with the provisions of this subpart.
	(d)(1) A Group 1 process vent that is also subject to the provisions of 40 CFR 60 subpart III (Standards of performance for VOC Emissions from SOCMI Air Oxidation Unit Process) is required to comply only with the provisions of this subpart.
	(d)(4) A Group 1 process vent that is also subject to the provisions of 40 CFR 60 Subpart NNN (Standards of Performance for VOC Emissions from SOCMI - distillation processes) is required to only comply with the provisions of this subpart.
	(d)(7) A Group 1 process vent that is also subject to the provisions of 40 CFR 60 Subpart RRR (Standards of performance for VOC Emissions from SOCMI - Reactor processes) is required to only comply with the provisions of this subpart.
	(e)(1) A Group 1 waste water stream that is also subject of the provisions of both this subpart and 40 CFR Part 61 Subpart FF (National Emission Standards for Benzene Waste Operations) is required to comply with both this subpart and 40 CFR Part 63 Subpart YY unless the operator elects to comply with the provisions of this subpart.
63.112	Emission Standard
	(a) Control of organic HAP emissions
	(b) -(h) Demonstration of compliance
63.113	Process Vent Provisions - Reference Control Technology
	(a) Group 1 process vent requirements
63.114	Process Vent Provisions - Monitoring Requirements
	(a) Monitoring requirements for a process vent that uses a combustion device or recovery or recapture device to comply with the requirements in 63.113.
	(b)-(e) Additional process vent monitoring requirements
63.115	Process Vent Provisions - Methods and procedures for Process Vent Group Determinations (a)-(e)
63.116	Process Vent Provisions - Performance Test Methods and Procedures to Determine Compliance (a)-(e)
63.117	Process Vents Provisions - Reporting and Recordkeeping Requirements for Group and TRE determinations and Performance Tests (a)-(f).
63.118	Process Vent Provisions - Periodic Reporting and Recordkeeping Requirements
	(a) Maintain records if using control device to comply with 63.113 (a)(1) or (a)2.
	(b)-(c) Maintain records is using control device or other means to achieve and maintain a TRE index.
63.119	Storage Vessel Provisions - Reference Control Technology (a)-(f).

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63.120	Storage Vessel Provisions - Procedures to Determine Compliance (a) - (f).
63.122	Storage Vessel Provisions - Reporting (a)-(h).
63.123	Storage Vessel Provisions - Recordkeeping (a)-(h).
63.126	Transfer Operations Provisions - Reference Control Technology (a) - (i).
63.127	Transfer Operations Provisions - Monitoring Requirements (a) - (e).
63.128	Transfer Operations Provisions - Test Methods and Procedures (a) - (v).
63.129	Transfer Operations Provisions - Reporting and Recordkeeping for Performance Tests and Notification of Compliance Status (a) - (f).
63.130	Transfer Operations Provisions - Periodic Recordkeeping and Reporting (a) - (f).
63.132	Process Wastewater Provisions - General
63.133	Process Wastewater Provisions - Wastewater Tanks
63.134	Process Wastewater Provisions - Surface Impoundments
63.135	Process Wastewater Provisions - Containers
63.136	Process Wastewater Provisions - Individual Drain Systems
63.137	Process wastewater Provisions - Oil Water Separators
63.138	Process Wastewater Provisions - Performance Standards for Treatment Processes Managing Group[1 Wastewater Stream and/or Residuals Removed From Group 1 Wastewater Streams.
63.139	Process Wastewater Provisions - Control Devices
63.140	Process Wastewater Provisions - Delay of Repair
63.143	Process Wastewater Provisions - Inspections and Monitoring of Operations
63.144	Process Wastewater Provisions - Test Methods and Procedures for Determining Applicability and Group1/Group 2 Determinations.
63.145	Process Wastewater Provisions - Test Methods and Procedures to Determine Compliance
63.146	Process Wastewater Provisions - Reporting
63.147	Process Wastewater Provisions - Recordkeeping
63.148	Leak Inspection Provisions
63.149	Control Requirements for Certain Liquid Streams in open Systems Within a Chemical Manufacturing Process Unit.
63.151	Initial Notification
63.152	General Reporting and Continuous Records

AREA 471 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

Subpart H - National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks	
63.160	Applicability and Designation of Source
	(b) Equipment to which this subpart applies that are also subject to the provisions of 40 CFR 60 [i.e. 40 CFR 60 Subpart VV: Standards of Performance for Equipment Leaks of VOC in the SOCMI] and 40 CFR 61 [i.e. 40 CFR 61 Subpart J: National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene and 40 CFR 61 Subpart V: National Emission Standards for Equipment Leaks (Fugitive Emission Sources)] will be required only to comply with the provisions of this Part.
63.162	Standards: General
	(c) Equipment Designation
	(f) If leaks detected additional requirements apply
63.163	Standards: Pumps in Light Liquid Service
	(b) Monthly monitoring checks
	(c) Leak detection procedure
63.164	Standards: Compressors
	(a)-(h) compressor seal requirements
63.165	Standards: Pressure Relief Devices in Gas/Vapor Service
	(a)-(b) Device requirements
63.166	Standards: Sampling connection systems
	(a)-(b) Sampling connection system requirements
63.167	Standards: Open Ended Valves or Lines
	(a)-(c) Open ended valve equipment provisions
63.168	Standards: Valves in gas/vapor service and in light liquid service
	(a) Provision implementation date
	(b) Monitoring provisions
	(f) Leak detection / repair provisions
63.169	Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service
	A) Monitoring
	(b) - (d) Leak detection and repair
63.170	Standards: Surge Control vessels and bottoms receivers
63.171	Standards: Delay of Repair (a) - (e)
63.172	Standards: Closed Vent Systems and Control Devices

AREA 471 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

	(a) General requirements
	(b) Recovery and recapture devices efficiency
	(c) Enclosed combustion devices
	(d) Flares used to comply with this subpart shall comply with 40 CFR 63.11(b)
	(e) Monitoring
	(f)-(g) Inspection procedures
	(h) Leak repair
63.173	Standards: Agitators in Gas/Vapor Service and in Light Liquid Service
	(a) Monitoring
	(b) Visual inspection
	(c) Repair
63.174	Standards: Connectors in Gas/ Vapor Service and in Light Liquid Service
	(a) Monitoring
	(b) Leak interval check
	(d) Leak detection procedures
63.175	Quality Improvement Program for Valves
63.176	Quality Improvement Program for Pumps
63.180	Test Methods and Procedures
63.181	Recordkeeping Requirements
	(a) Records maintenance
	(b)-(c) Information recorded
	(d) Leak detection records
	(f) Compliance test recordkeeping
	(g) Maintenance of records for closed vent systems and control devices subject to 63.172
	(h) Maintenance of records for process units subject to 63.175 and 63.176
	(i) Maintenance of records for equipment in heavy liquid service
63.182	Reporting Requirements
	(a) Report submittal
	(c) Notification of compliance status
	(d) Periodic report submittal

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment SO-E01-D

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: TRU	
2. Emission Point Type Code: [ ]1 [x]2 [ ]3 [ ]4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Thermal Reduction Unit (TRU) or equivalent**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **Area II nylon intermediates (AC17-262486)**	
5. Discharge Type Code: [ ]D [ ]F [ ]H [ ]P [ ]R [x]V [ ]W	
6. Stack Height:	60 feet
7. Exit Diameter:	4 feet
8. Exit Temperature:	500 °F

9. Actual Volumetric Flow Rate:	**4,500** acfm
10. Percent Water Vapor:	**30** %
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **Area 471 process VOC emissions directed to Area II Thermal Reduction Unit (TRU) or equivalent. Note range of parameters for line 8 = 400-500, line 9 = 35k-45k, and line 10 = 20-30%.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Heat input for Reactor (Rx) Furnaces**	
2. Source Classification Code (SCC): **3-01-900-03**	
3. SCC Units: **Million Cubic Feet Burned**	
4. Maximum Hourly Rate: **0.16**	5. Maximum Annual Rate:
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Maximum Annual Rate = 0.10 MMCF Burned. Natural gas combustion for Area 471, Nylon Intermediates reactor furnaces.**	

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Area 471 Nylon Intermediates**	
2. Source Classification Code (SCC): **3-01-202-01**	
3. SCC Units: **Tons produced**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: **200,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Area 471 nylon intermediates process VOC's directed to TRU or equivalent. Backup TRU afterburner or equivalent utilized as backup control.**	

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

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOx	024		NS
PM			WP
VOC	024	021	WP
CO			WP
H017	024	021	WP
H144	024	021	WP

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

Pollutant Detail Information:

1. Pollutant Emitted: NOx
2. Total Percent Efficiency of Control: %
3. Potential Emissions: lb/hour 217.1 tons/year
4. Synthetically Limited? [ ] Yes [x] No
5. Range of Estimated Fugitive/Other Emissions: [ ]1 [ ]2 [ ]3 _____ to _____ tons/yr
6. Emission Factor: Reference:
7. Emissions Method Code: [ ]0 [ ]1 [ ]2 [x]3 [ ]4 [ ]5
8. Calculation of Emissions (limit to 600 characters): **See Attachment SO-E01-H8 for calculation methodology.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **NOx emissions generated from heater combustion exhaust, backup afterburner, and tank flares.**

Emissions Unit Information Section 1 **of** 1

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

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

Pollutant Detail Information:

1. Pollutant Emitted:	PM
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	lb/hour 8.83 tons/year
4. Synthetically Limited?	[ ] Yes [x] No
5. Range of Estimated Fugitive/Other Emissions:	[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor:	Reference:
7. Emissions Method Code:	[ ] 0 [ ] 1 [ ] 2 [x] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters):	**See Attachment SO-E01-H8 for calculation methodology.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	**PM emissions generated from heater combustion exhaust, backup afterburner, and tank flares.**

Emissions Unit Information Section 1 **of** 1

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

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

Pollutant Detail Information:

1. Pollutant Emitted: VOC
2. Total Percent Efficiency of Control: 99 %
3. Potential Emissions: lb/hour 9.09 tons/year
4. Synthetically Limited? [ ] Yes [X] No
5. Range of Estimated Fugitive/Other Emissions: [X] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: Reference:
7. Emissions Method Code: [ ] 0 [ ] 1 [ ] 2 [X] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment SO-E01-H8 for calculation methodology.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **VOC emissions generated from heater combustion exhaust, backup afterburner, tank flares, and process VOC fugitive emissions.**

Emissions Unit Information Section 1 **of** 1

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

Emissions Unit Information Section 1 of 1

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

Pollutant Detail Information:

1. Pollutant Emitted: CO
2. Total Percent Efficiency of Control: %
3. Potential Emissions: lb/hour 21.3 tons/year
4. Synthetically Limited? [ ] Yes [x] No
5. Range of Estimated Fugitive/Other Emissions: [ ]1 [ ]2 [ ]3 _____ to _____ tons/yr
6. Emission Factor: Reference:
7. Emissions Method Code: [ ]0 [ ]1 [ ]2 [x]3 [ ]4 [ ]5
8. Calculation of Emissions (limit to 600 characters): **See Attachment SO-E01-H8 for calculation methodology.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **CO emissions generated from heater combustion exhaust, backup afterburner, and tank flares.**

Emissions Unit Information Section 1 **of** 1

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: VE20
2.	Basis for Allowable Opacity: [ ] Rule [X] Other
3.	Requested Allowable Opacity Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: EPA Method 9
5.	Visible Emissions Comment (limit to 200 characters): General visible emission standard per 62-296.320(4)(b).

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: VE99
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour
4.	Method of Compliance: EPA Method 9
5.	Visible Emissions Comment (limit to 200 characters): Exceptional conditions per 62-210.700 for start-up, shutdown and malfunctions (2 hrs per 24 hr period).

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] 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 the 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 the 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.

   [X] 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?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] 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 the source 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 the source 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 the emissions unit consumes increment.

[X] 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	[ ] C	[ ] E	[X] Unknown
	SO_2	[ ] C	[ ] E	[X] Unknown
	NO_2	[ ] C	[ ] E	[X] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

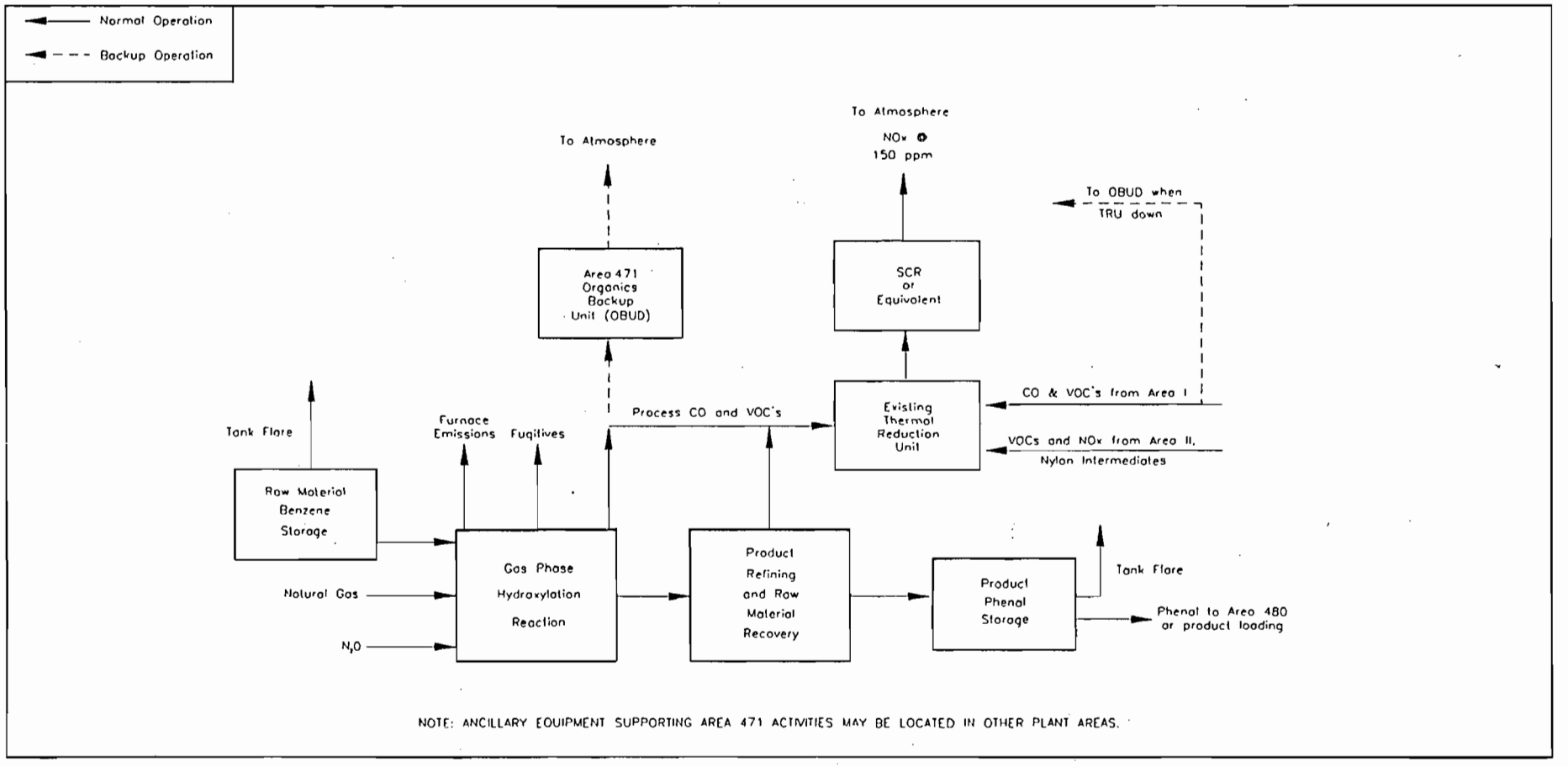
1.	Process Flow Diagram	
	[X] Attached, Document ID: SO-E01-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[X] Attached, Document ID: SO-E01-L2	
	[ ] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[ ] Attached, Document ID: _____	
	[ ] Not Applicable	[X] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[ ] Attached, Document ID: _____	
	[ ] Not Applicable	[X] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[X] Not Applicable
	[ ] Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: SO-E01-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[X] Attached, Document ID: SO-E01-L7	[ ] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[X] Attached, Document ID: SO-E01-L8	[ ] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10.	Alternative Methods of Operation [ ] Attached, Document ID: _____ [ ] Not Applicable
11.	Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ ] Not Applicable
12.	Identification of Additional Applicable Requirements [ ] Attached, Document ID: _____ [ ] Not Applicable
13.	Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ ] Not Applicable
14.	Acid Rain Permit Application (Hard Copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Not Applicable

ATTACHMENT SO-E01-L1

Process Flow Diagram



Company: Solutia Inc.
File Name: 471_1.DWG
Revision Date: 06/09/98
Developed By: Golder Associates

SOLUTIA, INC. PENSACOLA PLANT
AREA 471, NYLON INTERMEDIATES

ATTACHMENT SO-E01-L2

Fuel Analysis

KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	7653
SLN:	2417	Date Sampled:	12/17/97
Customer:	MONSANTO COMPANY	Date Analyzed:	12/18/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	11/21/97
Field:		Effective Date:	12/1/97
Cylinder Number:		Sample Pressure (psig):	390
Sample Type:	COMP	Line Pressure (psig):	578
		Line Temperature (deg. F):	61

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.418	0.0	
Carbon Dioxide	1.654	0.0	
Methane	91.082	922.1	
Ethane	4.617	81.9	1.235
Propane	1.449	36.5	0.399
Iso-Butane	0.349	11.4	0.114
Normal Butane	0.280	9.2	0.088
Iso-Pentane	0.071	2.9	0.026
Normal Pentane	0.027	1.1	0.010
Hexanes+	0.053	2.8	0.024
Total	100.00	1067.8	1.896

Ideal Gravity :	0.6205
Real Specific Gravity:	0.6220
Compressibility Factor:	1.002
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	3.2
Grains H_2S / 100 CF:	
ID	CARL3471
CS	45

	Pressure base (psia)			
	15.025	14.735	14.73	14.65
B.T.U / Cubic Foot				
Dry	1091.9	1070.8	1070.4	1064.6
Saturated	1072.9	1052.2	1051.8	1046.1
At Actual H_20 Content	1091.8	1070.7	1070.3	1064.5
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	1.934	1.897	1.896	1.886
Gal / MCF Pentanes +	0.061	0.06	0.059	0.059

Comments:

P/U BY LARRY CROSBY

Distribution: SALTER, ALEX

ANALYST: FRED K. SMITH

MONSANTO
JANIS ROSS
904-968-8814

OKALOOSA GAS
STEVE ALBIN
904-678-2165

GULF POWER COMPANY
JOCELYN HENDERSON
904-444-6217

KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	7285
SLN:	2417	Date Sampled:	11/21/97
Customer:	MONSANTO COMPANY	Date Analyzed:	11/25/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	10/20/97
Field:		Effective Date:	11/1/97
Cylinder Number:		Sample Pressure (psig):	610
Sample Type:	COMP	Line Pressure (psig):	630
		Line Temperature (deg. F):	66

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.227	0.0	
Carbon Dioxide	1.802	0.0	
Methane	91.048	921.7	
Ethane	4.399	78.0	1.177
Propane	1.568	39.5	0.432
Iso-Butane	0.442	14.4	0.145
Normal Butane	0.326	10.7	0.103
Iso-Pentane	0.099	4.0	0.036
Normal Pentane	0.040	1.6	0.014
Hexanes+	0.049	2.6	0.022
Total	100.00	1072.5	1.929

Ideal Gravity :	0.624
Real Specific Gravity:	0.6256
Compressibility Factor:	1.003
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	3.8
Grains H_2S / 100 CF:	
ID	AIC3368
CS	45

	Pressure base (psia)			
	15.025	14.735	14.73	14.65
B.T.U / Cubic Foot				
Dry	1096.7	1075.5	1075.2	1069.3
Saturated	1077.6	1056.8	1056.5	1050.7
At Actual H_20 Content	1096.6	1075.4	1075.1	1069.2
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	1.967	1.929	1.929	1.918
Gal / MCF Pentanes +	0.074	0.073	0.073	0.072

Comments:

P/U BY LARRY CROSBY

Distribution: SALTER, ALEX

ANALYST: FRED K. SMITH

MONSANTO
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904-968-8814

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JOCELYN HENDERSON
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KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	6614
SLN:	2417	Date Sampled:	10/20/97
Customer:	MONSANTO COMPANY	Date Analyzed:	10/24/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	9/19/97
Field:		Effective Date:	10/1/97
Cylinder Number:		Sample Pressure (psig):	805
Sample Type:	COMP	Line Pressure (psig):	606
		Line Temperature (deg. F):	76

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.282	0.0	
Carbon Dioxide	1.772	0.0	
Methane	91.100	922.2	
Ethane	4.390	77.9	1.174
Propane	1.566	39.5	0.432
Iso-Butane	0.425	13.9	0.139
Normal Butane	0.312	10.2	0.098
Iso-Pentane	0.096	3.8	0.035
Normal Pentane	0.002	0.1	0.001
Hexanes+	0.055	2.9	0.025
Total	100.00	1070.5	1.904

Ideal Gravity :	0.6228
Real Specific Gravity:	0.6243
Compressibility Factor:	1.002
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	3.8
Grains H_2S / 100 CF:	
ID	BVAR3276
CS	45

	Pressure base (psia)			
	15.025	14.735	14.73	14.65
E.T.U / Cubic Foot				
Dry	1094.6	1073.5	1073.2	1067.3
Saturated	1075.6	1054.8	1054.5	1048.7
At Actual H_20 Content	1094.5	1073.4	1073.1	1067.2
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	1.942	1.904	1.904	1.893
Gal / MCF Pentanes +	0.062	0.06	0.06	0.06

Comments:

P/U BY LARRY CROSBY

Distribution: SALTER, ALEX

ANALYST: FRED K. SMITH

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KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	5988
SLN:	2417	Date Sampled:	9/19/97
Customer:	MONSANTO COMPANY	Date Analyzed:	9/23/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	8/20/97
Field:		Effective Date:	9/1/97
Cylinder Number:		Sample Pressure (psig):	540
Sample Type:	COMP	Line Pressure (psig):	611
		Line Temperature (deg. F):	79

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.222	0.0	
Carbon Dioxide	1.786	0.0	
Methane	90.904	920.3	
Ethane	4.466	79.2	1.194
Propane	1.642	41.4	0.452
Iso-Butane	0.452	14.7	0.148
Normal Butane	0.330	10.8	0.104
Iso-Pentane	0.108	4.3	0.040
Normal Pentane	0.037	1.5	0.013
Hexanes+	0.053	2.8	0.024
Total	100.00	1075.0	1.975

Ideal Gravity :	0.6253
Real Specific Gravity:	0.6269
Compressibility Factor:	1.003
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	3.2
Grains H_2S / 100 CF:	
ID	BVAR3054
CS	45

	Pressure base (psia)			
	15.025	14.735	14.73	14.65
B.T.U / Cubic Foot				
Dry	1099.3	1078.1	1077.7	1071.8
Saturated	1080.2	1059.3	1059	1053.2
At Actual H_20 Content	1099.2	1078	1077.6	1071.7
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	2.015	1.976	1.975	1.965
Gal / MCF Pentanes +	0.078	0.077	0.077	0.076

Comments:

P/U BY LARRRY CROSBY

Distribution: SALTER, ALEX

ANALYST: FRED K. SMITH

MONSANTO
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KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	5177
SLN:	2417	Date Sampled:	7/21/97
Customer:	MONSANTO COMPANY	Date Analyzed:	7/29/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	6/20/97
Field:		Effective Date:	7/1/97
Cylinder Number:		Sample Pressure (psig):	750
Sample Type:	COMP	Line Pressure (psig):	573
		Line Temperature (deg. F):	78

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.220	0.0	
Carbon Dioxide	1.795	0.0	
Methane	90.811	919.3	
Ethane	4.458	79.1	1.192
Propane	1.646	41.5	0.454
Iso-Butane	0.475	15.5	0.155
Normal Butane	0.357	11.7	0.113
Iso-Pentane	0.120	4.8	0.044
Normal Pentane	0.046	1.9	0.017
Hexanes+	0.072	3.8	0.032
Total	100.00	1077.5	2.007

Ideal Gravity :	0.627
Real Specific Gravity:	0.6286
Compressibility Factor:	1.003
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	3.0
Grains H_2S / 100 CF:	
ID	CARL2642
CS	45

	Pressure base (psia)			
	15.025	14.735	14.73	14.65
B.T.U / Cubic Foot				
Dry	1101.9	1080.6	1080.2	1074.4
Saturated	1082.7	1061.8	1061.4	1055.7
At Actual H_20 Content	1101.8	1080.5	1080.1	1074.3
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	2.047	2.007	2.007	1.996
Gal / MCF Pentanes +	0.095	0.093	0.093	0.092

Comments:

P/U BY C. CHAPMAN

Distribution: SALTER, ALEX

ANALYST: FRED K. SMITH

MONSANTO
JANIS ROSS
904-968-8814

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KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	5439
SLN:	2417	Date Sampled:	8/20/97
Customer:	MONSANTO COMPANY	Date Analyzed:	8/22/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	7/21/97
Field:		Effective Date:	8/1/97
Cylinder Number:		Sample Pressure (psig):	890
Sample Type:	COMP	Line Pressure (psig):	566
		Line Temperature (deg. F):	80

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.222	0.0	
Carbon Dioxide	1.666	0.0	
Methane	91.468	926.0	
Ethane	4.192	74.4	1.121
Propane	1.506	38.0	0.415
Iso-Butane	0.408	13.3	0.133
Normal Butane	0.316	10.3	0.100
Iso-Pentane	0.099	4.0	0.036
Normal Pentane	0.042	1.7	0.015
Hexanes+	0.081	4.3	0.036
Total	100.00	1071.9	1.857

Ideal Gravity :	0.6213
Real Specific Gravity:	0.6228
Compressibility Factor:	1.002
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	4.2
Grains H_2S / 100 CF:	
ID	CARL2735
CS	45

	Pressure base (psia)			
	15.025	14.735	14.73	14.65
B.T.U / Cubic Foot				
Dry	1096.1	1074.9	1074.6	1068.7
Saturated	1077	1056.2	1055.9	1050.1
At Actual H_20 Content	1096	1074.8	1074.5	1068.6
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	1.894	1.858	1.857	1.847
Gal / MCF Pentanes +	0.089	0.088	0.088	0.087

Comments:

P/U BY LARRY CROSBY

Distribution: SALTER, ALEX

ANALYST: FRED K. SMITH

MONSANTO
JANIS ROSS
904-968-8814

OKALOOSA GAS
STEVE ALBIN
904-678-2165

GULF POWER COMPANY
JOCELYN HENDERSON
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KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	4388
SLN:	2417	Date Sampled:	6/20/97
Customer:	MONSANTO COMPANY	Date Analyzed:	6/26/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	5/21/97
Field:		Effective Date:	6/1/97
Cylinder Number:		Sample Pressure (psig):	620
Sample Type:	COMP	Line Pressure (psig):	596
		Line Temperature (deg. F):	76

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.214	0.0	
Carbon Dioxide	1.795	0.0	
Methane	90.791	919.1	
Ethane	4.430	78.6	1.185
Propane	1.678	42.3	0.462
Iso-Butane	0.494	16.1	0.162
Normal Butane	0.363	11.9	0.114
Iso-Pentane	0.113	4.5	0.041
Normal Pentane	0.045	1.8	0.016
Hexanes+	0.077	4.1	0.034
Total	100.00	1076.4	2.015

Ideal Gravity :	0.6275
Real Specific Gravity:	0.6291
Compressibility Factor:	1.003
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	3.6
Grains H_2S / 100 CF:	
ID	CARL2402
CS	45

Pressure base (psia)

E.T.U / Cubic Foot	15.025	14.736	14.73	14.65
Dry	1102.8	1081.5	1081.1	1075.3
Saturated	1083.6	1062.7	1062.3	1056.6
At Actual H_2O Content	1102.7	1081.4	1081	1075.2
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	2.056	2.016	2.015	2.004
Gal / MCF Pentanes +	0.094	0.092	0.092	0.092

Comments:

P/U BY C. CHAPMAN

Distribution: SALTER, ALEX

ANALYST: FRED K. SMITH

MONSANTO
JANIS ROSS
904-968-8814

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KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	3869
SLN:	2417	Date Sampled:	5/21/97
Customer:	MONSANTO COMPANY	Date Analyzed:	5/28/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	4/21/97
Field:		Effective Date:	5/1/97
Cylinder Number:		Sample Pressure (psig):	570
Sample Type:	COMP	Line Pressure (psig):	580
		Line Temperature (deg. F):	71

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.271	0.0	
Carbon Dioxide	1.808	0.0	
Methane	90.567	916.8	
Ethane	4.490	79.6	1.201
Propane	1.711	43.2	0.471
Iso-Butane	0.527	17.2	0.172
Normal Butane	0.390	12.8	0.123
Iso-Pentane	0.121	4.9	0.044
Normal Pentane	0.043	1.7	0.016
Hexanes+	0.072	3.8	0.032
Total	100.00	1080.0	2.060

Ideal Gravity :	0.6293
Real Specific Gravity:	0.6309
Compressibility Factor:	1.003
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	3.6
Grains H_2S / 100 CF:	
ID	BVAR2302
CS	45

	Pressure base (psia)			
	15.025	14.735	14.73	14.65
B.T.U / Cubic Foot				
Dry	1104.4	1083.1	1082.7	1076.9
Saturated	1085.2	1064.3	1063.9	1058.2
At Actual H_2O Content	1104.3	1083	1082.6	1076.8
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	2.101	2.06	2.06	2.049
Gal / MCF Pentanes +	0.094	0.092	0.092	0.092

Comments:

Distribution: SALTER, ALEX

ANALYST: FRED K. SMITH

MONSANTO
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STEVE ALBIN
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KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	3242
SLN:	2417	Date Sampled:	4/21/97
Customer:	MONSANTO COMPANY	Date Analyzed:	4/25/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	3/20/97
Field:		Effective Date:	4/1/97
Cylinder Number:		Sample Pressure (psig):	605
Sample Type:	COMP	Line Pressure (psig):	595
		Line Temperature (deg. F):	67

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.366	0.0	
Carbon Dioxide	1.805	0.0	
Methane	90.258	913.7	
Ethane	4.751	84.3	1.271
Propane	1.733	43.7	0.478
Iso-Butane	0.488	15.9	0.160
Normal Butane	0.369	12.1	0.116
Iso-Pentane	0.119	4.8	0.044
Normal Pentane	0.040	1.6	0.014
Hexanes+	0.071	3.8	0.032
Total	100.00	1079.8	2.114

Ideal Gravity :	0.6301
Real Specific Gravity:	0.6317
Compressibility Factor:	1.003
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	2.6
Grains H_2S / 100 CF:	
ID	CARL2060
CS	45

Comments:

P/U BY CHAPMAN

	Pressure base (psia)			
	15.025	14.735	14.73	14.65
B.T.U / Cubic Foot				
Dry	1104.2	1082.9	1082.6	1076.7
Saturated	1085	1064.1	1063.8	1058
At Actual H_2O Content	1104.1	1082.8	1082.5	1076.5
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	2.156	2.115	2.114	2.103
Gal / MCF Pentanes +	0.092	0.09	0.09	0.089

Distribution: SALTER, ALEX

ANALYST: FRED K. SMITH

MONSANTO
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OKALOOSA GAS
STEVE ALBIN
904-678-2165

GULF POWER COMPANY
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904-444-6217

KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	2622
SLN:	2417	Date Sampled:	3/20/97
Customer:	MONSANTO COMPANY	Date Analyzed:	3/27/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	2/21/97
Field:		Effective Date:	3/1/97
Cylinder Number:		Sample Pressure (psig):	270
Sample Type:	COMP	Line Pressure (psig):	605
		Line Temperature (deg. F):	64

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.407	0.0	
Carbon Dioxide	1.819	0.0	
Methane	90.275	913.9	
Ethane	4.712	83.6	1.260
Propane	1.702	42.9	0.469
Iso-Butane	0.487	15.9	0.159
Normal Butane	0.375	12.3	0.118
Iso-Pentane	0.121	4.9	0.044
Normal Pentane	0.041	1.7	0.015
Hexanes+	0.061	3.2	0.027
Total	100.00	1078.2	2.093

Ideal Gravity :	0.6298
Real Specific Gravity:	0.6314
Compressibility Factor:	1.003
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	2.4
Grains H_2S / 100 CF:	
ID	AVAR1866
CS	45

Comments:

E.T.U / Cubic Foot	Pressure base (psia) 15.025	14.735	14.73	14.65
Dry	1102.6	1081.3	1080.9	1075.1
Saturated	1083.4	1062.5	1062.1	1056.4
At Actual H_20 Content	1102.5	1081.2	1080.8	1075
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	2.135	2.094	2.093	2.082
Gal / MCF Pentanes +	0.088	0.086	0.086	0.086

Distribution: ADAMS, CHARLIE

Alex Salter

ANALYST: FRED K. SMITH

MONSANTO
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KOCH INDUSTRIES INC.

KOCH - GATEWAY PIPELINE

LONGVIEW CENTRAL LABORATORY P.O. Box 7906, Longview, TX 75607 (903) 757-3545

NATURAL GAS ANALYSIS

Meter Number:	213501013	Sample Number:	1838
SLN:	2417	Date Sampled:	2/20/97
Customer:	MONSANTO COMPANY	Date Analyzed:	2/27/97
Location:	MONSANTO: PENSACOLA PLANT	Date Installed:	1/22/97
Field:		Effective Date:	2/1/97
Cylinder Number:		Sample Pressure (psig):	720
Sample Type:	COMP	Line Pressure (psig):	645
		Line Temperature (deg. F):	28

@14.73 psia / 60° F, Dry
Uncorrected for compressibility

Component:	Mol %	BTU/CF	Gal / MCF
Nitrogen	0.802	0.0	
Carbon Dioxide	1.605	0.0	
Methane	89.221	903.2	
Ethane	5.503	97.6	1.472
Propane	1.804	45.5	0.497
Iso-Butane	0.474	15.5	0.155
Normal Butane	0.363	11.9	0.114
Iso-Pentane	0.116	4.7	0.042
Normal Pentane	0.036	1.5	0.013
Hexanes+	0.076	4.0	0.034
Total	100.00	1083.8	2.328

Ideal Gravity :	0.6341
Real Specific Gravity:	0.6357
Compressibility Factor:	1.003
Dew point Temperature:	
Dew point pressure:	
Pounds H_2O / MMCF:	2.8
Grains H_2S / 100 CF:	
ID	BVAR1636
IT	ADAMS, CHARLIE

	Pressure base (psia)			
	15.025	14.735	14.73	14.65
B.T.U / Cubic Foot				
Dry	1108.3	1087	1086.6	1080.7
Saturated	1089	1068.1	1067.7	1061.9
At Actual H_20 Content	1108.2	1086.9	1086.5	1080.6
Liquifiable Hydrocarbons				
Gal / MCF Ethane +	2.375	2.329	2.328	2.315
Gal / MCF Pentanes +	0.091	0.09	0.09	0.089

Comments:

P/U BY BRYAN MARTIN

Distribution: ADAMS, CHARLIE

ANALYST: FRED K. SMITH

MONSANTO
JANIS ROSS
904-968-8814

OKALOOSA GAS
STEVE ALBIN
904-678-2165

GULF POWER COMPANY
JOCELYN HENDERSON
904-444-6217

ATTACHMENT SO-E01-L6

Procedures for Start-up and Shutdown

PROCEDURES FOR STARTUP AND SHUTDOWN

Solutia, Inc. assures that best management practices are employed during startup and shutdown by the use of Specific Practice Instructions (SPIs) and Operating Instructions (OIs). These document are developed and maintained in a computerized document management system for each manufacturing operation at the Pensacola Plant. This document management system assures that the information is available to operations and maintenance personnel as needed. The documents are also available for Department inspection upon request.

The SPIs are written to facilitate safe and efficient startup and shutdown. They detail the sequence and timing of all operational steps to accomplish the intended action. The OIs establish optimum operating ranges, including process operations affecting control of environmental compliance.

ATTACHMENT SO-E01-L7

Operation and Maintenance Plan

OPERATION AND MAINTENANCE PLANS

Solutia, Inc. assures that best management practices are employed during operation and maintenance by the use of Specific Practice Instructions (SPIs) and Operating Instructions (OIs). These document are developed and maintained in a computerized document management system for each manufacturing operation at the Pensacola Plant. This document management system assures that the information is available to operations and maintenance personnel as needed. The documents are also available for Department inspection upon request.

The SPIs are written to facilitate safe and efficient operation and maintenance. They detail the sequence and timing of all operational steps to accomplish the intended action. The OIs establish optimum operating ranges, including process operations affecting control of environmental compliance.

ATTACHMENT SO-E01-L8

Emission Calculation Methodology

AREA 471 EMISSION CALCULATION SPREADSHEETS 7/8/98					
LIST OF TABLES AND LOCATIONS					
TABLE NUMBER	DESCRIPTION				
1	AREA 471 HEATERS				
2	AREA 471 TRU OBUD				
3	AREA 471 FLARES				
4	AREA 471 COMBINED TOTAL EMISSIONS				
5	AREA II, 480, and 471 COMBINED TOTAL EMISSIONS				

Table 1: Heater Emissions				
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)	
AREA 471 Heaters Total (Natural Gas Combustion) (1)				
Heat input rate total (MMBtu/hr) [100M Btu/hr annual average] (2)	160	NA	NA	
NOx Emission Factor - Emissions (Lb/MMBtu) (3)	0.200	32.00	87.60	
Particulate Emission Factor -Emissions (lb/MMBtu)	0.015	2.40	6.57	
CO Emission Factor - Emissions (lb/MMBtu)	0.035	5.60	15.33	
VOC Emission Factor - Emissions (lb/MMBtu)	0.003	0.45	1.22	

Comments: Heater Emissions

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.

(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.

(e) Catalyst charging, and catalyst removal will occur several times per year. Operation and maintenance plans, as addressed in Section SO-E01-L7, attached, will prevent objectionable odors, excessive visible emissions and will assure safe emission levels for workers and the public. Catalyst regeneration (thermal oxidation within the reactor) is performed every one (1) to two (2) days for each reactor. This procedure is integral to the process and these emissions are controlled as part of the process offgas.

(f) Area 471 nylon intermediate process residue is being considered for fuel use in one or more existing plant boilers #4, #5, and/or #6.

Footnotes:

(1) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Small industrial boilers (10 - 100 MMBtu/hr) uncontrolled (lb/MMCF) CO - 35, VOC - 5.8*0.83. Natural gas 1000 Btu/scf.
Lb/MMBtu = lb/MMCF/Btu/scf . PM emission factor = 0.015 per similar stack tests.

(2) 100 MMBtu/hr annual average basis, total hourly rate = 160 MMBtu/hr

(3) NOx emission factor determined from engineering estimates and design criteria.

Table 2: TRU ORGANICS BACK-UP DEVICE (OBUD) EMISSIONS				
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)	
Area 471 TRU Organics Back-up Device (OBUD) - Pilot fuel (1)				
Heat input rate total; MMBtu/hr ;hours/year	0.27		8760	
NOx factor, natural gas, Lb/Btu (4)	0.200	0.05	0.24	
Particulate factor, Natural gas, lb/MMBtu	0.015	0.00	0.02	
CO factor, Natural gas, lb/MMBtu	0.040	0.01	0.05	
VOC factor, Natural gas, lb/MMBtu	0.003	0.00002	0.00007	
AREA 471 TRU Organics Back-up Device (OBUD) - Hot Standby (2)				
Heat input rate total; MMBtu/hr ;hours/year	18.75		8030	
NOx factor, natural gas, lb/MMBtu (4)	0.200	3.75	15.06	
Particulate factor, Natural gas, Lb/MMBtu	0.015	0.28	1.13	
CO factor, Natural gas, lb/MMBtu	0.040	0.75	3.01	
VOC factor, Natural gas, lb/MMBtu	0.003	0.001	0.004	
AREA 471 TRU Organics Back-up Device (OBUD) - Assist fuel (3)				
Heat input rate total; MMBtu/hr ;hours/year	187.5		730	
NOx factor, natural gas, lb/MMBtu (4)	0.200	37.50	13.69	
Particulate factor, Natural gas, lb/MMBtu	0.015	2.81	1.03	
CO factor, Natural gas, lb/MMBtu	0.040	7.50	2.74	
VOC factor, Natural gas, lb/MMBtu	0.003	0.010	0.004	
AREA 471 TRU Organics Back-up Device (OBUD) - Process gas				
Maximum Hours of Operation			730	
NOx converted from N20 (assume 15%) lb/hr	1815	272.25	99.37	
VOC/CO destruction efficiency - 99%+	0.01			
CO from Area 471 (5)	600	6.00	0	
VOC from Area 471 (6)	1300	13.00	0	
CO from Area I (7)	1404	14.04	0	
VOC from Area I (8)	926	9.26	0	
AREA 471 TRU-OBUD EMISSION TOTALS				
NOx Emissions	NA	313.55	128.35	
Particulate Emissions	NA	3.10	2.17	
CO Emissions	NA	28.30	5.80	
VOC Emissions	NA	22.27	0.01	

Comments: TRU Organics Backup Device (OBUD)
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.
(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.
(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.
Footnotes:
(1) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Commercial boilers (0.3 < 10 MMBtu/hr) uncontrolled (lb/MMCF) CO - 40, VOC - 5.8 * 48% . Natural gas 1000 Btu/scf.
Lb/MMBtu = lb/MMCF/Btu/scf. PM emission factor = 0.015 per similar stack tests.
(2) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Small industrial boilers (10-100 MMBtu/hr) uncontrolled (lb/MMCF) CO - (Conservative Estimate) 40, VOC - 5.8 * 48% .
Natural gas 1000 Btu/scf. Lb/MMBtu = lb/MMCF/Btu/scf . PM emission factor = 0.015 per similar stack tests.
(3) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Large industrial boilers (> 100 MMBtu/hr) uncontrolled (lb/MMCF) CO - (conservative estimate) 40, VOC (conservative estimate) 5.8 * 48%.
Natural gas 1000 Btu/scf. Lb/MMBtu = lb/MMCF/Btu/scf . PM emission factor = 0.015 per similar stack tests.
(4) NOx emission factor determined from engineering estimate and design criteria.
(5) Area 471 process CO TPY emissions included in Area II TRU online estimates, because TRU calculation based on 8760 hours per year.
(6) Area 471 process VOC TPY emissions included in Area II TRU online estimates, because TRU calculation based on 8760 hours per year.
(7) Basis 1404 lb/hr per permit AC17-247476. TPY emissions accounted for in Area II TRU downtime CO.
(8) Basis 926 lb/hr per permit AC17-247476. TPY emissions accounted for in Area II TRU downtime VOC.

Table 3: AREA 471 FLARES AND VOC FUGITIVE EMISSIONS				
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)	
AREA 471 Pressure Relief Flare - Pilot fuel (1)				
Heat input rate total (MMBtu/hr) - Hours per year	0.27	NA	8760	
NOx factor, natural gas, lb/MMBtu (2)	0.200	0.054	0.237	
Particulate factor, Natural gas, lb/MMBtu	0.015	0.004	0.018	
CO factor, Natural gas, lb/MMBtu	0.021	0.006	0.025	
VOC factor, Natural gas, lb/MMBtu	0.003	0.001	0.003	
Raw Material Storage Tank Flare - Pilot fuel and assist fuel (1)				
Heat input rate total; MMBtu/hr;hours/year	0.54		8760	
NOx factor, natural gas, Lb/MMbtu (2)	0.200	0.108	0.473	
Particulate factor, Natural gas, lb/MMBtu	0.015	0.008	0.035	
CO factor, Natural gas, lb/MMBtu	0.021	0.011	0.050	
VOC factor, Natural gas, lb/MMBtu	0.003	0.00003	0.00013	
VOC destruction efficiency 98%+	0.020			
VOC from store material to flare (lb per hr)	3.00	0.008	0.037	
Product Storage Tank Flare - Pilot Fuel and assist fuel (1)				
Heat input rate total; MMBtu/hr;hours/year	0.54		8760	
NOx factor, natural gas, Lb/MMBtu (2)	0.200	0.108	0.473	
Particulate factor, Natural gas, Lb/MMBtu	0.015	0.008	0.035	
CO factor, Natural gas, Lb/MMBtu	0.021	0.011	0.050	
VOC factor, Natural gas, Lb/MMBtu	0.003	0.00001	0.0001	
VOC destruction efficiency 98%+	0.020			
VOC from store material to flare (lb per hr)	0.23	0.005	0.020	
VOC fugitive emissions (3)	na	na	3.8	
VOC-Benzene leaks + spills (4)	non-Title V	episodic	4	

Comments: AREA 471 Flares and VOC Fugitive Emissions
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.
(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.
(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.
Footnote:
(1) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 1.4-2 and 1.4-3.
Commercial boilers (0.3<10 MMBtu/hr) uncontrolled (lb/MMCF) CO-21, VOC - 5.8*(48%). Natural Gas 1000 Btu/scf.
Lb/MMBtu = lb/MMCF /Btu/scf, PM emission factor = 0.015 per similar stack tests.
(2) NOx emission factor determined from engineering estimate and design criteria.
(3) Based on SARA 313 Fugitive Emission estimate for Area I Nylon Intermediates of 7600 lbs/yr.
(4) Based on leak or spills not to exceed 500 lbs per 24 hour period.
Emissions from start-up, shutdown and malfunction are not required in the PSD determination

Table 4: COMBINED TOTAL AREA 471 EMISSIONS (HEATERS, TRU-OBUD, FLARES, VOC FUGITIVES)				
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)	
AREA 471 Total Emissions				
NOx		345.82	217.13	
Particulate		5.52	8.83	
CO		33.93	21.25	
VOC		22.73	9.09	
Comments: AREA 471 Total Emissions				
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.				
(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.				
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.				
(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.				

Table 5: COMBINED TOTAL AREA II/Area 480/Area 471 EMISSIONS				
Pollutant				
	Area II (TPY)	**Area 480 (TPY)**	**Area 471 (TPY)**	**Net (TPY)**
NOx	-396.57	0.00	217.13	-179.4
Particulate, PM10	5.89	0.00	8.83	14.7
CO (1)	-123.68	0.00	21.25	-102.4
VOC (1)	-63.59	12.39	9.09	-42.1
TOTAL SITE REDUCTION				**-309.3**

Comments: Combined Total Emissions

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

Footnotes:

(1) Based on 90% capture of Area I offgas when TRU is down and 98% destruction of CO and 99% destruction of VOC in offgas captured by Area 471 OBUD.

Area 480
Nylon Intermediates Expansion

6/11/98

Solutia Inc.

Pensacola, Florida

Department of
Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - LONG FORM

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: **Solutia Inc.**	
2. Site Name: **Pensacola Plant**	
3. Facility Identification Number: **0330040**	[ ] Unknown
4. Facility Location Information: Street Address or Other Locator: **3000 Old Chemstrand Road** City: **Cantonment** County: **Escambia** Zip Code: **32533**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Owner/Authorized Representative or Responsible Official

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

Mr. J.C. Ochsner, Site Manager

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

Organization/Firm: **Solutia Inc.**
Street Address: **P.O. Box 97**
City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

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

Telephone: **(850) 968-7000** Fax: **(850) 968-7869**

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 unit.*

J.C. Ochsner — 6-12-98

Signature Date

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID		Description of Emissions Unit	Permit Type
Unit #	Unit ID		
1R	---	Area 480 Nylon Intermediates	AC1E

See individual Emissions Unit (EU) sections for more detailed descriptions.
Multiple EU IDs indicated with an asterisk (*). Regulated EU indicated with an "R".

Purpose of Application and Category

Check one (except as otherwise indicated):

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 renewed: _____

[ ] 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. Also check Category III.

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. Give reason for the revision e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit to be revised: _____

Reason for revision: _____

_____

Category II: All Air Construction 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. Give reason for revision; e.g.; to address one or more newly constructed or modified emissions units.

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:

[X] 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: _____

See Title V Application for facility permit references.

[ ] 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:

[X] Attached - Amount: $ 1,000.00 [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Area 480 Nylon Intermediates. Phased construction of a production unit to supply additional nylon intermediates to support increased adipic acid production. Construction will commence upon permit receipt and completion is expected within 5 years.

2. Projected or Actual Date of Commencement of Construction :

1 Oct 1998

3. Projected Date of Completion of Construction :

1 Oct 2003

Professional Engineer Certification

1. Professional Engineer Name: **Mr. Bruce P. McLeod**
   Registration Number: **26956**

2. Professional Engineer Mailing Address:
   Organization/Firm: **Solutia Inc.**
   Street Address: **P.O. Box 97**
   City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

3. Professional Engineer Telephone Numbers:
   Telephone: **(850) 968-8725** Fax: **(850) 968-7869**

4. Professional Engineer's 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 pollution 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 [X] 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 unit 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.

Bruce P. McLeod 6/12/98

Signature (seal) Date

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:

   Mr. Bruce P. McLeod, Fellow Environmental Prg Management

2. Application Contact Mailing Address:

   Organization/Firm: **Solutia Inc.**
   Street Address: **P.O. Box 97**
   City: **Gonzalez** State: **FL** Zip Code: **32560-0097**

3. Application Contact Telephone Numbers:

   Telephone: **(850) 968-8725** Fax: **(850) 968-7869**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates:
   Zone: 16 East (km): 476 North (km): 3385

2. Facility Latitude/Longitude:
   Latitude (DD/MM/SS): 30 / 35 / 56 Longitude: (DD/MM/SS): 87 / 15 / 1

3. Governmental Facility Code:	4. Facility Status Code:	5. Facility Major Group SIC Code:	6. Facility SIC(s):
0	A	28	2869

7. Facility Comment (limit to 500 characters):

Facility Contact

1. Name and Title of Facility Contact:
   Mr. John Wiley, Team Leader, Env. Health & Safety

2. Facility Contact Mailing Address:
   Organization/Firm: Solutia Inc.
   Street Address: P.O. Box 97
   City: Gonzalez State: FL Zip Code: 32560-0097

3. Facility Contact Telephone Numbers:
   Telephone: (850) 968-7582 Fax: (850) 968-7869

Facility Regulatory Classifications

1. Small Business Stationary Source?	[ ] Yes [x] No [ ] Unknown
2. Title V Source?	[x] Yes [ ] No
3. Synthetic Non-Title V Source?	[ ] Yes [x] No
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	[x] Yes [ ] No
5. Synthetic Minor Source of Pollutants Other than HAPs?	[ ] Yes [x] No
6. Major Source of Hazardous Air Pollutants (HAPs)?	[x] Yes [ ] No
7. Synthetic Minor Source of HAPs?	[ ] Yes [x] No
8. One or More Emissions Units Subject to NSPS?	[x] Yes [ ] No
9. One or More Emissions Units Subject to NESHAP?	[x] Yes [ ] No
10. Title V Source by EPA Designation?	[ ] Yes [x] No
11. Facility Regulatory Classifications Comment (limit to 200 characters):	

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment SO-FI-B

ATTACHMENT SO-FI-B

Regulatory Applicability

FACILITY APPLICABLE REQUIREMENTS

Chapter 4 Permits	
62-4.030	General Prohibition.
62-4.100	Suspensions and Revocation.
62-4.130	Plant Operations - Problems.

Chapter 210 Stationary Sources – General Requirements	
62-210.300	Permits Required.
	(2) Air Operation Permits
	(a) Minimum Requirements for All Air Operation Permits
	(5) Notification of Startup.
62-210.370	Reports.
	(3) Annual Operating Report for Air Pollutant Emitting Facility.
62-210.550	Stack Height Policy
62-210.650	Circumvention
62-210.900	Forms and Instructions

Chapter 213 Operation Permits for Major Sources of Air Pollution	
62-213.205	Annual Operation Licensing Fee.
62-213.400	Permits and Permit Revisions Required.
62-213.410	Changes Without Permit Revision.
62-213.460	Permit Shield.

Chapter 257 Asbestos Removal	
62-257.301	Notification Procedure and Fee.
62-257.350	National Emission Standard for Asbestos.
62-257.400	Fee Schedule.
62-257.401	Enforcement.
62-257.900	Form (1).

FACILITY APPLICABLE REQUIREMENTS

EPA Part 61 - National Emission Standard for Hazardous Air Pollutants.	
Subpart M - National Emission Standard for Asbestos.	
61.145	Standard for demolition and renovation.
61.146	Standard for spraying.
61.148	Standard for insulating materials.
61.149	Standard for waste disposal for asbestos mills; (d) (1)
61.150	Standard for waste disposal for manufacturing, fabricating, demolition, renovation,and spraying operations.
61.152	Air-cleaning.
61.153	Reporting.

EPA Part 82 - Protection Of Stratospheric Ozone	
Subpart C - Ban on Non-Essential Products--Manufactured with Class I Products	
82.66	Non-essential Class I products and exemptions (d)(2)(viii)
Subpart F - Recycling and Emissions Reduction	
82.154	Prohibition.
82.156	Required practices.
82.158	Standards for recycling and recovery equipment
82.162	Certification by owners of recovery and recycling equipment
82.166	Reporting and recordkeeping requirements; (k) and (m)
82.66	Circumvention; (d) (2) (viii)
82.70	HCFC exemption; (a) (2) (v)

Title V Core List

Effective:03/25/97

[Note: The Title V Core List is intended to simplify the completion of the "List of Applicable Regulations" that apply facility-wide (see Subsection II.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List. Requirements that apply to emissions units must be identified in Subsection III.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. Applicants must identify all "applicable requirements" in order to claim the "permit shield" described at Rule 62-213.460, F.A.C.]

Federal:

40 CFR 61: National Emission Standards for Hazardous Air Pollutants (NESHAP)
40 CFR 61, Subpart M: NESHAP for Asbestos.
40 CFR 64; Compliance Assurance Monitoring
40 CFR 82: Protection of Stratospheric Ozone.
40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).
40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State:

CHAPTER 62-4, F.A.C.: PERMITS, effective 10-16-95

62-4.030, F.A.C.: General Prohibition.
62-4.040, F.A.C.: Exemptions.
62-4.050, F.A.C.: Procedure to Obtain Permits; Application
62-4.060, F.A.C.: Consultation.
62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.
62-4.080, F.A.C.: Modification of Permit Conditions.
62-4.090, F.A.C.: Renewals.
62-4.100, F.A.C.: Suspension and Revocation.
62-4.110, F.A.C.: Financial Responsibility.
62-4.120, F.A.C.: Transfer of Permits.
62-4.130, F.A.C.: Plant Operation - Problems.
62-4.150, F.A.C.: Review
62-4.160, F.A.C.: Permit Conditions.
62-4.210, F.A.C.: Construction Permits.
62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-103, F.A.C.: RULES OF ADMINISTRATIVE PROCEDURE, effective 12-31-95

62-103.150, F.A.C.: Public Notice of Application and Proposed Agency Action.
62-103.155, F.A.C.: Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding

Title V Core List

Effective:03/25/97

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 03-21-96

62-210.300, F.A.C.: Permits Required.
62-210.300(1), F.A.C.: Air Construction Permits.
62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.
62-210.300(3)(a), F.A.C.: Full Exemptions.
62-210.300(3)(b), F.A.C.: Temporary Exemption.

62-210.300(5), F.A.C.: Notification of Startup.
62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.350, F.A.C.: Public Notice and Comment.
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.

62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.

62-210.650, F.A.C.: Circumvention.

62-210.900, F.A.C.: Forms and Instructions.
62-210.900(1) Application for Air Permit - Long Form, Form and Instructions.
62-210.900(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 03-20-96

62-213.205, F.A.C.: Annual Emissions Fee.
62-213.400, F.A.C.: Permits and Permit Revisions Required.
62-213.410, F.A.C.: Changes Without Permit Revision.
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
62-213.420, F.A.C.: Permit Applications.
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
62-213.440, F.A.C.: Permit Content.
62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.
62-213.900(1) Major Air Pollution Source Annual Emissions Fee Form, Form and Instructions.

CHAPTER 62-256, F.A.C.: OPEN BURNING AND FROST PROTECTION FIRES, effective 11-30-94

CHAPTER 62-257, F.A.C: ASBESTOS NOTIFICATION AND FEE, effective 03/24/96

CHAPTER 62-281, F.A.C: MOTOR VEHICLE AIR CONDITIONING REFRIGERANT RECOVERY AND RECYCLING, effective 03-07-96

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-13-96

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.
62-296.320(3), F.A.C.: Industrial, Commercial, and Municipal Open Burning Prohibited
62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter

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C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location:
   [X] Attached, Document ID: SO-FI-E1
   [ ] Not Applicable [ ] Waiver Requested

2. Facility Plot Plan:
   [X] Attached, Document ID: SO-FI-E2
   [ ] Not Applicable [ ] Waiver Requested

3. Process Flow Diagram(s):
   [ ] Attached, Document ID(s): _____
   [X] Not Applicable [ ] Waiver Requested

4. Precautions to Prevent Emissions of Unconfined Particulate Matter:
   [ ] Attached, Document ID: _____
   [X] Not Applicable [ ] Waiver Requested

5. Fugitive Emissions Identification:
   [ ] Attached, Document ID: _____
   [X] Not Applicable [ ] Waiver Requested

6. Supplemental Information for Construction Permit Application:
   [ ] Attached, Document ID: _____
   [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities:
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

8. List of Equipment/Activities Regulated under Title VI:
   [ ] Attached, Document ID: _____
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [ ] Not Applicable

9. Alternative Methods of Operation:
   [ ] Attached, Document ID: _____
   [ ] Not Applicable

10. Alternative Modes of Operation (Emissions Trading):
    [ ] Attached, Document ID: _____
    [ ] Not Applicable

11. Identification of Additional Applicable Requirements:
[ ] Attached, Document ID: _____
[ ] Not Applicable

12. Compliance Assurance Monitoring Plan:
[ ] Attached, Document ID: _____
[ ] Not Applicable

13. Risk Management Plan Verification:

[ ] Plan Submitted to Implementing Agency - Verification Attached
Document ID: _____

[ ] Plan to be Submitted to Implementing Agency by Required Date

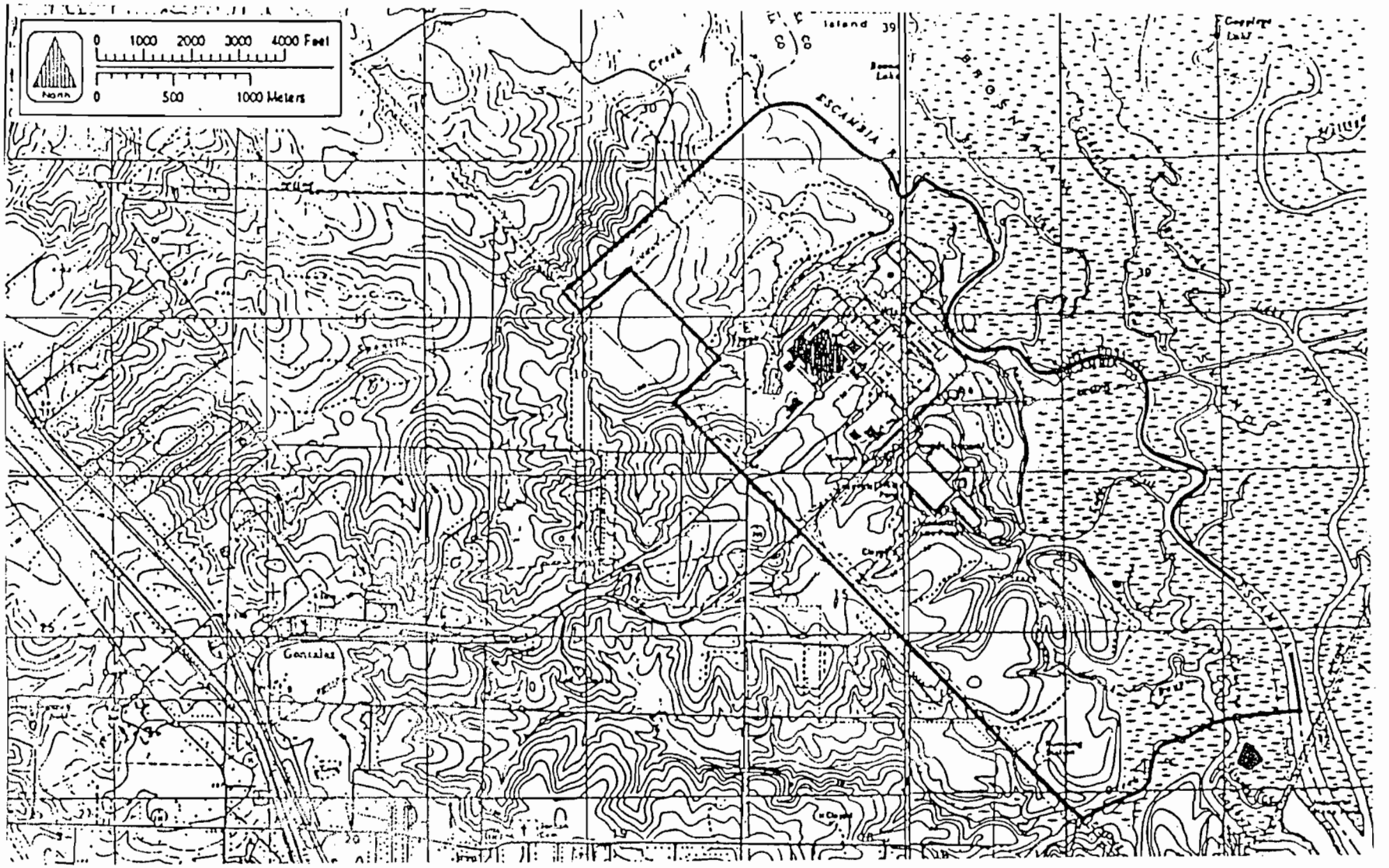
[ ] Not Applicable

14. Compliance Report and Plan
[ ] Attached, Document ID: _____
[ ] Not Applicable

15. Compliance Statement (Hard-copy Required)
[ ] Attached, Document ID: _____
[ ] Not Applicable

ATTACHMENT SO-FI-E1

Area map



Attachment SO-FI-E2
Facility Plot Plan

Solutia, Inc. - Pensacola, Florida

Drawing: PLOTP1.VSD

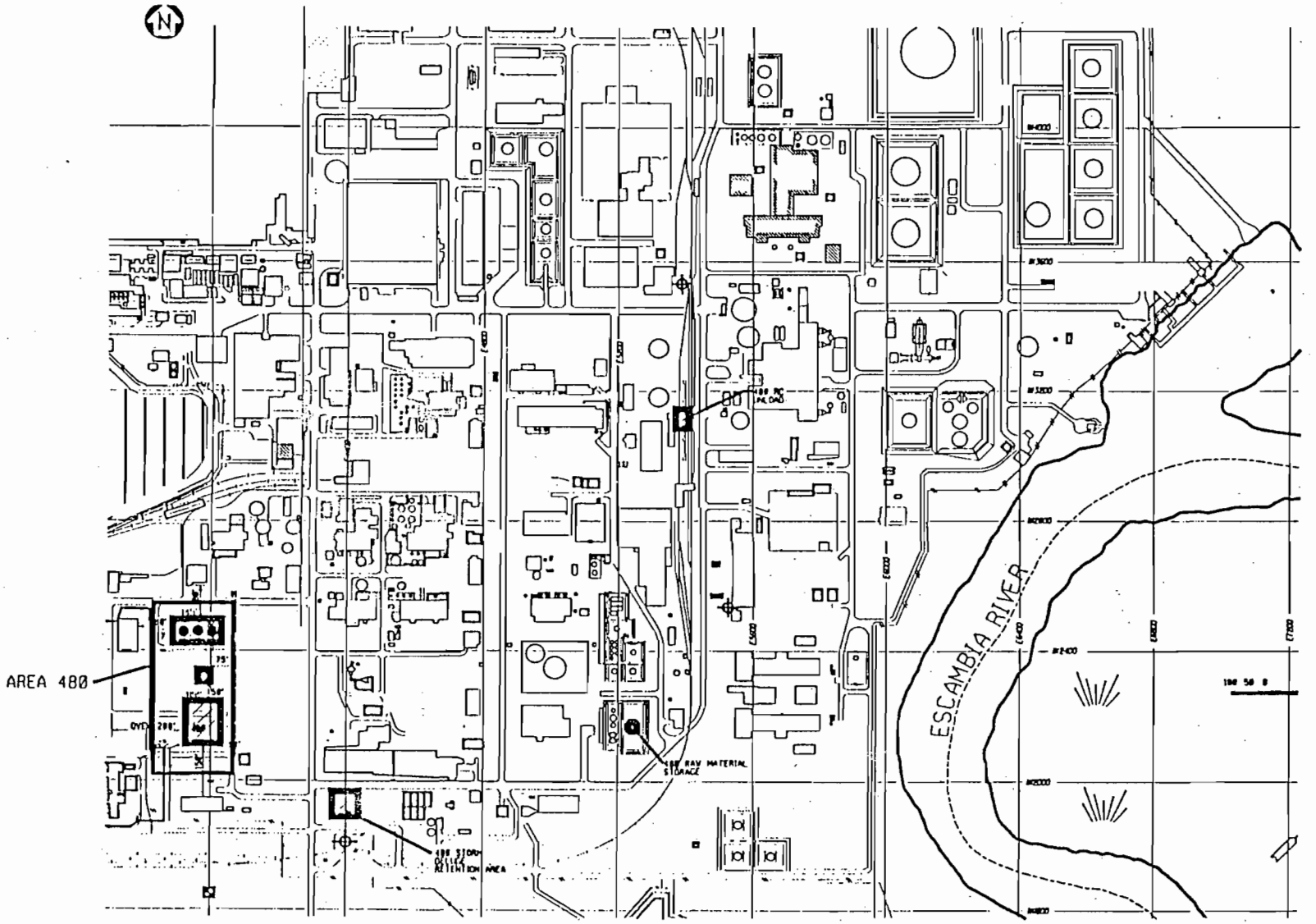
Project #: 9837535Y/F2/BLANKS.VSD

Date: 06/10/98

Golder Associates

ATTACHMENT SO-FI-E2

Facility Plot Plan



Attachment SO-FI-E1
Site Area Map

Solutia, Inc. - Pensacola, Florida

Drawing: SITEMAP1.VSD

Project #: 9837535Y/F2/BLANKS.VSD

Date: 06/10/98

Golder Associates

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

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

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).

[X] 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.

[ ] 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.

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

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Area 480 Nylon Intermediates**		
2. Emissions Unit Identification Number: [X] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: C	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **28**
6. Emissions Unit Comment (limit to 500 characters): **A production unit to supply additional nylon intermediates to support additional adipic acid production.**		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

The process VOC's are directed to a hydrogen plant reformer furnace or equivalent.

2. Control Device or Method Code: **60**

B.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):

2. Control Device or Method Code:

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

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: Dwell Time: Incinerator Afterburner Temperature:	 °F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:	200,000	TPY
5. Operating Capacity Comment (limit to 200 characters):		

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

24	hours/day	7	days/week
52	weeks/yr	8,760	hours/yr

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment SO-E01-D

ATTACHMENT SO-E01-D

Regulatory Applicability

EMISSION UNIT REGULATORY APPLICABILITY
AREA 480

The following section outlines the applicable Federal regulations specific to the emission unit associated with Area 480. The process may be subject to certain provisions of the New Source Performance Standards (NSPS), National Emission Standards For Hazardous Air Pollutants (NESHAPS), and the Hazardous Organic NESHAPS Rule (HON). The facility is currently reviewing final design parameters for Area 480. Upon completion of the final detailed design criteria, Solutia proposes to provide a finalized regulatory applicability assessment for Department review. The design parameters will determine process vent and associated equipment classification as Group I or Group II sources defined pursuant to 40 CFR 63. Generally, only the HON rule will apply to Group I processes . For process defined as Group II, the HON rule is applicable, however, the HON requirements for Group II sources are typically less stringent than the requirements of Group I sources. Generally, if a Group II process is subject to the provisions of both subparts (HON and NSPS or NESHAPS) the facility may have an option of complying completely with the HON Rule or a portion of the HON and a portion of NSPS or NESHAPS requirements for that particular source.

Provided below is a general list of NSPS, and NESHAPS applicable to Area 480 processes. A detailed list of HON requirements assuming Group I source applicability is provided following the general NSPS / NESHAPS list provided below.

---

40 CFR PART 60 **STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES**

Subpart A	General Provisions
Subpart Kb	Standards of Performance For Volatile Organic Liquid Storage Vessels
Subpart VV	Standards of Performance For Equipment Leaks of VOC in the SOCMI Industry
Subpart NNN	Standards of Performance for Volatile Organic Compound (VOC) Emissions From the SOCMI Industry - Distillation Operations
Subpart RRR	Standards of Performance for Volatile Organic Compounds (VOC) Emissions From the SOCMI Industry - Reactor Operations

40 CFR PART 61 **NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS**

Subpart A	General Provisions
Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)

AREA 480 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

Chapter 210 Stationary Sources - General Requirements	
62-210.700	Excess Emissions (1), (4) and (6)

Chapter 296 Stationary Sources – Emission Standards	
62-296.320	(1) VOC Vapor Emission Control Devices
	(2) Objectionable Odor Prohibited
	(4) General Particulate Emission Limiting Standards.

EPA Part 63 - National Emission Standard for Hazardous Air Pollutants for Source Categories	
Subpart A - General Provisions	
63.1	Applicability
63.4	Prohibited Activities and Circumvention
	(a) Prohibited Activities
	(b) Circumvention
63.5	Construction and Reconstruction
	(b) Requirements for existing, newly constructed and reconstructed sources
	(d) Application for construction approval
63.6	Compliance with standards and Maintenance requirements
	(b) Compliance dates for new and reconstructed sources
	(e) Operation and maintenance requirements
	(f) Compliance with non-opacity emission standards
	(h) Compliance with opacity and visible emission standards
63.7	Performance Testing Requirements
	(a) Applicability and performance test dates
	(b) Notification of performance tests
	(c) Quality assurance program
	(d) Performance testing facilities
	(g) Data analysis, recordkeeping, and reporting

AREA 480 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

63.8	Monitoring Requirements
	(b) Conduct of Monitoring
63.9	Notification Requirements
63.10	Recordkeeping and Reporting Requirements
	(b) General recordkeeping requirements
	(d) General reporting requirements
63.11	Control Device Requirements
	(b) Flares
Subpart F - National Emission Standards for Organic Hazardous Air Pollutants From the SOCMI Industry	
63.100	Applicability and Designation of Source
	(a) Applicability provisions, general provisions
	(l) Additional chemical manufacturing process requirements
63.102	General Requirements
	(a) Sources subject to subpart F to comply with subpart G and H
	(f) Obtain Title V permit for source
63.103	General Compliance, Reporting and Recordkeeping Provisions
	(a) Provisions of Subpart A applicability
	(b) Initial performance tests/compliance determinations
	(c) Copies of applicable reports
	(d) Records/postmarks/submittals
63.104	Heat Exchange System Requirements
	(a) Monitor heat exchange system
63.105	Maintenance Wastewater Requirements (a)-(e)
Subpart G - National Emission Standards for Organic Hazardous AIR Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer operations, and Wastewater	
63.110	Applicability
	(a) Subpart applies to all process vents, storage vessels, transfer trucks and wastewater streams within a source subject to subpart F of 40 CFR 63.
	(b)(1) Group 1 or Group 2 storage vessel also subject to provisions of 40 CFR 60 Subpart Kb is required to comply only with the provisions of this subpart.

AREA 480 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

	(d)(1) A Group 1 process vent that is also subject to the provisions of 40 CFR 60 subpart III (Standards of performance for VOC Emissions from SOCMI Air Oxidation Unit Process) is required to comply only with the provisions of this subpart.
	(d)(4) A Group 1 process vent that is also subject to the provisions of 40 CFR 60 Subpart NNN (Standards of Performance for VOC Emissions from SOCMI - distillation processes) is required to only comply with the provisions of this subpart.
	(d)(7) A Group 1 process vent that is also subject to the provisions of 40 CFR 60 Subpart RRR (Standards of performance for VOC Emissions from SOCMI - Reactor processes) is required to only comply with the provisions of this subpart.
63.112	Emission Standard
	(a) Control of organic HAP emissions
	(b) -(h) Demonstration of compliance
63.113	Process Vent Provisions - Reference Control Technology
	(a) Group 1 process vent requirements
63.114	Process Vent Provisions - Monitoring Requirements
	(a) Monitoring requirements for a process vent that uses a combustion device or recovery or recapture device to comply with the requirements in 63.113.
	(b)-(e) Additional process vent monitoring requirements
63.115	Process Vent Provisions - Methods and procedures for Process Vent Group Determinations (a)-(e)
63.116	Process Vent Provisions - Performance Test Methods and Procedures to Determine Compliance (a)-(e)
63.117	Process Vents Provisions - Reporting and Recordkeeping Requirements for Group and TRE determinations and Performance Tests (a)-(f).
63.118	Process Vent Provisions - Periodic Reporting and Recordkeeping Requirements
	(a) Maintain records if using control device to comply with 63.113 (a)(1) or (a)2.
	(b)-(c) Maintain records is using control device or other means to achieve and maintain a TRE index.
63.119	Storage Vessel Provisions - Reference Control Technology (a)-(f).
63.120	Storage Vessel Provisions - Procedures to Determine Compliance (a) - (f).
63.122	Storage Vessel Provisions - Reporting (a)-(h).
63.123	Storage Vessel Provisions - Recordkeeping (a)-(h).
63.126	Transfer Operations Provisions - Reference Control Technology (a) - (i).
63.127	Transfer Operations Provisions - Monitoring Requirements (a) - (e).
63.128	Transfer Operations Provisions - Test Methods and Procedures (a) - (v).
63.129	Transfer Operations Provisions - Reporting and Recordkeeping for Performance Tests and Notification of Compliance Status (a) - (f).

AREA 480 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

63.130	Transfer Operations Provisions - Periodic Recordkeeping and Reporting (a) - (f).
63.132	Process Wastewater Provisions - General
63.133	Process Wastewater Provisions - Wastewater Tanks
63.134	Process Wastewater Provisions - Surface Impoundments
63.135	Process Wastewater Provisions - Containers
63.136	Process Wastewater Provisions - Individual Drain Systems
63.137	Process wastewater Provisions - Oil Water Separators
63.138	Process Wastewater Provisions - Performance Standards for Treatment Processes Managing Group[1 Wastewater Stream and/or Residuals Removed From Group 1 Wastewater Streams.
63.139	Process Wastewater Provisions - Control Devices
63.140	Process Wastewater Provisions - Delay of Repair
63.143	Process Wastewater Provisions - Inspections and Monitoring of Operations
63.144	Process Wastewater Provisions - Test Methods and Procedures for Determining Applicability and Group1/Group 2 Determinations.
63.145	Process Wastewater Provisions - Test Methods and Procedures to Determine Compliance
63.146	Process Wastewater Provisions - Reporting
63.147	Process Wastewater Provisions - Recordkeeping
63.148	Leak Inspection Provisions
63.149	Control Requirements for Certain Liquid Streams in open Systems Within a Chemical Manufacturing Process Unit.
63.151	Initial Notification
63.152	General Reporting and Continuous Records
Subpart H - National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks	
63.160	Applicability and Designation of Source
	(b) Equipment to which this subpart applies that are also subject to the provisions of 40 CFR 60 [i.e. 40 CFR 60 Subpart VV: Standards of Performance for Equipment Leaks of VOC in the SOCMI] and 40 CFR 61 Subpart V: National Emission Standards for Equipment Leaks (Fugitive Emission Sources)] will be required only to comply with the provisions of this Part.
63.162	Standards: General
	(c) Equipment Designation
	(f) If leaks detected additional requirements apply

AREA 480 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

63.163	Standards: Pumps in Light Liquid Service
	(b) Monthly monitoring checks
	(c) Leak detection procedure
63.164	Standards: Compressors
	(a)-(h) compressor seal requirements
63.165	Standards: Pressure Relief Devices in Gas/Vapor Service
	(a)-(b) Device requirements
63.166	Standards: Sampling connection systems
	(a)-(b) Sampling connection system requirements
63.167	Standards: Open Ended Valves or Lines
	(a)-(c) Open ended valve equipment provisions
63.168	Standards: Valves in gas/vapor service and in light liquid service
	(a) Provision implementation date
	(b) Monitoring provisions
	(f) Leak detection / repair provisions
63.169	Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service
	A) Monitoring
	(b) - (d) Leak detection and repair
63.170	Standards: Surge Control vessels and bottoms receivers
63.171	Standards: Delay of Repair (a) - (e)
63.172	Standards: Closed Vent Systems and Control Devices
	(a) General requirements
	(b) Recovery and recapture devices efficiency
	(c) Enclosed combustion devices
	(d) Flares used to comply with this subpart shall comply with 40 CFR 63.11(b)
	(e) Monitoring
	(f)-(g) Inspection procedures
	(h) Leak repair
63.173	Standards: Agitators in Gas/Vapor Service and in Light Liquid Service

AREA 480 NYLON INTERMEDIATES APPLICABLE REQUIREMENTS

	(a) Monitoring
	(b) Visual inspection
	(c) Repair
63.174	Standards: Connectors in Gas/ Vapor Service and in Light Liquid Service
	(a) Monitoring
	(b) Leak interval check
	(d) Leak detection procedures
63.175	Quality Improvement Program for Valves
63.176	Quality Improvement Program for Pumps
63.180	Test Methods and Procedures
63.181	Recordkeeping Requirements
	(a) Records maintenance
	(b)-(c) Information recorded
	(d) Leak detection records
	(f) Compliance test recordkeeping
	(g) Maintenance of records for closed vent systems and control devices subject to 63.172
	(h) Maintenance of records for process units subject to 63.175 and 63.176
	(i) Maintenance of records for equipment in heavy liquid service
63.182	Reporting Requirements
	(a) Report submittal
	(c) Notification of compliance status
	(d) Periodic report submittal

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: H2 Plant
2. Emission Point Type Code: [ ] 1 [x] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Hydrogen Plant Reformer Furnace (H2 Plant)**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W
6. Stack Height: **65** feet
7. Exit Diameter: **4.6** feet
8. Exit Temperature: **600** °F

9. Actual Volumetric Flow Rate:	**70,000** acfm
10. Percent Water Vapor:	**20** %
11. Maximum Dry Standard Flow Rate:	**40,000** dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **The process VOC emissions are direct to the H2 Plant reformer furnace. Note range of parameters for line 8 = 500-600, line 9 = 50-70k, line 10 = 15-20%, and line 11 = 20-40k.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

   Area 480 nylon intermediates. A complete production process for the manufacture of nylon intermediates. All necessary operations are provided, such as raw material handling and storage, chemical reaction equipment, product refining and recovery equipment, and process waste handling and treatment.

2. Source Classification Code (SCC):

   3-01-091-99

3. SCC Units:

   Tons Produced

4. Maximum Hourly Rate:	5. Maximum Annual Rate: **200,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	

10. Segment Comment (limit to 200 characters):

    Maximum annual rate is based on 400 million pounds (MAR) of ketone/alcohol (ka) mixture.

Segment Description and Rate: Segment ____ of ____

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):	
2. Source Classification Code (SCC):	
3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters):	

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

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	099	060	WP
H017	099		WP
H144	099		WP

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

Pollutant Detail Information:

1. Pollutant Emitted: VOC
2. Total Percent Efficiency of Control: 98 %
3. Potential Emissions: lb/hour 12.4 tons/year
4. Synthetically Limited? [ ] Yes [x] No
5. Range of Estimated Fugitive/Other Emissions: [x] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr
6. Emission Factor: Reference:
7. Emissions Method Code: [ ] 0 [ ] 1 [x] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **See Attachment SO-E01-L8 for detailed calculation methodology.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

Emissions Unit Information Section 1 **of** 1

Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 3

1.	Visible Emissions Subtype: VE05
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: EPA Method 9
5.	Visible Emissions Comment (limit to 200 characters): Opacity Limit 5% by permit.

Visible Emissions Limitations: Visible Emissions Limitation 2 of 3

1.	Visible Emissions Subtype: VE20
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: EPA Method 9
5.	Visible Emissions Comment (limit to 200 characters): General visible emission standards per 62-296.320(4)(b).

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 3 of 3

1.	Visible Emissions Subtype: VE99
2.	Basis for Allowable Opacity: [X] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance: EPA Method 9
5.	Visible Emissions Comment (limit to 200 characters): Exceptional conditions defined pursuant to FDEP excess emissions provisions, 62-210.700.

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: [ ] Rule [ ] Other
3.	Requested Allowable Opacity Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4.	Method of Compliance:
5.	Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [ ] Rule [ ] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] 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 the 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 the 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.

   [X] 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?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] 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 the source 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 the source 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 the emissions unit consumes increment.

[X] 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	[ ] C	[ ] E	[X] Unknown
	SO_2	[ ] C	[ ] E	[X] Unknown
	NO_2	[ ] C	[ ] E	[X] Unknown
4.	Baseline Emissions:			
	PM	lb/hour		tons/year
	SO_2	lb/hour		tons/year
	NO_2			tons/year
5.	PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

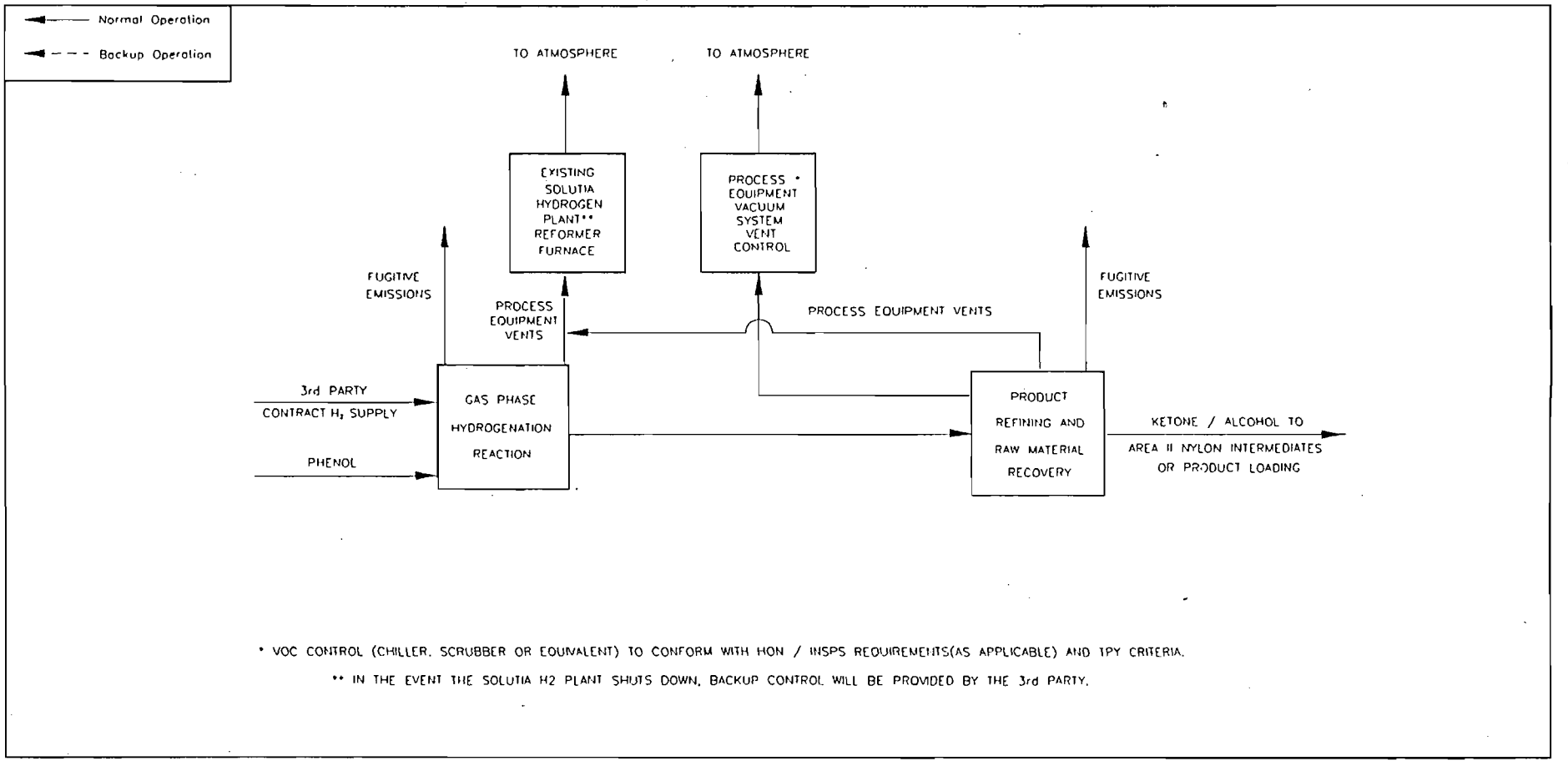
1.	Process Flow Diagram	
	[X] Attached, Document ID: SO-E01-L1	
	[ ] Not Applicable	[ ] Waiver Requested
2.	Fuel Analysis or Specification	
	[ ] Attached, Document ID: _____	
	[X] Not Applicable	[ ] Waiver Requested
3.	Detailed Description of Control Equipment	
	[ ] Attached, Document ID: _____	
	[ ] Not Applicable	[X] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[X] Attached, Document ID: SO-E01-L4	
	[ ] Not Applicable	[ ] Waiver Requested
5.	Compliance Test Report	
	[ ] Attached, Document ID: _____	[X] Not Applicable
	[ ] Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	
	[X] Attached, Document ID: SO-E01-L6	[ ] Not Applicable
7.	Operation and Maintenance Plan	
	[X] Attached, Document ID: SO-E01-L7	[ ] Not Applicable
8.	Supplemental Information for Construction Permit Application	
	[X] Attached, Document ID: SO-E01-L8	[ ] Not Applicable
9.	Other Information Required by Rule or Statute	
	[ ] Attached, Document ID: _____	[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10.	Alternative Methods of Operation [ ] Attached, Document ID: _____ [ ] Not Applicable
11.	Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ ] Not Applicable
12.	Identification of Additional Applicable Requirements [ ] Attached, Document ID: _____ [ ] Not Applicable
13.	Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ ] Not Applicable
14.	Acid Rain Permit Application (Hard Copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Not Applicable

ATTACHMENT SO-E01-L1

Process Flow Diagram



* VOC CONTROL (CHILLER, SCRUBBER OR EQUIVALENT) TO CONFORM WITH HON / NSPS REQUIREMENTS(AS APPLICABLE) AND TPY CRITERIA.

** IN THE EVENT THE SOLUTIA H2 PLANT SHUTS DOWN, BACKUP CONTROL WILL BE PROVIDED BY THE 3rd PARTY.

Company: Solutia Inc.
File Name: 480_1.DWG
Revision Date: 06/09/98
Developed By: Golder Associates

SOLUTIA INC. PENSACOLA PLANT
AREA 480, NYLON INTERMEDIATES

ATTACHMENT SO-E01-L4

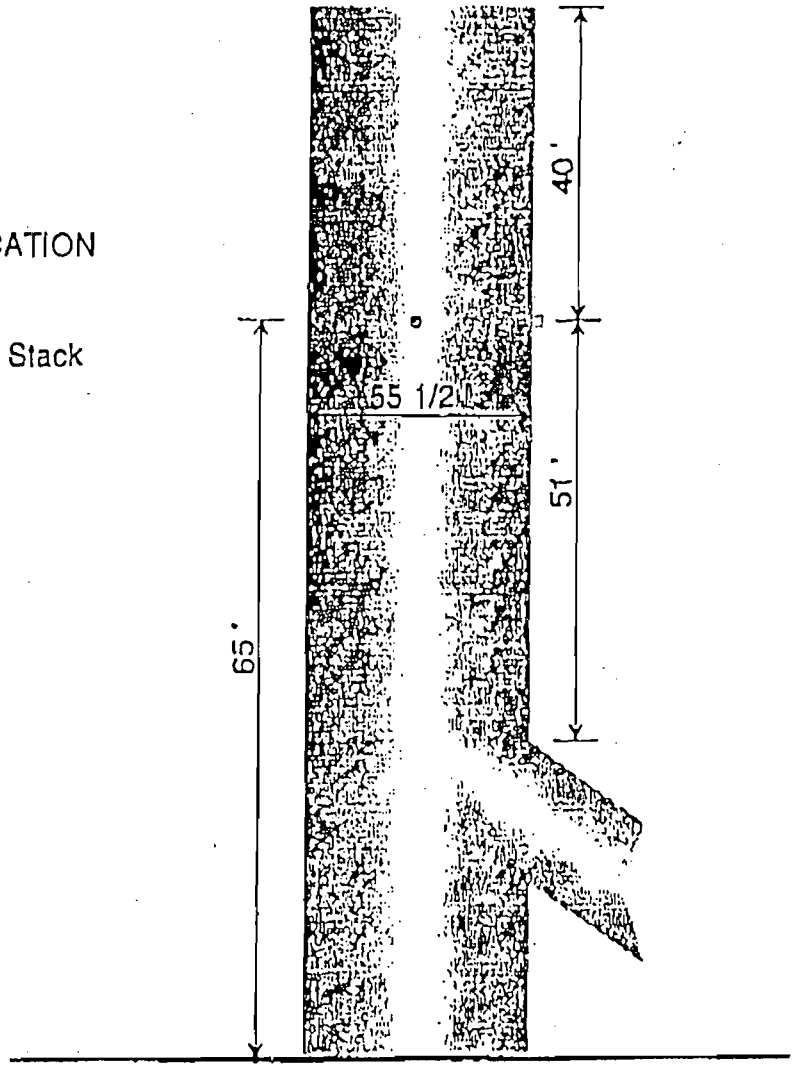
Stack Sampling Activities

DESCRIPTION OF STACK SAMPLING FACILITIES
H2 Plant Stack

The sampling location on the hydrogen plant stack is approximately 65 feet above the ground. The sampling ports are located 51 feet (11.03 stack diameters) downstream from the inlet to the stack and 40 feet (8.65 stack diameters) upstream from the outlet of the stack.

SAMPLING LOCATION

Hydrogen Plant Stack



Not to Scale

Attachment SO-E01-L4
H2 Stack Sampling Location

Solutia, Inc. - Pensacola, Florida

Drawing: H2SAMP1.VSD

Project #: 9837535Y/F2/BLANKS.VSD

Date: 06/10/98

Golder Associates

ATTACHMENT SO-E01-L6

Procedures for Start-up and Shutdown

PROCEDURES FOR STARTUP AND SHUTDOWN

Solutia, Inc. assures that best management practices are employed during startup and shutdown by the use of Specific Practice Instructions (SPIs) and Operating Instructions (OIs). These document are developed and maintained in a computerized document management system for each manufacturing operation at the Pensacola Plant. This document management system assures that the information is available to operations and maintenance personnel as needed. The documents are also available for Department inspection upon request.

The SPIs are written to facilitate safe and efficient startup and shutdown. They detail the sequence and timing of all operational steps to accomplish the intended action. The OIs establish optimum operating ranges, including process operations affecting control of environmental compliance.

ATTACHMENT SO-E01-L7

Operation and Maintenance Plan

OPERATION AND MAINTENANCE PLANS

Solutia, Inc. assures that best management practices are employed during operation and maintenance by the use of Specific Practice Instructions (SPIs) and Operating Instructions (OIs). These document are developed and maintained in a computerized document management system for each manufacturing operation at the Pensacola Plant. This document management system assures that the information is available to operations and maintenance personnel as needed. The documents are also available for Department inspection upon request.

The SPIs are written to facilitate safe and efficient operation and maintenance. They detail the sequence and timing of all operational steps to accomplish the intended action. The OIs establish optimum operating ranges, including process operations affecting control of environmental compliance.

ATTACHMENT SO-E01-L8

Emission Calculation Methodology

Area 480, Nylon Intermediates Expansion								
Item	Calculation Basis	Emission rate, Lb/hr	Emission rate, tons/yr					
Process Off-gas emissions								
VOC destruction efficiency = 98+% (1),(2)	0.02							
Offgas VOC Total to H2 plant, lbs/yr (3)	900,000	2.1	9.0					
Vacuum System Emissions								
VOC Control Efficiency	90%							
Vacuum System offgas VOC to control (TPY)	22	0.5	2.2					
Fugitive Emissions								
Process Fugitive Emissions (4)		0.3	1.2					
Total Emissions								
NOx		0.0	0.0					
Particulate		0.0	0.0					
CO		0.0	0.0					
VOC		2.8	12.4					

Comments: Area 480, Nylon Intermediates Expansion

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.

(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.

(e) Catalyst charging, catalyst removal, and catalyst regeneration (thermal oxidation within the reactor) will occur approximately once per year. Operation and maintenance plans, as addressed in Section SO-E01-L7, attached, will prevent objectionable odors, excess visible emissions and will assure safe emission levels for workers and the public.

Footnotes:

(1) Existing hydrogen plant reformer furnace, (or equivalent) VOC destruction estimated efficiency @ 98+%.

(2) No additional NO_x, particulate, CO or SO_2 emissions are expected from Area 480 process off-gas burning in the hydrogen plant reformer furnace. Process offgas burning is expected to be indistinguishable from natural gas fuel, with regard to these emissions.

(3) Process VOC to H2 plant = H2 purge gas, Process off-gas, storage tank vents and other miscellaneous area vents.

(4) Based on SARA 313 fugitive emission estimate for Area I Nylon Intermediates of 7600 lbs/yr.

Post-it® Fax Note 7671	Date 6/18/98 # of pages ▶ 7
To Willard Hanks	From Armando Sarasua
Co./Dept. DEP	Co. DEP NWD
Phone # 3C 278-1344	Phone # 3C 695-8364
Fax # 3C 292-6979	Fax # 3C 595-8597

FILE COPY

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Virginia B. Wetherell
Secretary

June 17, 1998

J. C. Ochsner
Facility Manager
Solutia, Inc.
P O Box 97
Gonzalez FL 32560-0097

Dear Mr. Ochsner:

This is in response to your Air Construction Permit Applications for the proposed Nylon Intermediates Expansion in Areas II, 471 and 480 at your Pensacola facility.

We are unable to process the applications because there is not enough information to verify the proper processing fee. Based on the information received it seems at this time that the fee submitted is insufficient. [Rule 62-4.050(5), F.A.C.]

Please send us, for each emission unit in the proposed expansion, a table showing the potential emissions of each criteria pollutant before and after the expansion. This table should be accompanied by supporting calculations and documentation for ease of verification.

If you have any questions or comments, please contact Armando Sarasua at (850) 595-8364.

Sincerely,

Ed K. Middleswart

Ed K. Middleswart, P.E.
Air Program Administrator

EKM:asc

cc: DEP Division of Air Resources Management, Tallahassee

permitting\98permit\solurpsd.doc

MEMORANDUM

To: A. S. Allen
From: A. I. Sarasua
Date: June 16, 1998
Subject PSD Review Applicability, Solutia (Monsanto) - Pensacola

We recently received Air Construction Permit Applications for the proposed Nylon Intermediates Expansion in Areas II, 471 and 480 at the Pensacola facility.

I recommend we proceed with caution. It seems to me that PSD is triggered by contemporaneous emissions of several recent expansion projects coupled with this one.

They claim in their cover letter an emissions reduction of 300 T/yr. Any offsets claimed should be disallowed if this is due to the NOx reduction from the TRU Consent Order. Other permits were previously issued based on the TRU performance as originally represented. To allow them to claim any offset for fixing something that should have been operating correctly all along would be inadvisable.

They submitted applications without enough information to verify what effect the expansion would have on emissions. There was not enough information to establish emissions before and after the expansions. Based on a quick review of the applications to determine fee applicability I gathered the following table:

		Emissions, Ton/yr				
EU ID	Area	NOx	PM	VOC	CO	$ fee paid
002	II	447.5	30.2	378.6	309.4	5,000
	471	217.1	8.83	9.09	21.3	1,000
	480			12.4		1,000

ACs for expansions of existing facilities pay fees based on the incremental increase. What is the real incremental increase? Note from the above that the $5,000 fee paid is for a sub-type 1B; *sources 100 T/yr or more without PSD or NAA*. This is incongruous as an increase of 100 T/yr on any of the criteria pollutants listed in the table would trigger PSD. Why is this expansion not subject to PSD review?

Keep in mind that as recently as 1995, during their adipic acid synthesis expansion, they increased NOx emissions by 37.5 T/yr. I felt that, coupled with other recent projects, a PSD review was warranted at the time. I expressed concern at the time that there seemed to be a pattern of sub-PSD trigger increases every few years at the Pensacola Facility. I am more suspicious now.

They produced an EPA memo from John Calcagni, clarifying a memo from Sheldon Meyers concerning net emissions increases under PSD, to support their claim that PSD did not apply. The memo states that EPA policy is no to aggregate less than significant (40 T/yr) increases. We backed down then. However, the memo also states that two or more related changes over a short period of time should be studied for possible circumvention. I believe such a pattern is more obvious with this present submittal. All these expansions are related to the primary business purpose of this facility - the manufacture and sale of nylon and intermediates. To claim the expansions are unrelated because they are not being done concurrently is specious. I propose we forward this to Tally and/or EPA for a closer look and determination.

Memo to: A. S. Allen
From: A I Sarasua
Re: PSD Review Applicability, Monsanto - Pensacola
Date: 4/14/95

Monsanto recently applied for construction permits for expansion of their Adipic Acid Synthesis and Transfer Processes. As submitted, they triggered PSD on PM. They then submitted a modification lowering the allowable limit from 0.03 to 0.015 g/DSCF to avoid PSD. These expansions would result in the following increases in criteria pollutants using the best numbers available at this time.

Pollutant	Emissions T/yr
NOx	37.5
PM	6.25
VOC	31.25

Monsanto has not provided reasonable assurance that NOx PSD is not triggered by the emissions increase that will occur during the 730 hours permitted for the NOx pollution control device to be out of service. strange condition for permit.

Also, I was concerned that there seemed to be a pattern of sub-PSD trigger increases every few years for different processes (emissions units) at the Pensacola plant (facility). I asked for a quantification of criteria pollutants emitted from the plant over the appropriate PSD baseline.

In a meeting held 4/13/95 Monsanto representatives opined that the Pensacola plant was not a candidate for PSD review. Each of the separate processes' increases did not individually exceed the PSD triggers so PSD review is not warranted. They cited an EPA guidance document that states the appropriate time period is two (2) years. They declined to provide the Department with the criteria pollutants quantification. only if change - unrelated

I mentioned that FAC 62-212.400(2)(e)3 states that Contemporaneous Emissions are defined as a change, an increase or decrease, in actual emissions if it occurs within 5 years prior to date of the present application to modify the facility. Also, FAC 62-212.200(2)(a) defines actual emissions,and FAC 62-212.200(31) defines facility. They did not share my appraisal of the situation.

Their efforts to avoid triggering PSD appear futile in light of a Hydrogen Plant expansion they are planning.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

SUBJECT: Net Emission Increase under PSD

FROM: Sheldon Meyers, Director
Office of Air Quality Planning and Standards

TO: David PI Howekamp, Director
Air Management Division - Region IX

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 4

To ANDY ALLEN	From BRUCE MACLEOD
Co. DEP	Co. MONSANTO
Dept.	Phone # 968 2725
Fax # 444 8417	Fax # I WILL CALL TO DISCUSS.

This is in response to your memo dated May 3, 1983 to Kathleen M. Bennett concerning net emission increases under PSD. I have looked into the question of inconsistency in interpretation of the de minimus provisions of the PSD relations as raised in your memorandum, and have concluded that the interpretation made by the Stationary Source Compliance Division is the most practical.

The issue, as I understand it, is whether sources and control agencies need to aggregate small changes (i.e., those below de minimus levels) which occur over time so that once the cumulative effect of the changes exceeds de minimus levels, PSD is triggered. The preamble to the PSD regulations implied that this aggregation would be required. However, the Agency has maintained since 1981 that no such aggregation is required. This interpretation was first articulated in a memo from SSCD (then DSSE) to Region VII dated January 22, 1981, and has been reiterated in memoranda to Region IX and X since then. The SSCD interpretation was concurred in by the Office of General Counsel (Peter Wyckoff) as legally supportable since the regulations themselves are not clear. The policy considerations leading to this interpretation were:

(a) aggregation could impose a significant resource burden on sources which might never become subject to PSD,

(b) aggregation would only require installation of BACT level controls on the last piece of equipment which triggered the review, with a minimum air quality benefit, and

(c) air quality would be protected since these changes would consume increment in any event.

Bad Call Big Loophole

In conclusion, I feel that the interpretation made by SSCD to be the most reasonable. However, I recognize that a clarifying amendment to the PSD regulation is advisable and will include it as part of the next set of proposed changes to the PSD regulations. If you would like to discuss this further, please contact me.

cc: Darryl Tyler
Ed. Reich
Peter Wyckoff

SEE ALSO
4.39

eptember 18, 1989

EMORANDUN

UBJECT: Request for Clarification of Policy Regarding the "Net Emissions Increase"

ROM: John Calcagni, Director
Air Quality Management Division (MD-15)

O: William B. Hathaway, Director
Air, Pesticides, and Toxics Division (6T)

This is in response to your August 10, 1989 memorandum regarding guidance on several issues related to the calculation of "net emissions increase" (as defined in 40 CFR 52.21(b)(3)(i)) for prevention of significant deterioration (PSD) applicability purposes. These issues arose from a PSD pre-application package submitted to Region VI by Conoco Inc. of Westlake, Louisiana.

As was discussed in an August 17, 1989 conference call between Region VI staff and members of the New Source Review Section, our response provides general guidance on the four basic netting questions raised in your memorandum, as opposed to a more detailed response specific to the Conoco application.

Question 1:

Which of the following approaches is correct for determining if a contemporaneous net emissions increase has occurred at an existing major source?

A. Not including contemporaneous emissions unless the project emissions exceed PSD significance levels for a pollutant.

B. Using a literal interpretation of the definition of "net emissions increase" as contained in 40 CFR 52.21(b)(3)(i) which suggests that, even if the project's emissions do not exceed the PSD significance levels, a series of less than significant changes would still be accumulated.

Response:

Although the definition of "net emissions increase" could be interpreted differently, the Environmental Protection Agency's (EPA's)

historic policy has been not to consider ...mulated emissions from a series of small (i.e., less than significant) emissions increases if the emissions increase from the proposed modification to the source is, standing alone without regard to any

decreases, less than significant. In other words, the netting calculus (the summation of contemporaneous emissions increases and decreases) is not triggered unless there will be a significant emissions increase associated with the proposed modification. This policy was discussed in detail in a 1983 EPA memorandum (copy attached) titled "Net Emission Increases Under PSD." In October 1988 the Policy and Guidance Section of the Stationary Source Compliance Division (SSCD) sent a memorandum (copy attached) to Region V restating the policy and indicating that it applied only to applicability determinations made under PSD and did not apply to nonattainment rules. The memorandum also indicated that SSCD was reconsidering the policy as it applies to PSD. We have, however, discussed this matter with SSCD and understand that there are no plans to revise the policy.

This office has reviewed the considerations (as discussed in the 1983 memorandum) which led to the policy and continue to find them to be reasonable and appropriate. For example, it would not be sensible to subject a small increase (e.g., 2 tons per year (tpy)) to a full PSD review because of an unrelated 39 tons per year increase 3 years earlier. The PSD reviews of such small emissions could place a significant resource burden on both applicants and review agencies and would likely result in minimal, if any, emissions reductions or air quality benefits from the application of BACT. Conse- quently, I reaffirm that EPA's current policy is not to aggregate less than significant increases at a major source when the emissions increase from a proposed modification is less than significant. Of course, attempts by applicants to avoid PSD review by splitting a modification into two or more minor modifications constitutes circumvention of the PSD requirements. Two or more related minor changes over a short period of time should be studied for possible circumvention.

Question 2:

Once PSD review is triggered for one pollutant, does the triggering mechanism (i.e., as described in question 1) remain the same for other pollutants or is the net contemporaneous emissions increase for these other pollutants compared to the PSD significance levels? In other words, if PSD review is triggered for one pollutant, is the source then required to consider all contemporaneous emissions changes for the other pollutants when determining applicability, even if new emissions from the proposed project will be less than significant?

Response:

No. The criteria used to determine if a significant net emissions increase has occurred from a proposed modification at an existing major source are applied on a pollutant-by-pollutant basis.

For example, a major source experienced insignificant increases of NOx (30 tpy) and SO2 (15 tpy) 2 years ago, and a decrease of SO2 (50 tpy) 3 years ago. The source now proposes to add a new process unit with an associated emissions increase of 35 tpy NOx and 80 tpy SO2. For SO2, the proposed 80 tpy increase from the modification by itself (before any

SOLUTIA

Applied Chemistry, Creative Solutions

Solutia Inc.
P.O. Box 97
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Tel 850-968-7000

July 17, 1998

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Northwest Florida DEP

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JUL 30 1998
BUREAU OF AIR REGULATION

Mr. Ed Middleswart
Air Program Administrator
Department of Environmental Protection
160 Governmental Center
Pensacola, Florida 32501

Dear Mr. Middleswart,

Enclosed for Department review is the additional information requested in the letter dated June 17, 1998 and the July 9, 1998 incompleteness letter, attached for reference.

A meeting has been scheduled with Andy Allen of your staff at the Northwest District Office on Tuesday August 11, 1998, to resolve any remaining Department information needs.

These letters requested:
a) Information to verify the proper processing fee.
b) Data tables showing emissions before and after the expansions. As clarified verbally with your staff, specifically whether PSD permitting and that fee should apply.
c) Supporting calculations and documentation.
d) Expansion schedule information
e) Contract hydrogen plant information
f) Hydrogen cyanide emissions information
g) OBUD unit information
h) TRU and OBUD downtime contingency plans

Solutia response:

Solutia representative, Bruce McLeod, P.E., met with Andy Allen and Armondo Sarasua of your staff on 6/24/98, 6/29/98 and 7/6/98, to review the information contained in the initial construction permit application submittals for Area II, Area 471 and Area 480, dated 6/11/98. The emissions spread sheets from these submittals are attached for reference.

a) Processing fee:
The data in the table below is based on Florida 62-4.050, DEP permit fee schedule (attached for reference) and the detailed project emission spreadsheets (attached for

reference) . The fees submitted were based on the total emissions from each component of the overall integrated Nylon Intermediates Expansion. Individual construction permits for each Area are considered necessary to simplify identification of applicable requirements, which are different for each Nylon Intermediates process area.

Area	Emissions range, TPY	Fee, per 62-4.050
Area II	5-25	$1,000
Area 471	100+	$5,000
Area 480	5-25	$1,000
	Total amount submitted	$7,000

b) PSD Evaluation:
Attached for reference, is Section III, Major Modification Applicability for PSD determination of the EPA New Source Review Workshop Manual (NSR Manual)(Draft, October, 1990).

1)Based on guidance on Page A37 of the NSR Manual, the projects are to be considered as one project for PSD applicability review purposes, because they will occur over a relatively short period of time and they are related parts of an overall Nylon Intermediates Expansion.

Each process area expansion (Area II, Area 471 & Area 480) is a component of an overall integrated Nylon Intermediates Expansion. Individual construction permits for each Area are considered necessary to simplify identification of applicable requirements, which are different for each Nylon Intermediates process area.

2)From the Table below, and the guidance contained on page A46, Step 1 of the NSR Manual the Nylon Intermediates Expansion project emissions increases is 14.7 tons/year of PM10 emissions, which is less the PSD significance level of 15 tons/year. Emissions of NOx, CO and VOC do not increase and therefore do not exceed their respective PSD significance levels of 40 TPY, 100 TPY and 40 TPY. Therefore PSD review is not required for the Nylon Intermediates Expansion. The proposed Nylon Intermediates Expansion results in an overall reduction of emissions of over 300 tons/year.

Total Nylon Intermediates expansion emissions

Pollutant	Area II (TPY)	Area 480 (TPY)	Area 471 (TPY)	Total Nylon Intermediates Expansion Project (TPY)	PSD signif. level (tpy)	PSD?
NOx	-396.57	0.00	217.13	**-179.4**	**40**	**NO**
Particulate, PM10	5.89	0.00	8.83	**14.7**	**15**	**NO**
CO (1)	-123.68	0.00	21.25	**-102.4**	**100**	**NO**
VOC (1)	-63.59	12.39	9.09	**-42.1**	**40**	**NO**
TOTAL (TPY)				**-309.3**		

c) Supporting calculations and documentation
The attached spreadsheets detail the emissions before and after the Nylon Intermediates expansion and include supporting calculations. The comparison of actual verses potential emissions conforms to the new source review guidelines of the prevention of significant deterioration requirements, contained in section III of the NSR Manual.

d) Expansion schedule information
The Solutia Nylon Intermediates expansion plans call for initiation of construction activities upon receipt of the permits. In general, construction activities are expected to continue through 1999, with the 1st phase of the process startup activities occurring in late 1999 and 2000. Timing of the contract hydrogen supply will complement these activities.

e) Contract hydrogen plant information
The Air Products Company has been selected to provide the contract hydrogen supply for the Area 480 Nylon Intermediates process. Current plans are for Air Products Company to construct a new hydrogen generation unit on the Solutia, Pensacola plant site. The new hydrogen plant will be owned and operated by Air Products Company, who is responsible for air construction permitting of this unit. Hydrogen generated in excess of Solutia needs will be transferred via pipeline to the Air Products Pace, Florida facility. Prior to the new hydrogen generation unit startup, Solutia may receive hydrogen generated at the Air Products Pace facility, via pipeline. Use of this hydrogen generation unit as back-up control for the Area 480 process, would conform to the 62-210.700 excess emissions provisions, and would be equivalent control to that provided by the Solutia hydrogen generation unit.

$10\ \#/h = 43.8\ T/yr$
$10\ \#/h * 1.3$
$13\ \#/h$
$13.14\ T/yr$ increase to $56.94\ T/yr$

f) Hydrogen cyanide emissions information
Hydrogen cyanide emissions are estimated by use of the EPA AP-42 emission factors for volatile organic compounds (VO C). These factors predict emissions based on product rate and therefore estimate the potential increase of HCN. In an April 9, 1998 correspondence to the apartment HCN emissions were estimated to be between 3-10 lb/hour. As a result of the planned Nylon Intermediates expansion a 30% increase would be predicted. Based on the modeling information submitted with the April 9, 1998 letter, this level would be safe.

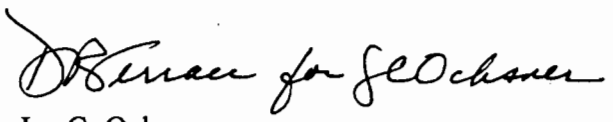
g) OBUD unit information
The OBUD unit (Area 471 Organic BackUp Device) has not undergone detailed design, at this time. As this design is finalized, Solutia can submit this information for Department review and comment.

h) TRU and OBUD downtime emissions and contingency plans
In the unlikely, but possible event, that the TRU and OBUD are simultaneously down or unable to operate, the Area 471 process would the shut down in conformance with a pre-established shutdown plan. Area I Nylon Intermediates offgas would be vented without control as currently done. This minimal downtime possibility (and the expected CO and VOC emissions) has been accounted for in the emissions spreadsheet for Area II Nylon

Intermediates. Attached, per your request, is air dispersion modeling information which was previously performed to assess the potential ambient impact of this source. It was submitted to the Department in a letter dated November 11, 1988. Since the carbon monoxide ambient standards have not changed and the past and current emission rates are comparable this information may adequately address the Department's information need.

If you have any questions regarding this submittal, please call Bruce McLeod at 850-968-8725.

Sincerely,



J. C. Ochsner
Site Manager

Enclosures:
1) DEP letters, June 17 and July 9, 1998
2) 62-4.050 permit processing fee schedule
3) EPA NSR Manual, section III
4) Detailed emissions spreadsheets
5) Area I modeling data

cc: DEP, Division of Air Resources Management, Tallahassee

SOLUTIA

Applied Chemistry, Creative Solutions

Solutia Inc.
P.O. Box 97
Gonzalez, Florida 32560-0097
Tel 850-968-7000

July 16, 1998

Subject: Delegation of Authority

I will be out of town Friday, July 17 through Sunday, July 26. During my absence, Dave Terrace, as Acting Site Manager will be responsible for the operation of the Pensacola Plant.

Joe Ochsner

XC: MATT MCCOMBS
DAVE KRAWCZYK
KEN KOSKY

FAX - FYI

Department of Environmental Protection

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Virginia B. Wetherell
Secretary

June 17, 1998

J. C. Ochsner
Facility Manager
Solutia, Inc.
P O Box 97
Gonzalez FL 32560-0097

Dear Mr. Ochsner:

This is in response to your Air Construction Permit Applications for the proposed Nylon Intermediates Expansion in Areas II, 471 and 480 at your Pensacola facility.

We are unable to process the applications because there is not enough information to verify the proper processing fee. Based on the information received it seems at this time that the fee submitted is insufficient. [Rule 62-4.050(5), F.A.C.]

Please send us, for each emission unit in the proposed expansion, a table showing the potential emissions of each criteria pollutant before and after the expansion. This table should be accompanied by supporting calculations and documentation for ease of verification.

If you have any questions or comments, please contact Armando Sarasua at (850) 595-8364.

Sincerely,

Ed K. Middleswart

Ed K. Middleswart, P.E.
Air Program Administrator

EKM:asc

cc: DEP Division of Air Resources Management, Tallahassee

JUN 1998
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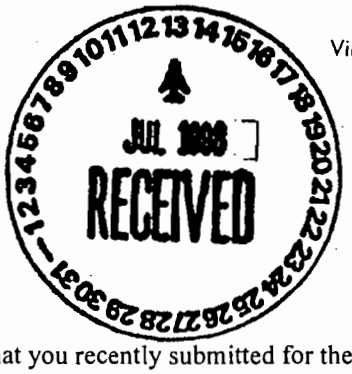
Department of Environmental Protection

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Virginia B. Wetherell
Secretary

July 9, 1998



J. C. Ochsner, Facility Manager
Solutia, Inc.
P O Box 97
Gonzalez FL 32560-0097

Dear Mr. Ochsner:

This is in response to the Air Construction Permit Applications that you recently submitted for the proposed Nylon Intermediates Expansion at your Pensacola facility with the following file numbers:

Area II Expansion	0330040-011-AC
Area 471 Expansion	0330040-010-AC
Area 480 Expansion	0330040-012-AC

This letter constitutes notice that permits will be required for your projects pursuant to Chapter 403, Florida Statutes. After an initial review the applications have been determined to be incomplete. Please provide the information listed below promptly. Further action regarding these applications will be delayed until the information has been received.

- Please summarize your PSD applicability analysis of these expansions, including the hydrogen plant.
- Please provide, for each emission unit in the proposed expansion, a table showing the potential emissions of each criteria pollutant before and after the expansion. This table should be accompanied by supporting calculations and documentation for ease of verification.
- Please provide a summary of the expansion schedule including the hydrogen plant, and identify all new pollution control equipment and appropriate parameters to ensure that the equipment is operating properly.
- Please explain and provide details of the backup control that will be provided by the 3rd party hydrogen supplier in the event the Solutia hydrogen plant shuts down.
- Please explain the impact this proposed expansion will have on hydrogen cyanide emissions.
- Please provide information for reasonable assurance as to the design, function and effectiveness of the proposed Organic Back-Up Device (OBUD).
- Please explain the effects on emissions if the TRU and OBUD go down simultaneously. What are expected 3 hour and 24 hour concentrations? What are the contingency plans?

When referring to these projects, please use the appropriate file numbers indicated above. If you have any questions, please contact Armando Sarasua at (850) 595-8364.

Sincerely,

Ed K. Middleswart

Ed K. Middleswart, P.E.
Air Program Administrator

EKM:asc
cc: DEP Division of Air Resources Management, Tallahassee

Florida 62-4.050

2. Construction Permit Fee for an Emissions Unit Not Requiring Prevention of Significant Deterioration or Nonattainment Area Preconstruction Review. No processing fee shall be required for a construction permit for an emissions unit not requiring Prevention of Significant Deterioration (PSD) or Nonattainment Area (NAA) preconstruction review, if the facility containing the emissions unit holds an air operation permit issued pursuant to Chapter 62-213, F.A.C. For any such emissions unit at a facility not holding a Chapter 62-213, F.A.C., air operation permit, the processing fee shall be as follows:

a. Construction permit for an emissions unit having potential emissions of 100 or more tons per year of any single pollutant $ 5000

b. Construction permit for an emissions unit having potential emissions of 50 or more tons per year, but less than 100 tons per year, of any single pollutant $ 4500

c. Construction permit for an emissions unit having potential emissions of 25 or more tons per year, but less than 50 tons per year, of any single pollutant $ 2000

d. Construction permit for an emissions unit having potential emissions of 5 or more tons per year, but less than 25 tons per year, of any single pollutant $ 1000

e. Construction permit for an emissions unit having potential emissions of less than 5 tons per year of each pollutant $ 250

3. Operation Permit Fee for an Emissions Unit at a Non-Title V Source.

a. Operation permit for an emissions unit required to measure actual emissions by stack sampling $ 1500

b. Operation permit for an emissions unit required to measure actual emissions by any method other than stack sampling (such as visible emissions observation or continuous emissions monitoring) $ 1000

c. Operation permit for an emissions unit not required to measure actual emissions $ 750

United States
Environmental Protection
Agency

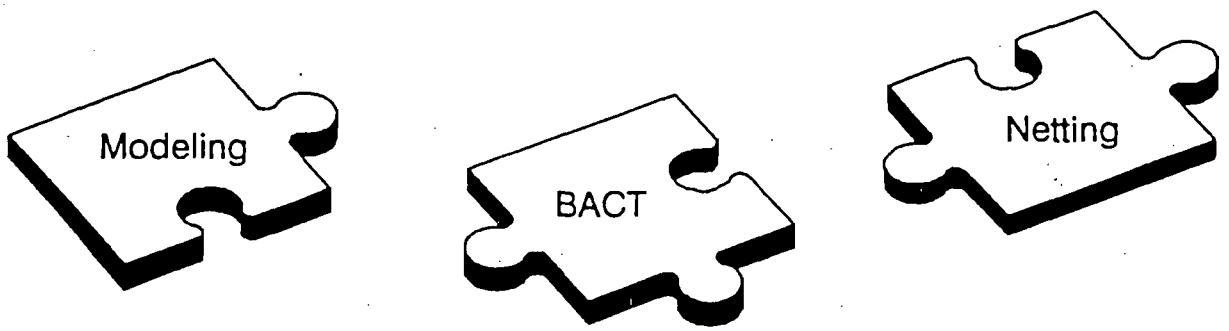
Office of Air Quality
Planning And Standards
Research Triangle Park, NC 27711

DRAFT
October 1990

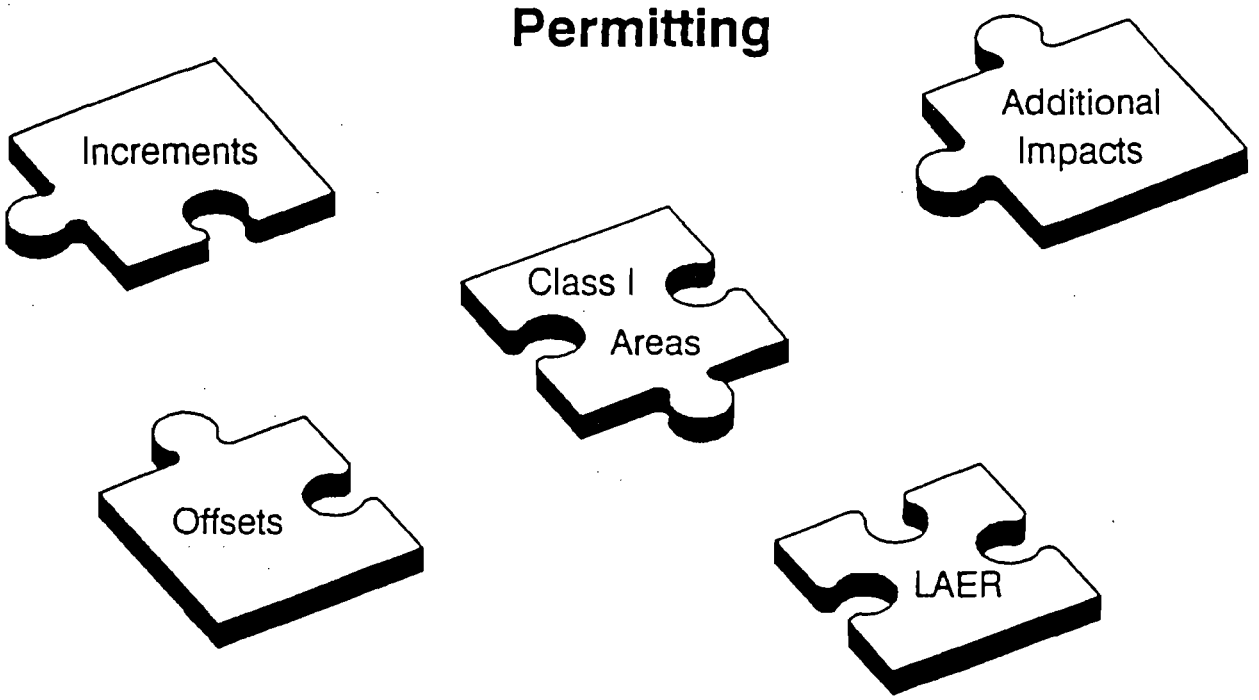
AIR

EPA

New Source Review Workshop Manual



Prevention of Significant Deterioration and Nonattainment Area Permitting



III. MAJOR MODIFICATION APPLICABILITY

A modification is subject to PSD review only if (1) the existing source that is modified is "major," and (2) the net emissions increase of any pollutant emitted by the source, as a result of the modification, is "significant," i.e., equal to or greater than the emissions rates given on Table A-4 (unless the source is located in a nonattainment area for that pollutant). Note also that any net emissions increase in a regulated pollutant at a major stationary source that is located within 10 kilometers of a Class I area, and which will cause an increase of 1 $\mu g/m^3$ (24 hour average) or more in the ambient concentration of that pollutant within that Class I area, is "significant".

Typical examples of modifications include (but are not limited to) replacing a boiler at a chemical plant, construction of a new surface coating line at an assembly plant, and a switch from coal to gas requiring a physical change to the plant, e.g., new piping, etc.

As discussed earlier, when a "minor" source, i.e., one that does not meet the definition of "major," makes a physical change or change in the method of operation that is by itself a major source, that physical or operational change constitutes a major stationary source that is subject to PSD review. Also, if an existing minor source becomes a major source as a result of a SIP relaxation, then it becomes subject to PSD requirements just as if construction had not yet commenced on the source or the modification.

III.A. ACTIVITIES THAT ARE NOT MODIFICATIONS

The regulations do not define "physical change" or "change in the method of operation" precisely; however, they exclude from those activities certain specific types of events described below.

(1) Routine maintenance, repair and replacement.

[Sources should discuss any project that will significantly increase actual emissions to the atmosphere with their

respective permitting authority, as to whether that project is considered routine maintenance, repair or replacement.]

(2) A fuel switch due to an order under the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or due to a natural gas curtailment plan under the Federal Power Act.

(3) A fuel switch due to an order or rule under section 125 of the CAA.

(4) A switch at a steam generating unit to a fuel derived in whole or in part from municipal solid waste.

(5) A switch to a fuel or raw material which (a) the source was capable of accommodating before January 6, 1975, so long as the switch would not be prohibited by any federally-enforceable permit condition established after that date under a federally approved SIP (including any PSD permit condition) or a federal PSD permit, or (b) the source is approved to make under a PSD permit.

(6) Any increase in the hours or rate of operation of a source, so long as the increase would not be prohibited by any federally-enforceable permit condition established after January 6, 1975 under a federally approved SIP (including any PSD permit condition) or a federal PSD permit.

(7) A change in the ownership of a stationary source.

For more details see 40 CFR 52.21(b)(2)(iii).

Notwithstanding the above, if a significant increase in actual emissions of a regulated pollutant occurs at an existing major source as a result of a physical change or change in the method of operation of that source, the "net emissions increase" of that pollutant must be determined.

III.B. EMISSIONS NETTING

Emissions netting is a term that refers to the process of considering certain previous and prospective emissions changes at an existing major source to determine if a "net emissions increase" of a pollutant will result from a proposed physical change or change in method of operation. If a net emissions

increase is shown to result, PSD applies to each pollutant's emissions for which the net increase is "significant", as shown in Table A-4.

The process used to determine whether there will be a net emissions increase will result uses the following equation:

Net Emissions Change
EQUALS
Emissions increases associated with the proposed modification
MINUS
Source-wide creditable contemporaneous emissions decreases
PLUS
Source-wide creditable contemporaneous emissions increases

Consideration of contemporaneous emissions changes is allowed only in cases involving existing major sources. In other words, minor sources are not eligible to net emissions changes. As discussed earlier, existing minor sources are subject to PSD review only when proposing to increase emissions by "major" (e.g., 100 or 250 tpy, as applicable) amounts, which, for PSD purposes, are considered and reviewed as a major new source.

For example, an existing minor source (subject to the 100 tpy major source cutoff) is proposing a modification which involves the shutdown and removal of an old emissions unit (providing an actual contemporaneous reduction in NOx emissions of 75 tpy) and the construction of two new units with total potential NOx emissions of 110 tpy. Since the existing source is minor, the 75 tpy reduction is not considered for PSD applicability purposes. Consequently, PSD applies to the new units because the emissions increase of 110 tpy is itself "major". The new units are then subject to a PSD review for NOx and for any other regulated pollutant with a "significant" potential to emit.

The consideration of contemporaneous emissions changes is also source specific. Netting must take place at the same stationary source; emissions reductions cannot be traded between stationary sources.

III.B.1. ACCUMULATION OF EMISSIONS

If the proposed emissions increase at a major source is by itself (without considering any decreases) less than "significant", EPA policy does not require consideration of previous contemporaneous small (i.e., less than significant) emissions increases at the source. In other words, the netting equation (the summation of contemporaneous emissions increases and decreases) is not triggered unless there will be a significant emissions increase from the proposed modification.

> *For example, a major source experienced less than significant increases of NO_x (30 tpy) and SO_2 (15 tpy) 2 years ago, and a decrease of SO_2 (50 tpy) 3 years ago. The source now proposes to add a new process unit with an associated emissions increase of 35 tpy NO_x and 80 tpy SO_2. For SO_2, the proposed 80 tpy increase from the modification by itself (before netting) is significant. The contemporaneous net emissions change is determined, by taking the algebraic sum of (-50) and (+15) and (+80), which equals +45 tpy. Therefore, the proposed modification is a major modification and a PSD review for SO_2 is required. However, the NO_x increase from the proposed modification is by itself less than significant. Consequently, netting for PSD applicability purposes is not performed for NO_x (even though the modification is major for SO_2) and a PSD review is not needed for NO_x.*

It is important to note that when <u>any</u> emissions decrease is claimed (including those associated with the proposed modification), <u>all</u> source-wide creditable and contemporaneous emissions increases and decreases of the pollutant subject to netting must be included in the PSD applicability determination.

A deliberate decision to split an otherwise "significant" project into two or more smaller projects to avoid PSD review would be viewed as circumvention and would subject the entire project to enforcement action if construction on any of the small projects commences without a valid PSD permit.

> *For example, an automobile and truck tire manufacturing plant, an existing major source, plans to increase its production of both types*

"debottlenecking" its production processes. For its passenger tire line, the source applies for and is granted a "minor" modification permit for a new extruder that will increase VOC emissions by 39 tons/yr. A few months later, the source applies for a "minor" modification permit to construct a new tread-end cementer on the same line which will increase VOC emissions by 12 tons/yr. The EPA would likely consider these proposals as an attempt to circumvent the regulations because the two proposals are related in terms of an overall project to increase source-wide production capacity. The important point in this example is that the two proposals are sufficiently related that the PSD regulations would consider them a single project.

Usually, at least two basic questions should be asked when evaluating the construction of multiple minor projects to determine if they should have been considered a single project. First, were the projects proposed over a relatively short period of time? Second, could the changes be considered as part of a single project?

III.B.2. CONTEMPORANEOUS EMISSIONS CHANGES

The PSD definition of a net emissions increase [40 CFR 52.21(b)(3)(i)] consists of two additive components as follows:

(a) Any increases in actual emissions from a particular physical change or change in method of operation at a stationary source; and

(b) Any other increase and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

The first component narrowly includes only the emissions increases associated with a particular change at the source. The second component more broadly includes all contemporaneous, source-wide (occurring anywhere at the entire source), creditable emission increases and decreases.

To be contemporaneous, changes in actual emissions must have occurred after January 6, 1975. The changes must also occur within a period beginning 5 years before the date construction is expected to commence on the proposed

modification (reviewing agencies may use the date construction is scheduled to commence provided that it is reasonable considering the time needed to issue a final permit) and ending when the emissions increase from the modification occurs. An increase resulting from a physical change at a source occurs when the new emissions unit becomes operational and begins to emit a pollutant. A replacement that requires a shakedown period becomes operational only after a reasonable shakedown period, not to exceed 180 days. Since the date construction actually will commence is unknown at the time the applicability determination takes place and is simply a scheduled date projected by the source, the contemporaneous period may shift if construction does not commence as scheduled. Many States have developed PSD regulations that allow different time frames for definitions of contemporaneous. Where approved by EPA, the time periods specified in these regulations govern the contemporaneous timeframe.

III.B.3. CREDITABLE CONTEMPORANEOUS EMISSIONS CHANGES

There are further restrictions on the contemporaneous emissions changes that can be credited in determining net increases or decreases. To be creditable, a contemporaneous reduction must be federally-enforceable on and after the date construction on the proposed modification begins. The actual reduction must take place before the date that the emissions increase from any of the new or modified emissions units occurs. In addition, the reviewing agency must ensure that the source has maintained any contemporaneous decrease which the source claims has occurred in the past. The source must either demonstrate that the decrease was federally-enforceable at the time the source claims it occurred, or it must otherwise demonstrate that the decrease was maintained until the present time and will continue until it becomes federally-enforceable. An emissions decrease cannot occur at, and therefore, cannot be credited from an emissions unit which was never constructed or operated, including units that received a PSD permit.

Reductions must be of the same pollutant as the emissions increase from the proposed modification and must be qualitatively equivalent in their effects on public health and welfare to the effects attributable to the proposed increase. Current EPA policy is to assume that an emissions decrease will have approximately the same qualitative significance for public health and welfare as that attributed to an increase, unless the reviewing agency has reason to believe that the reduction in ambient concentrations from the emissions decrease will not be sufficient to prevent the proposed emissions increase from causing or contributing to a violation of any NAAQS or PSD increment. In such cases, the applicant must demonstrate that the proposed netting transaction will not cause or contribute to an air quality violation before the emissions reduction may be credited. Also, in situations where a State is implementing an air toxics program, proposed netting transactions may be subject to additional tests regarding the health and welfare equivalency demonstration. For example, a State may prohibit netting between certain groups of toxic subspecies or apply netting ratios greater than the normally required 1:1 between certain groups of toxic pollutants.

A contemporaneous emissions increase occurs as the result of a physical change or change in the method of operation at the source and is creditable to the extent that the new emissions level exceeds the old emissions level. The "old" emissions level for an emissions unit equals the average rate (in tons per year) at which the unit actually emitted the pollutant during the 2-year period just prior to the physical or operational change which resulted in the emissions increase. In certain limited situations where the applicant adequately demonstrates that the prior 2 years is not representative of normal source operation, a different (2 year) time period may be used upon a determination by the reviewing agency that it is more representative of normal source operation. Normal source operations may be affected by strikes, retooling, major industrial accidents and other catastrophic occurrences. The "new" emissions levels for a new or modified emissions unit which has not begun normal operation is its potential to emit.

An emissions increase or decrease is creditable only if the relevant reviewing authority has not relied on it in issuing a PSD permit for the source, and the permit is still in effect when the increase in actual emissions from the proposed modification occurs. A reviewing authority relies on an increase or decrease when, after taking the increase or decrease into account, it concludes that a proposed project would not cause or contribute to a violation of an increment or ambient standard. In other words, an emissions change at an emissions point which was considered in the issuance of a previous PSD permit for the source is not included in the source's "net emissions increase" calculation. This is done to avoid "double counting" of emissions changes.

For example, an emissions increase or decrease already considered in a source's PSD permit (state or federal) can not be considered a contemporaneous increase or decrease since the increases or decrease was obviously relied upon for the purpose of issuing the permit. Otherwise the increase or decrease would not have been specified in the permit. In another example, a decrease in emissions from having previously switched to a less polluting fuel (e.g., oil to gas) at an existing emissions unit would not be creditable if the source had, in obtaining a PSD permit (which is still in effect) for a new emissions unit, modeled the source's ambient impact using the less polluting fuel.

Changes in PM (PM/PM-10), SO_2 and NO_x emissions are a subset of creditable contemporaneous changes that also affect the available increment. For these pollutants, emissions changes which do not affect allowable PSD increment consumption are not creditable.

III.B.4. CREDITABLE AMOUNT

As mentioned above, only contemporaneous and creditable emissions changes are considered in determining the source-wide net emissions change. All contemporaneous and creditable emissions increases and decreases at the source must, however, be considered. The amount of each contemporaneous and

creditable emissions increase or decrease involves determining old and new actual annual emissions levels for each affected emission unit.

The following basic criteria should be used when quantifying the increase or decrease:

- For proposed new or modified units which have not begun normal operations, the potential to emit must be used to determine the increase from the units.
- For an existing unit, actual emissions just prior to either a physical or operational change are based on the lower of the actual or allowable emissions levels. This "old" emissions level equals the average rate (in tons per year) at which the unit actually emitted the pollutant during the 2-year period just prior to the change which resulted in the emissions increase. These emissions are calculated using the actual hours of operation, capacity, fuel combusted and other parameters which affected the unit's emissions over the 2-year averaging period. In certain limited circumstances, where sufficient representative operating data do not exist to determine historic actual emissions and the reviewing agency has reason to believe that the source is operating at or near its allowable emissions level, the reviewing agency may presume that source-specific allowable emissions [or a fraction thereof] are equivalent to (and therefore are used in place of) actual emissions at the unit. For determining the difference in emissions from the change at the unit, emissions after the change are the potential to emit from the units.
- A source cannot receive emission reduction credit for reducing any portion of actual emissions which resulted because the source was operating out of compliance.
- An emissions decrease cannot be credited from a unit that has not been constructed or operated.

Examples of how to apply these creditability criteria for prospective emissions reductions is shown in Figure A-1. As shown in Case I of Figure A-1, the potential to emit for an existing emissions unit (which is based on the existing allowable emission rate) is greater than the actual emissions, which are based on actual operating data (e.g., type and amount of fuel combusted at the unit) for the past 2 years. The source proposes to switch to a lower sulfur fuel. The amount of the reduction in this case is the difference between the actual emissions and the revised allowable emissions. (Recall that

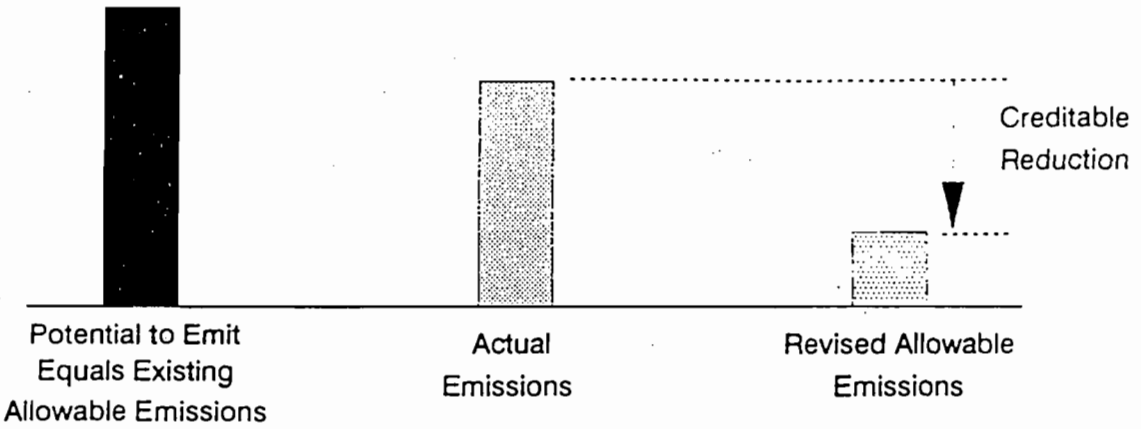
for reductions to be creditable, the revised allowable emission rate must be ensured with federally-enforceable limits.)

Figure A-1 also illustrates in Case II that the previous allowable emissions were much higher than the potential to emit. Common examples are PM sources permitted according to process weight tables contained in most SIPs. Since process weight tables apply to a range of source types, they often overpredict actual emission rates for individual sources. In such cases, as in the previous case, the only creditable contemporaneous reduction is the difference between the actual emissions and the revised allowable emission rate for the existing emissions unit.

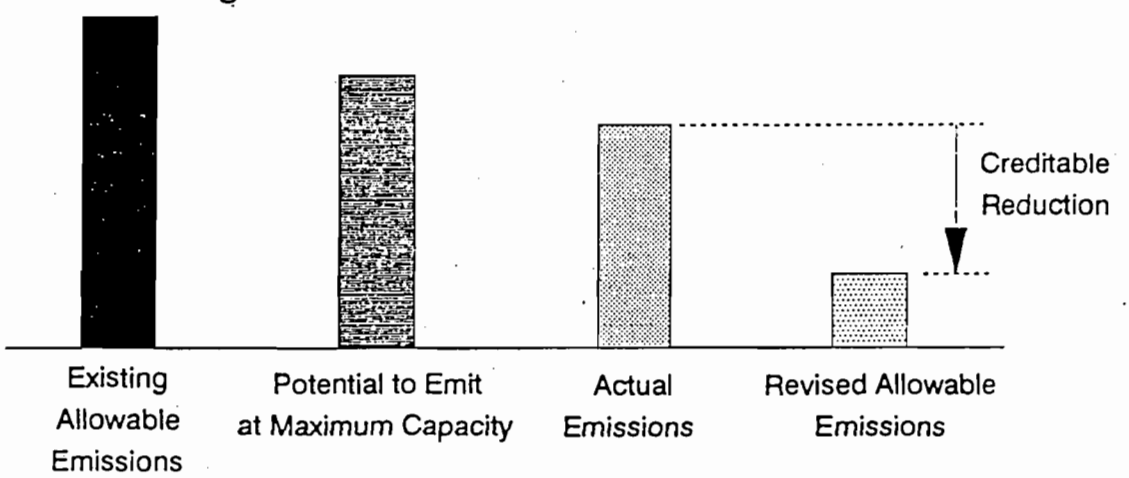
Case III in Figure A-1 illustrates a potential violation situation where the actual emissions level exceeds allowable limit. The creditable reduction in this case is the difference between what the emissions would have been from the unit had the source been in compliance with its old allowable limits (considering its actual operations) and its revised allowable emissions level.

Consider a more specific example, where a source has an emissions unit with an annual allowable emissions rate of 200 tpy based on full capacity year-round operation and an hourly unit-specific allowable emission rate. The source is, however, out of compliance with the allowable hourly emission rate by a factor of two. Consequently, if the unit were to be operated year-round at full capacity it would emit 400 tpy. However, in this case, although the unit operated at full capacity, it was operated on the average 75 percent of the time for the past 2 years. Consequently, for the past 2 years average actual emissions were 300 tpy. The unit is now to be shutdown. Assuming the reduction is otherwise creditable, the reduction from the shutdown is its allowable emissions prorated by its operating factor (200 tpy x .75 = 150 tpy).

Case I: Normal Existing Source



Case II: Existing Source Where Allowable Exceeds Potential



Case III: Existing Source in Violation of Permit

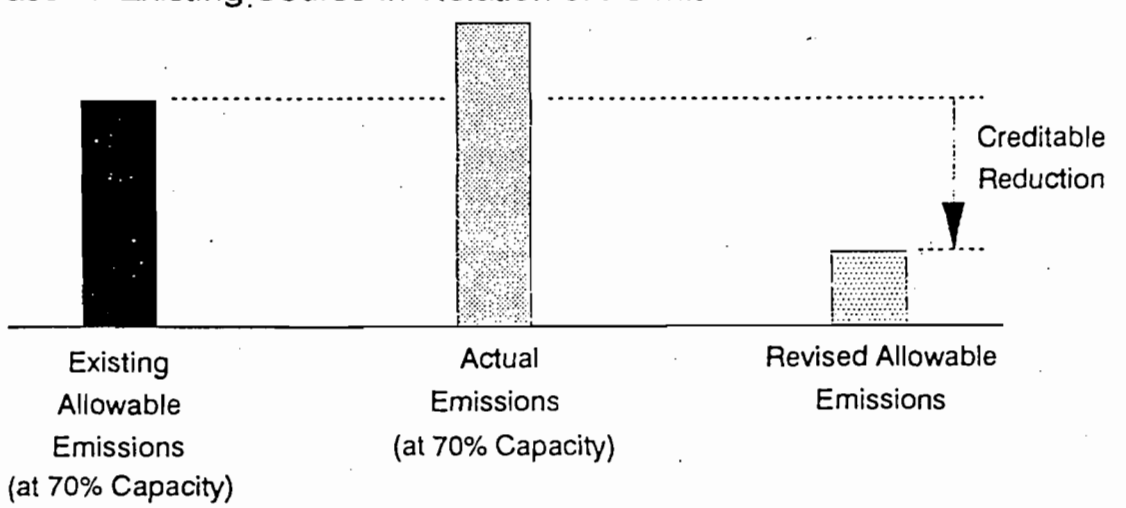


Figure A-1. Creditable Reductions in Actual Emissions

III.B.5. SUGGESTED EMISSIONS NETTING PROCEDURE

Through its review of many emissions netting transactions, EPA has found that, either because of confusion or misunderstanding, sources have used various netting procedures, some of which result in cases where projects should have been subjected to PSD but were not. Some of the most common errors include:

- Not including contemporaneous emissions increases when considering decreases;
- Improperly using allowable emissions instead of actual emissions level for the "old" emissions level for existing units;
- Using prospective (proposed) unrelated emissions decreases to counterbalance proposed emission increases without also examining all previous contemporaneous emissions changes;
- Not considering a contemporaneous increase creditable because the increase previously netted out of review by relying on a past decrease which was, but is no longer, contemporaneous. If contemporaneous and otherwise creditable, the increase must be considered in the netting calculus.
- Not properly documenting all contemporaneous emissions changes; and
- Not ensuring that emissions decreases are covered by federally-enforceable restrictions, which is a requirement for creditability.

For the purpose of minimizing confusion and improper applicability determinations, the six-step procedure shown in Table A-5 and described below is recommended in applying the emissions netting equation. Already assumed in this procedure is that the existing source has been defined, its major source status has been confirmed and the air quality status in the area is attainment for at least one criteria pollutant.

TABLE A-5. Procedures for Determining the Net Emissions Change at a Source

- Determine the emissions increases (but not any decreases) from the proposed project. If increases are significant, proceed; if not, the sources is not subject to review.
- Determine the beginning and ending dates of the contemporaneous period as it relates to the proposed modification.
- Determine which emissions units at the source experienced (or will experience, including any proposed decreases resulting from the proposed project) a creditable increase or decrease in emissions during the contemporaneous period.
- Determine which emissions changes are creditable.
- Determine, on a pollutant-by-pollutant basis, the amount of each contemporaneous and creditable emissions increase and decrease.
- Sum all contemporaneous and creditable increases and decreases with the increase from the proposed modification to determine if a significant net emissions increase will occur.

Step 1. Determine the emissions increases from the proposed project.

First, only the emissions increases expected to result from the proposed project are examined. This includes emissions increases from the new and modified emissions units and any other plant-wide emissions increases (e.g., debottlenecking increases) that will occur as a result of the proposed modification. [Proposed emissions decreases occurring elsewhere at the source are not considered at this point. Emission decreases associated with a proposed project (such as a boiler replacement) are contemporaneous and may be considered along with other contemporaneous emissions changes at the source. However, they are not considered at this point in the analysis.]

A PSD review applies only to those regulated pollutants with a significant emissions increase from the proposed modification. If the proposed project will not result in a significant emissions increase of any regulated pollutant, the project is exempt from PSD review and the PSD applicability process is completed. However, if this is not the case, each regulated pollutant to be emitted in a significant amount is subject to a PSD review unless the source can demonstrate (using steps 2-6) that the sum of all other source-wide contemporaneous and creditable emissions increases and decreases would be less than significant.

Step 2 Determine the beginning and ending dates of the contemporaneous period as it relates to the proposed modification.

The period begins on the date 5 years (some States may have a different time period) before construction commences on the proposed modification. It ends on the date the emissions increase from the proposed modification occurs.

Step 3 Determine which emissions units at the source have experienced an increase or decrease in emissions during the contemporaneous period.

Usually, creditable emissions increases are associated with a physical change or change in the method of operation at a source which did not require a PSD permit. For example, creditable emissions increases may come from the construction of a new unit, a fuel switch or an increase in operation that (a) would have otherwise been subject to PSD but instead netted out of review (per steps 1-6) or (b) resulted in a less than significant emissions increase (per step 1).

Decreases are creditable reductions in actual emissions from an emissions unit that are, or can be made, federally-enforceable. A

physical change or change in the method of operation is also associated with the types of decreases that are creditable. Specifically, in the case of an emissions decrease, once the decrease has been made federally-enforceable, any proposed increase above the federally-enforceable level must constitute a physical change or change in the method of operation at the source or the reduction is not considered creditable. For example, a source could only receive an emissions decrease for netting purposes from a unit that has been taken out of operation if, due to the imposition of federally-enforceable restrictions preventing the use of the unit, a proposal to reactivate the unit would constitute a physical change or change in the method of operation at the source. If operating the unit was not considered a physical or operational change, the unit could go back to its prior level of operation at any time, thereby producing only a "paper" reduction, which is not creditable.

Step 4 ***Determine which emissions changes are creditable.***

The following basic rules apply:

1) A increase or decrease is creditable only if the relevant reviewing authority has not relied upon it in previously issuing a PSD permit and the permit is in effect when the increase from the proposed modification occurs. As stated earlier, a reviewing authority "relies" on an increase or decrease when, after taking the increase or decrease into account, it concludes in issuing a PSD permit that a project would not cause or contribute to a violation of a PSD increment or ambient standard.

2) For pollutants with PSD increments (i.e., SO2, particulate matter and NOx), an increase or decrease in actual emissions which occurs before the baseline date in an area is creditable only if it would be considered in calculating how much of an increment remains available for the pollutant in question. An example of this situation is a 39 tpy NO_x emissions increase resulting from a new heater at a major source in 1987, prior to the NO_x increment baseline date. Because these emissions do not affect the allowable PSD increment, they need not be considered in 1990 when the source proposes another unrelated project. The emissions increase for the heater (up to 39 tpy) would be zero in the accounting exercise. Likewise, decreases which occurred before the baseline date was triggered cannot be credited after the baseline date. Such reductions are included in the baseline concentration and are not considered in calculating PSD increment consumption.

3) A decrease is creditable only to the extent that it is "federally-enforceable" from the moment that the actual construction begins on the proposed modification to the source. The decrease

must occur before the proposed emissions increase occurs. An increase occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period not to exceed 180 days.

4) A decrease is creditable only to the extent that it has the same health and welfare significance as the proposed increase from the source.

5) A source cannot take credit for a decrease that it has had to make, or will have to make, in order to bring an emissions unit into compliance.

6) A source cannot take credit for an emissions reduction from potential emissions from an emissions unit which was permitted but never built or operated.

Step 5 ***Determine, on a pollutant-by-pollutant basis, the amount of each contemporaneous and creditable emissions increase and decrease.***

An emissions increase is the amount by which the new level of "actual emissions" at the emissions unit exceeds the old level. The old level of "actual emissions" is that which prevailed just prior (i.e., prior 2 year average) to the physical or operational change at that unit which caused the increase. The new level is that which prevails just after the change. In most cases, the old level is calculated from the unit's actual operating data from a 2 year period which directly preceded the physical change. The new "actual emissions" level us the lower of the unit's "potential" or "allowable" emissions after the change. In other words, a contemporaneous emission increase is calculated as the positive difference between an emissions unit's potential to emit just after a physical or operation change at that unit (not the unit's current actual emissions) and the unit's actual emissions just prior to the change.

An emissions decrease is the amount by which the old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of "actual" emissions. Like emissions increases, the old level is calculated from the unit's actual operating data from a 2 year period which preceded the decrease, and the new emissions level will be the lower of the unit's "potential" or "allowable" emissions after the change.

Figure A-2 shows a example of how old and new actual SO2 emissions levels are established for an existing emissions unit at a source. The applicant met with the reviewing agency in January 1988, proposing to commence construction on a new emissions unit in mid-1988. The contemporaneous time frame in this case is from mid-1983 (using EPA's 5-year definition) to the expected date of the new boiler start-up, about January 1990.

In mid-1984 an existing boiler switched to a low sulfur fuel oil. The applicant wishes to use the fuel switch as a netting credit. The time period for establishing the old SO2 emissions level for the fuel switch is the 2 year period preceding the change [mid-1982 to mid-1984, when emissions were 600 tpy (mid-1982 through mid-1983) and 500 tpy (mid-1982 through mid-1983)]. The new SO2 emissions level, 300 tpy, is established by the new allowable emissions level (which will be made federally-enforceable). The old level of emissions is 550 tpy (the average of 600 tpy and 500 tpy). Thus, if this is the only existing SO2 emissions unit at the source, a decrease of 250 tpy SO2 emissions (550 tpy minus 300 tpy) is creditable towards the emissions proposed for the new boiler. This example assumes that the reduction meets all other applicable criteria for a creditable emissions decrease.

Step 6 ***Sum all contemporaneous and creditable increases and decreases with the increase from the proposed modification to determine if a significant net emissions increase will occur.***

The proposed project is subject to PSD review for each regulated pollutant for which the sum of all creditable emissions increases and decreases results in a significant net emissions increase.

If available, the applicant may consider proposing additional prospective and creditable emissions reductions sufficient to provide for a less than significant net emissions increase at the source and thus avoid PSD review. These reductions can be achieved through either application of emissions controls or placing restrictions on the operation of existing emissions units. These additional reductions would be added to the sum of all other creditable increases and decreases. As with all contemporaneous emissions reductions, these additional decreases must be based on actual emissions changes, federally-enforceable prior to the commencement of construction and occur before the new unit begins operation. They must also affect the allowable PSD increment, where applicable.

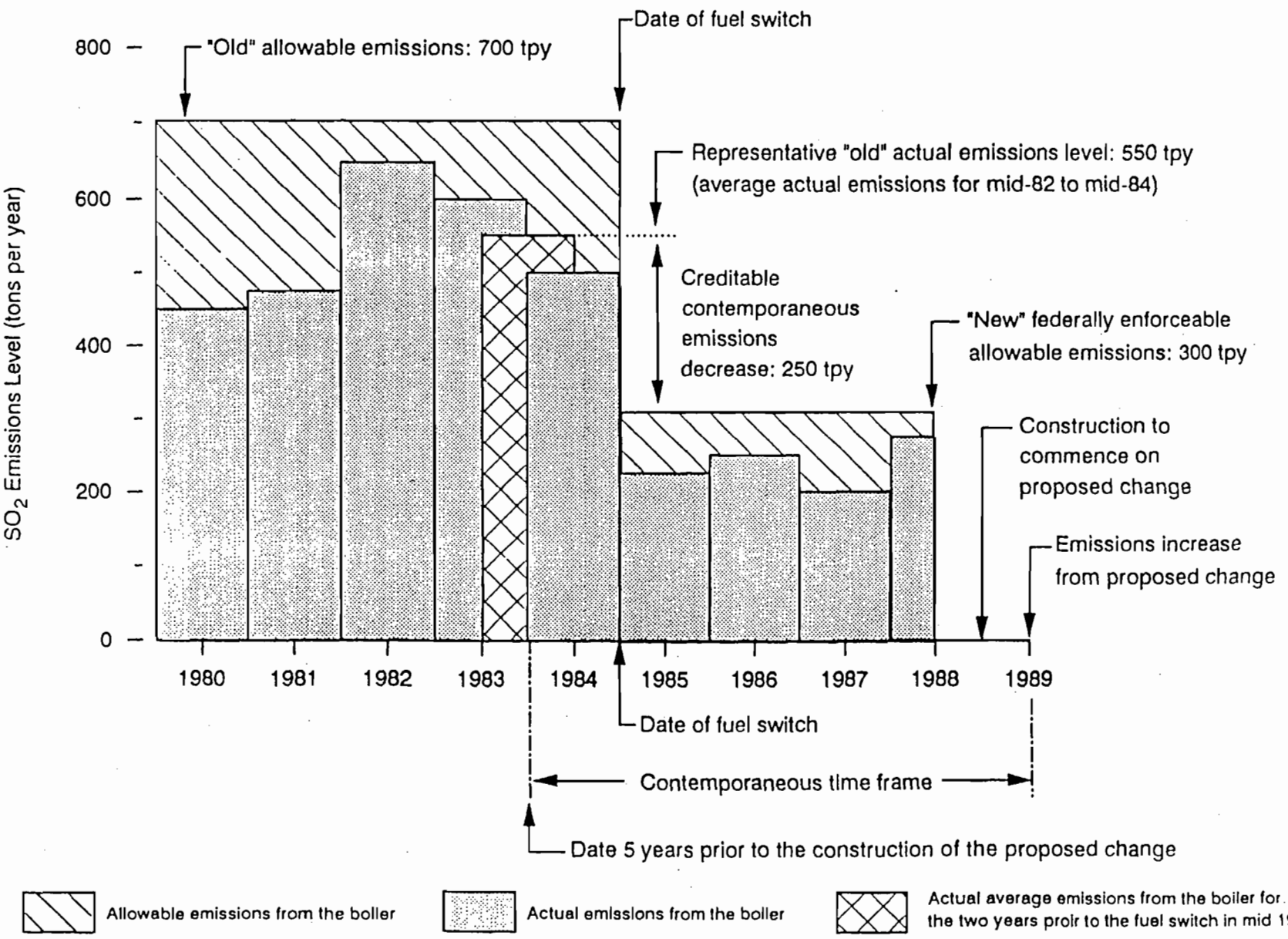


Figure A-2. Establishing "Old" and "New" Representative Actual SO_2 Emissions

AREA II NYLON INTERMEDIATES EMISSION ESTIMATES					
1.1 BAR Adipic Acid case					
EPA AP-42 factors, Adipic mfg. Lb/ton adipic	VOC (1)	CO	NOx	PM	
Oxidation reactor, process offgas	0.55	0.49	14	na	
Nitric acid tank fume sweep, (NOx Comp or equiv,all process fugitives)	0.014	0.28	1.6	na	
Adipic acid refining	0.5	0	0.6	0.1	
Comments: Bar Adipic Acid Case					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(1) TNMOC, total non methane organic compounds					

NOX Emissions:	Actual	Potential			
Adipic annual production rate MAR	**850**	**1100**			
TRU online NOx, tons/yr. Potential includes SCR (3) (9)	575.8	235.8			
TRU downtime NOx tons/yr. (4), (9)	102.4	0.0			
NOx leaks and spills (5)	10.0	10.0			
NOx Compressor or equiv, includes all process fug.emissions (6)(9)	28.3	36.7			
Adipic acid refining NOx (7)	127.5	165.0	**Diff.**		
TOTAL NOx emissions, tons/year	**844.1**	**447.5**	**-396.6**		
Comments: Area II NOx Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(3) See Calculation below, TRU emissions 850 MAR & 1100MAR, No N2O purif., Area 471 not on-line.					
	Adipic A	Area II	Halcon	TRU	NOx
	MAR	k Lb/hr	k Lb/hr	ppm	(tons/yr)
Maxium Emission Rate Authorized in 850 MAR Construction Permit @ 878	850	70	66	878	1196
Maxium Emission Rate Authorized in Consent Order for 850 MAR @ 500 ppm	850	70	66	500	681
Actual Emissions: 681 x (63+52)/(70+66) = 576 tpy	850	63	52	500	576
Potential Emissions at 1,100 MAR: 576 tpy x 150 ppm/500 ppm x (91+66)/(70+66)	1100	91	66	150	236
(4) Actual Emissions (for 1995 through 1997); Adipic Off-gases and NOx Compressor to go to backup SCR when TRU down					
and/or NOx compressor malfunctions; emission rate will be 150 ppm in either case. Therfore TRU backup emissions					
accounted for in TRU emissions because TRU calculation basis is 8760 hrs/yr.					
Actual emissions based annual operating reports (AOR) for three years to account for process varaibles and therefore representative:					
From AORs - 1995 = 59.5 tons; 1996 = 12.9 tons and 1997 = 234.9 tons; Average = 307.3/3 = 102.4					
(5) Leaks and spills not to exceed 1000 lbs per 24 hour period.					
(6) Calculated fugitive NOx using EPA tank fume factor, includes NOx Comp. backup emissions at 150 ppm NOx.					
(7) Adipic MAR X AP-42 NOx factor/2000 = tons/yr NOx					
(8) reserved					
(9) Excess emissions not included (2 hr/24 hr for SU, SD and malfunc); not subject to PSD NSR review					

Particulate, PM10, emissions:	Actual	Potential			
Adipic annual production rate MAR	**850**	**1100**			
TRU Gas Usage (@ 1.8 - 850, 1.1 -1100 scfh/Lb TRU feed-Area II); Kscfh (14)	113.4	100.1			
Emission factor (AP-42; Table 1.4-2; 10-100Mbtu/hr); Lb/Mscf	6.2	6.2			
TRU online Particulate, tons/yr. (10)	3.1	2.7			
TRU downtine Particulate, tons/yr.(11)	0.0	0.0			
NOx Compressor downtime Particulate, tpy (12)	0	0			
Adipic acid refining Particulate, tons/yr.(13)	21.3	27.5	**Diff.**		
TOTAL Particulate emissions	**24.3**	**30.2**	**5.9**		
Comments: Area II Particulate Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(10) TRU gas usage x TRU feed x AP-42 Natural gas factor; 1.8 x 113.4 x 6.2/10^6 x 8,760 / 2,000 = 3.1 tons/yr.					
(11)TRU backup operational,SU, SD and malf. excess emissions not subject to PSD NSR and not included					
SCR or equivalent will have steam heat exchanger if necessary; therefore no fuel combustion.					
(12) No applicable EPA AP-42 factor					
(13) Based on EPA AP-42 factor of 0.1 lb part./ton adipic					
(14) Annual average basis.					

VOC Emissions:					
Fugitive emissions, (valves, flanges, etc.) (15)	5	5			
Adipic annual production rate MAR	**850**	**1100**			
TRU Gas Usage (@ 1.8 - 850, 1.1 - 1100 scfh/Lb TRU feed-Area II); Kscfh	113.4	100.1			
Emission factor (AP-42; Table 1.4-2; 10-100Mbtu/hr); Lb/Mscf	2.8	2.8			
TRU on-line VOC, natural gas AP-42, tons/yr.(16)	1.4	1.2			
TRU downtime VOC, tons/yr.(17),(21)	209.7	22.9			
Process Offgas Oxidation Reaction VOC, (tons/yr) (20)	116.9	151.3			
EPA AP42 "fume sweep" factor for VOC, tons/yr.(18)	3.0	3.9			
Adipic acid refining AP42 factor for VOC, tons/yr.(19)	106.3	137.5	**Diff.**		
VOC from Area 471 (1300 Lb/hr); 99+% efficient (22)		56.9			
TOTAL VOC emissions	**442.2**	**378.6**	**-63.6**		

GAS USAGE DECR. BECAUSE: W/ SCR ADDED TRU DOES NOT HAVE TO RUN IN AS MUCH OF A REDUCING MODE, SO FUEL USE DECR.

Comments: Area II VOC Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(15) Engineering estimate					
(16) TRU gas usage x TRU feed x AP-42 Natural gas factor; 1.8 x 113.4 x 2.8/10^6 x 8,760 / 2,000 = 1.4 tons/yr.					
(17) See calculation below, 850 MAR=Halcon off-gas 1995-97 VOC emissions when TRU down					
	1995	1996	1997	Average	
Cyclohexane Oxidation Air Vented (off-gas), M lb/yr	49.5	30.6	67.278		
Total Cyclohexane Oxidation Air Used, M lb/yr	514.9	562.8	620.6		
Cyclohexane Oxidation Venting, hours (Air Vented/Total Air x 8,000 hr)	769.1	435.0	867.3		
TRU Downtime, hours	636.1	225.3	589.9		
Cyclohexane venting due to TRU, percent	83%	52%	68%		
Total VOC Vented, tons/yr (from AOR)	329.0	193.0	378.0		
VOC Vented due to TRU Downtime, tons (% TRU down x VOC vented)	272.1	100.0	257.1	209.7	
(18) MAR x AP-42 factor (0.014 lb VOC/ton Adipic) x 8,760/2,000					
(19) MAR x AP-42 factor (0.5 lb VOC/ton Adipic) x 8,760/2,000					
(20) VOC emissions, including HCN, are calculated using AP-42 emission factor of 0.55 lb/ton adipic.					
Solutia will be attempting to document through emissions testing that the oxidation reactors off gas					
contains less than 300 ppm VOC and therefore qualify for an exemption form NSPS Subpart RRR.					
It has not been determined that this will be inconsistent with the AP-42 VOC factor.					
(21) 1100MAR case = Backup afterburner, 90% capture and 99+% VOC destruction of Halcon VOC:					
209.7 x (1-0.90) + (209.7 -20.97)x (1-0.99) = 22.9 TPY					
(22) VOC emissions (TPY) = 1300 lb/hr * 0.01 * 8760/2000 = 56.9 TPY					

CO Emissions:					
Adipic annual production rate MAR	**850**	**1100**			
TRU Gas Usage (@ 1.8 - 850, 1.8 - 1100 scfh/Lb TRU feed-Area II); Kscfh	113.4	100.1			
Emission factor (AP-42; Table 1.4-2; 10-100Mbtu/hr); Lb/Mscf	35	35			
TRU online CO, tons/yr.(23)	17.4	15.3			
TRU downtime CO, tons/yr.(24) (27)	252.1	29.7			
Process Offgas Oxidation Reaction CO, (tons/yr) (28)	104.1	134.8			
Adipic Fume sweep CO per AP42 factor, tons/yr.(25)	59.5	77.0			
Adipic acid refining CO, tons/yr.(26)	0.0	0.0	**Diff.**		
CO from Area 471 (600 lb/hr; 98+% destruction) (29)		52.6			
TOTAL CO emissions	**433.1**	**309.4**	**-123.7**		

Comments: Area II CO Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(23) TRU gas feed factor x TRU feed rate x Natural gas CO factor (35 lbs CO/M cu ft gas)					
(24) See calculation below, 850 MAR=Halcon off-gas 1995-97 CO emissions when TRU down					
	1995	1996	1997	Average	
Cyclohexane Oxidation Air Vented, M lb/yr	49.5	30.6	67.278		
Total Cyclohexane Oxidation Air Used, M lb/yr	514.9	562.8	620.6		
Cyclohexane Oxidation Venting, hours (Air Vented/Total Air x 8,000 hr)	769.08138	434.968	867.263938		
TRU Downtime, hours	636.1	225.3	589.9		
Cyclohexane venting due to TRU, percent	83%	52%	68%		
Total CO Vented, tons/yr (from AOR)	308.0	217.0	572.0		
CO Vented due to TRU Downtime, tons (% TRU down x CO vented)	254.7	112.4	389.1	252.1	
1100MAR case = TRU backup afterburner, 98+% CO abatement of Halcon CO only (185 X 0.02 = 3.7)					
Potential BTOP CO afterburner emissions offset of (185 - 3.7 = 181.3 tpy CO) for use in BTOP summary					
(25) AP-42 = 0.28 lb CO/ton adipic					
(26) AP-42 factor = 0					
(27) 1100MAR case = Backup afterburner, 90% capture and 98+% CO destruction of Halcon CO:					
252.1 x (1-0.90) + 252.1-25.1 * 0.02 = 29.75					
(28) Process offgas oxidation CO (tpy) = MAR /2000 * 0.49 (AP-Emission factor lb/ton adipic) /2000					
(29) CO emissions (TPY) = 600 lb/hr * 0.02 * 8760/2000 = 52.6 TPY					

AREA II NYLON INTERMEDIATES EMISSION ESTIMATION SUMMARY					
Pollutant	**Actual**	**Potential**	**Net change**	**PSD level**	**PSD**
NOx	**844.1**	**447.5**	**-396.6**	**40**	**No**
PM10	**24.3**	**30.2**	**5.9**	**15**	**No**
VOC	**442.2**	**378.6**	**-63.6**	**40**	**No**
CO	**433.1**	**309.4**	**-123.7**	**100**	**No**
Comments:					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					

AREA 471 EMISSION CALCULATION SPREADSHEETS 7/8/98					
LIST OF TABLES AND LOCATIONS					
TABLE NUMBER	DESCRIPTION				
1	AREA 471 HEATERS				
2	AREA 471 TRU OBUD				
3	AREA 471 FLARES				
4	AREA 471 COMBINED TOTAL EMISSIONS				
5	AREA II, 480, and 471 COMBINED TOTAL EMISSIONS				

Table 1: Heater Emissions				
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)	
AREA 471 Heaters Total (Natural Gas Combustion) (1)				
Heat input rate total (MMBtu/hr) [100M Btu/hr annual average] (2)	160	NA	NA	
NOx Emission Factor - Emissions (Lb/MMBtu) (3)	0.200	32.00	87.60	
Particulate Emission Factor -Emissions (lb/MMBtu)	0.015	2.40	6.57	
CO Emission Factor - Emissions (lb/MMBtu)	0.035	5.60	15.33	
VOC Emission Factor - Emissions (lb/MMBtu)	0.003	0.45	1.22	

Comments: Heater Emissions

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.

(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.

(e) Catalyst charging, and catalyst removal will occur several times per year. Operation and maintenance plans, as addressed in Section SO-E01-L7, attached, will prevent objectionable odors, excessive visible emissions and will assure safe emission levels for workers and the public. Catalyst regeneration (thermal oxidation within the reactor) is performed every one (1) to two (2) days for each reactor. This procedure is integral to the process and these emissions are controlled as part of the process offgas.

(f) Area 471 nylon intermediate process residue is being considered for fuel use in one or more existing plant boilers #4, #5, and/or #6.

Footnotes:

(1) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Small industrial boilers (10 - 100 MMBtu/hr) uncontrolled (lb/MMCF) CO - 35, VOC - 5.8*0.83. Natural gas 1000 Btu/scf.
Lb/MMBtu = lb/MMCF/Btu/scf . PM emission factor = 0.015 per similar stack tests.

(2) 100 MMBtu/hr annual average basis, total hourly rate = 160 MMBtu/hr

(3) NOx emission factor determined from engineering estimates and design criteria.

Table 2: TRU ORGANICS BACK-UP DEVICE (OBUD) EMISSIONS				
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)	
Area 471 TRU Organics Back-up Device (OBUD) - Pilot fuel (1)				
Heat input rate total; MMBtu/hr ;hours/year	0.27		8760	
NOx factor, natural gas, Lb/Btu (4)	0.200	0.05	0.24	
Particulate factor, Natural gas, lb/MMBtu	0.015	0.00	0.02	
CO factor, Natural gas, lb/MMBtu	0.040	0.01	0.05	
VOC factor, Natural gas, lb/MMBtu	0.003	0.00002	0.00007	
AREA 471 TRU Organics Back-up Device (OBUD) - Hot Standby (2)				
Heat input rate total; MMBtu/hr ;hours/year	18.75		8030	
NOx factor, natural gas, lb/MMBtu (4)	0.200	3.75	15.06	
Particulate factor, Natural gas, Lb/MMBtu	0.015	0.28	1.13	
CO factor, Natural gas, lb/MMBtu	0.040	0.75	3.01	
VOC factor, Natural gas, lb/MMBtu	0.003	0.001	0.004	
AREA 471 TRU Organics Back-up Device (OBUD) - Assist fuel (3)				
Heat input rate total; MMBtu/hr ;hours/year	187.5		730	
NOx factor, natural gas, lb/MMBtu (4)	0.200	37.50	13.69	
Particulate factor, Natural gas, lb/MMBtu	0.015	2.81	1.03	
CO factor, Natural gas, lb/MMBtu	0.040	7.50	2.74	
VOC factor, Natural gas, lb/MMBtu	0.003	0.010	0.004	
AREA 471 TRU Organics Back-up Device (OBUD) - Process gas				
Maximum Hours of Operation			730	
NOx converted from N20 (assume 15%) lb/hr	1815	272.25	99.37	
VOC/CO destruction efficiency - 99%+	0.01			
CO from Area 471 (5)	600	6.00	0	
VOC from Area 471 (6)	1300	13.00	0	
CO from Area I (7)	1404	14.04	0	
VOC from Area I (8)	926	9.26	0	
AREA 471 TRU-OBUD EMISSION TOTALS				
NOx Emissions	NA	313.55	128.35	
Particulate Emissions	NA	3.10	2.17	
CO Emissions	NA	28.30	5.80	
VOC Emissions	NA	22.27	0.01	

Comments: TRU Organics Backup Device (OBUD)
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.
(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.
(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.
Footnotes:
(1) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Commercial boilers (0.3 < 10 MMBtu/hr) uncontrolled (lb/MMCF) CO - 40, VOC - 5.8 * 48% . Natural gas 1000 Btu/scf.
Lb/MMBtu = lb/MMCF/Btu/scf. PM emission factor = 0.015 per similar stack tests.
(2) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Small industrial boilers (10-100 MMBtu/hr) uncontrolled (lb/MMCF) CO - (Conservative Estimate) 40, VOC - 5.8 * 48% .
Natural gas 1000 Btu/scf. Lb/MMBtu = lb/MMCF/Btu/scf . PM emission factor = 0.015 per similar stack tests.
(3) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Large industrial boilers (> 100 MMBtu/hr) uncontrolled (lb/MMCF) CO - (conservative estimate) 40, VOC (conservative estimate) 5.8 * 48%.
Natural gas 1000 Btu/scf. Lb/MMBtu = lb/MMCF/Btu/scf . PM emission factor = 0.015 per similar stack tests.
(4) NOx emission factor determined from engineering estimate and design criteria.
(5) Area 471 process CO TPY emissions included in Area II TRU online estimates, because TRU calculation based on 8760 hours per year.
(6) Area 471 process VOC TPY emissions included in Area II TRU online estimates, because TRU calculation based on 8760 hours per year.
(7) Basis 1404 lb/hr per permit AC17-247476. TPY emissions accounted for in Area II TRU downtime CO.
(8) Basis 926 lb/hr per permit AC17-247476. TPY emissions accounted for in Area II TRU downtime VOC.

Table 3: AREA 471 FLARES AND VOC FUGITIVE EMISSIONS				
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)	
AREA 471 Pressure Relief Flare - Pilot fuel (1)				
Heat input rate total (MMBtu/hr) - Hours per year	0.27	NA	8760	
NOx factor, natural gas, lb/MMBtu (2)	0.200	0.054	0.237	
Particulate factor, Natural gas, lb/MMBtu	0.015	0.004	0.018	
CO factor, Natural gas, lb/MMBtu	0.021	0.006	0.025	
VOC factor, Natural gas, lb/MMBtu	0.003	0.001	0.003	
Raw Material Storage Tank Flare - Pilot fuel and assist fuel (1)				
Heat input rate total; MMBtu/hr;hours/year	0.54		8760	
NOx factor, natural gas, Lb/MMbtu (2)	0.200	0.108	0.473	
Particulate factor, Natural gas, lb/MMBtu	0.015	0.008	0.035	
CO factor, Natural gas, lb/MMBtu	0.021	0.011	0.050	
VOC factor, Natural gas, lb/MMBtu	0.003	0.00003	0.00013	
VOC destruction efficiency 98%+	0.020			
VOC from store material to flare (lb per hr)	3.00	0.008	0.037	
Product Storage Tank Flare - Pilot Fuel and assist fuel (1)				
Heat input rate total; MMBtu/hr;hours/year	0.54		8760	
NOx factor, natural gas, Lb/MMBtu (2)	0.200	0.108	0.473	
Particulate factor, Natural gas, Lb/MMBtu	0.015	0.008	0.035	
CO factor, Natural gas, Lb/MMBtu	0.021	0.011	0.050	
VOC factor, Natural gas, Lb/MMBtu	0.003	0.00001	0.0001	
VOC destruction efficiency 98%+	0.020			
VOC from store material to flare (lb per hr)	0.23	0.005	0.020	
VOC fugitive emissions (3)	na	na	3.8	
VOC-Benzene leaks + spills (4)	non-Title V	episodic	4	

Comments: AREA 471 Flares and VOC Fugitive Emissions				
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design				
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard				
to total emissions increases and offset reductions, as well as PSD/NSR determinations.				
(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations.				
The facility total emissions rates in tons per year are the environmental performance criteria.				
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies				
will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.				
(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions				
control performance requirements for this process from raw material handling, through chemical processing to product transfer				
operations. Solutia will conform to the applicable provisions of this regulation.				
Footnote:				
(1) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 1.4-2 and 1.4-3.				
Commercial boilers (0.3<10 MMBtu/hr) uncontrolled (lb/MMCF) CO-21, VOC - 5.8*(48%). Natural Gas 1000 Btu/scf.				
Lb/MMBtu = lb/MMCF /Btu/scf, PM emission factor = 0.015 per similar stack tests.				
(2) NOx emission factor determined from engineering estimate and design criteria.				
(3) Based on SARA 313 Fugitive Emission estimate for Area I Nylon Intermediates of 7600 lbs/yr.				
(4) Based on leak or spills not to exceed 500 lbs per 24 hour period.				
Emissions from start-up, shutdown and malfunction are not required in the PSD determination				

Table 4: COMBINED TOTAL AREA 471 EMISSIONS (HEATERS, TRU-OBUD, FLARES, VOC FUGITIVES)				
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)	
AREA 471 Total Emissions				
NOx		345.82	217.13	
Particulate		5.52	8.83	
CO		33.93	21.25	
VOC		22.73	9.09	
Comments: AREA 471 Total Emissions				
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design				
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard				
to total emissions increases and offset reductions, as well as PSD/NSR determinations.				
(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations.				
The facility total emissions rates in tons per year are the environmental performance criteria.				
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply				
with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.				
(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance				
requirements for this process from raw material handling, through chemical processing to product transfer operations.				
Solutia will conform to the applicable provisions of this regulation.				

Table 5: COMBINED TOTAL AREA II/Area 480/Area 471 EMISSIONS				
Pollutant				
	Area II (TPY)	**Area 480 (TPY)**	**Area 471 (TPY)**	**Net (TPY)**
NOx	-396.57	0.00	217.13	-179.4
Particulate, PM10	5.89	0.00	8.83	14.7
CO (1)	-123.68	0.00	21.25	-102.4
VOC (1)	-63.59	12.39	9.09	-42.1
TOTAL SITE REDUCTION				**-309.3**

Comments: Combined Total Emissions

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

Footnotes:

(1) Based on 90% capture of Area I offgas when TRU is down and 98% destruction of CO and 99% destruction of VOC in offgas captured by Area 471 OBUD.

Area 480, Nylon Intermediates Expansion			
Item	**Calculation Basis**	**Emission rate, Lb/hr**	**Emission rate, tons/yr**
Process Off-gas emissions			
VOC destruction efficiency = 98+% (1),(2)	0.02		
Offgas VOC Total to H2 plant, lbs/yr (3)	900,000	2.1	9.0
Vacuum System Emissions			
VOC Control Efficiency	90%		
Vacuum System offgas VOC to control (TPY)	22	0.5	2.2
Fugitive Emissions			
Process Fugitive Emissions (4)		0.3	1.2
Total Emissions			
NOx		0.0	0.0
Particulate		0.0	0.0
CO		0.0	0.0
VOC		2.8	12.4

Comments: Area 480, Nylon Intermediates Expansion

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.

(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.

(e) Catalyst charging, catalyst removal, and catalyst regeneration (thermal oxidation within the reactor) will occur approximately once per year. Operation and maintenance plans, as addressed in Section SO-E01-L7, attached, will prevent objectionable odors, excess visible emissions and will assure safe emission levels for workers and the public.

Footnotes:

(1) Existing hydrogen plant reformer furnace, (or equivalent) VOC destruction estimated efficiency @ 98+%.

(2) No additional NO_x, particulate, CO or SO_2 emissions are expected from Area 480 process off-gas burning in the hydrogen plant reformer furnace. Process offgas burning is expected to be indistinguishable from natural gas fuel, with regard to these emissions.

(3) Process VOC to H2 plant = H2 purge gas, Process off-gas, storage tank vents and other miscellaneous area vents.

(4) Based on SARA 313 fugitive emission estimate for Area I Nylon Intermediates of 7600 lbs/yr.

Monsanto

MONSANTO CHEMICAL COMPANY
P. O. Box 12830
Pensacola, Florida 32575-2830
Phone: (904) 968-7000

November 11, 1988

Mr. Edwin Middleswart, P.E.
Department of Environmental Regulation
160 Governmental Center
Pensacola, FL 32501-5794

Dear Mr. Middleswart:

REF: "Additional information for application No. 155769"

This letter is in response to your letter to Mr. W. J. Board dated October 25, 1988. In your letter you requested additional assurance that the carbon monoxide emissions from the Pensacola Plant cyclohexane oxidation process, File No. 155769, will not cause a violation of ambient air quality standards for carbon monoxide.

Modelled carbon monoxide concentrations for the maximum 1 hour and maximum 8 hour averaging periods were well within the NAAQS standards. The second highest one hour average for the five years of weather data examined (1971-1975) is 6.3 mg/m^3 compared to the NAAQS of 40 mg/m^3. The second highest eight hour average is 1.5 mg/m^3 compared to the NAAQS of 10 mg/m^3.

The modelling was performed using a polar coordinate receptor grid. The center of the grid is approximately the Monsanto flag circle. Radius lines at 22.5 degree increments were used with receptor radius distances beginning at the property boundary and extending out to 5,000 meters. A summary of the input data on the cyclohexane oxidation CO sources are attached and are also included in the computer output summary.

The EPA approved Industrial Source Complex Short Term (ISCST) dispersion model (version 6) was used. Maximum CO emissions were assumed. Actual stack input parameters were used plus

Pensacola meteorologic data obtained from DER in Tallahassee. The input data and modeling results are attached for your review.

Hopefully this information will provide adequate assurance of compliance with the carbon monoxide ambient air quality standards so that the department can renew this operating permit. In the event this application cannot be deemed complete based on this submittal, please contact us immediately for further assistance.

Sincerely,

Bruce P McLeod

Bruce P. McLeod, Sr. Specialist
Environmental Control

Attachment

cc: J. G. Wiley

1396.BPM

CYCLOHEXANE OXIDATION PROCESS
ISCST INPUT DATA FOR CARBON MONOXIDE

Plant Contact Name: B. P. McLeod Phone No.: 8725
Plant: Pensacola Date Completed: 10/28/88
Origin Location: Longitude 87° 15' 20"
Latitude 30° 35' 40"

Parameter	Units	Source No. 1	Source No. 2
Cartesian Coordinates (x,y,) of center of stack	Meters	(630,50)	(560,140)
Source height above grade	Meters	25	25
Source Base elevation above MSL	Meters	0	0
Stack gas temperature	Degrees Kelvin	303	303
Stack gas exit velocity	Meters per second	40	40
Stack inner diameter	Meters	.154	.154
Building height[5]	Meters	18.5	18.5
Building width[5]	Meters	30.8	23.1
Building length	Meters	38.5	36.9
Emission rate	Grams per second	73.8	73.8
Source Description		Building 461 high press. scrubber	Building 401 high press. scrubber

1396.BPM

CYCLOHEXANE OXIDATION PROCESS
SUMMARY OF ISCST MODELLING RESULTS

CARBON MONOXIDE
2ND HIGHEST VALUES
UNITS = MG/M^3

YEAR	1 HOUR AVERAGE	8 HOUR AVERAGE
1971	5.9	1.5
1972	6.3	1.5
1973	5.7	1.5
1974	6.3	1.4
1975	6.0	1.5

1396.BPM

246785 AC17-0330040-013

RECEIVED

SOLUTIA

Applied Chemistry, Creative Solutions

Solutia Inc.
P.O. Box 97
Gonzalez, Florida 32560-0097
Tel 850-968-7000

December 18, 1998

RECEIVED
DEC 30 1998
BUREAU OF
AIR REGULATION

Mr. Ed Middleswart
Air Program Administrator
Department of Environmental Protection
160 Governmental Center
Pensacola, Florida 32501

Dear Mr. Middleswart,

Enclosed for Department review, is a response to the August 19, 1998 letter from you. This letter requested additional information with regard to the following air construction permit applications, currently being processed by your office.

Area II Expansion 0330040-011-AC
Area 471 Expansion 0330040-010-AC
Area 480 Expansion 0330040-012-AC
and in addition:
#2 Hydrogen Generation Unit (initial application submittal, enclosed)

In discussions with your staff, Solutia clarified that this response would be delayed to allow additional time to refine the process design, with the expectation that emission estimates could be reduced. This effort has been successful with total site emissions now expected to be reduced by about 390 tons/year from an initial estimate of a 300 ton/year reduction.

The format of the Solutia additional information submittal, (see Attachment 1) is, the Department question shown for reference, followed by the Solutia response.

If you or your staff have questions regarding this submittal, please call Bruce McLeod at 850-968-8725. Thank you for your consideration of this information.

Sincerely,

John L. Wiley for Joe C. Ochsner

J. C. Ochsner
Site Manager

--ATTENTION MAIL ROOM--

PLEASE ROUTE THIS DOCUMENT TO:

Joe Kahn

Name of Individual/Office

5505

Mail Station Number

Enclosures:

1) Attachment 1, Solutia response to the Department's 8/19/98 letter.
2) 40 CFR 63.11b
3) Area II, Nylon Intermediates Expansion Construction permit application and emissions spreadsheet update.
4) Area 471, Nylon Intermediates Expansion Construction permit application and emissions spreadsheet update.
5) Area 480, Nylon Intermediates Expansion Construction permit application and emissions spreadsheet update.
6) #2 Hydrogen Plant, Nylon Intermediates Expansion Construction permit application (4 copies) and $4,500 processing fee check, No. 1000060488.

SOLUTIA

Applied Chemistry, Creative Solutions

Solutia Inc.
P.O. Box 97
Gonzalez, Florida 32560-0097
Tel 850-968-7000

December 17, 1998

Subject: Delegation of Authority

I will be away from the plant, Thursday afternoon, December 17 and Friday, December 18. During my absence, John Wiley, as Acting Site Manager will be responsible for the operation of the Pensacola plant.

Joe Ochsner

Joe Ochsner

NON NEGOTIABLE

1000060488

FOR INQUIRIES CALL:

Vendor Number: 260328

Solutia Inc. (314) 674-6220

Invoice Number	Date	Gross Amount	Discount/Wthld	Net Amt	Comments
12071998	12/07/1998	4,500.00	0.00	4,500.00	
Sum Total		4,500.00	0.00	4,500.00	

CC8511C

REMITTANCE ADVICE: The attached check is in full payment of invoices or other charges listed.

THIS DOCUMENT IS PRINTED IN TWO COLORS. DO NOT ACCEPT UNLESS BLUE AND BROWN ARE PRESENT.

62-20/311

ACCOUNTS PAYABLE DEPARTMENT

1000060488

DATE 12/11/1998

PAY TO THE ORDER OF

DEPARTMENT OF ENVIRONMENTAL PROTECTION
160 GOVERNMENTAL CENTER
PENSACOLA FL 32501-5794
USA

VOID IF NOT CASHED WITHIN SIX MONTHS

*********4,500.00*

THIS AMOUNT *FOUR THOUSAND FIVE HUNDRED********** USD

PAYABLE AT Citibank
One Penns Way
New Castle, DE 19720

by Rodney L. Bishop

by

Authorized Signatures

Enclosure 1

Attachment 1,
Solutia response to the Department's
8/19/98 letter

Attachment 1
Additional information requested by the 8/19/98 DEP letter.

DEP Item 1a:

- **Please evaluate the upstream and downstream collateral emission changes associated with producing more adipic acid for nylon salt production. Evaluate the impacts on the nylon process, the Hexamethylene Diamine process, Solutia's hydrogen plant, increased AGS byproducts storage and combustion, increased Dimethyl Ester production, and any other relevant process unit.**

Solutia Response:
An increment of Nylon polymerization capacity increase is being planned. The nylon polymerization process is considered a VOC source, but not a not a PM10 source. VOC emissions of approximately 20-30 tons per year would be the potential emissions impact of the likely nylon polymerization expansions. This amount of VOC emissions increase is still well below the expected VOC reductions from the nylon intermediate expansions projects.

The existing hydrogen Plant is currently operating under an existing construction permit which will bring it to its maximum capacity. No further expansion is planned.

The Hexamethylene Diamine process is considered a VOC source, but not a PM10 source. VOC compounds only and these emissions occur primarily from the distillation columns vacuum systems. Vacuum system emissions are considered to be independent of column operating rate. No additional distillation columns are expected at this time.

The existing nitric acid plant is currently operating under a construction permit to bring it to its maximum capacity. Additional nitric acid will be needed to allow Adipic acid manufacturing up to 1100 MAR capacity. Current plans are to buy nitric acid. As production rates increase, the economic justification increases to produce additional nitric acid through means, such as, constructing a new Solutia nitric acid plant, a joint venture nitric acid plant or obtaining nitric acid from a 3rd party nitric acid plant (with all options potentially occurring on Solutia property). Therefore it is conceivable that Solutia may submit a construction permit for a new nitric acid plant during the term of the Area II construction permit. Nitric acid plants are considered to be a NOx source but not a PM10 source.

The DME production unit is considered to be a VOC source but not a PM10 source. Although no expansion in this area is currently planned, if expanded, the result would be minimal VOC emissions, since the process off-gas is routed to the existing Solutia hydrogen plant reformer furnace for destruction. No additional natural gas would be needed to combust the DME off-gas.

Increased AGS by-product production will occur as a result of the Adipic 1100MAR expansion. AGS handling emissions are accounted for by the Adipic acid refining AP-42 factors, These emission estimates have been included in the construction permit

application for Area II Nylon Intermediates. AGS by-product fuel combustion has been recently suspended, since implementation of the Dimethyl Ester production facility. Additional AGS produced as a waste stream from the Area II Purge system , if not used in the DME process, will be disposed in the plant process waste system. As an alternative to AGS by-product fuel burning in Boiler 4, residue burning from Area 471 and possibly from Area 480, is being considered.

DEP Item 1b:

- **Please provide an affirmative demonstration that the total adipic acid production capacity will be no greater than the target 1100 MAR that is used as the basis for the PM_{10} estimates. This demonstration may be based on the adipic acid expansion design specifications and/or the design capacity specifications of the Area 471/480 process and the existing capacities of Area I and nitric acid processes.**

Solutia Response:
The Adipic acid production capacity will be limited to 1100 MAR based on two primary factors.

First, the ability of the low temperature converters, which react KA to produce Adipic acid, will be designed to allow instantaneous KA feedrates in conformance with the maximum KA processing rates specified in the Adipic acid construction permit application for the 1100 MAR expansion project.

Second, the AGS by-product removal system (Purge system) will be redesigned to allow sustained AGS removal, on a long-term basis, to support 1100 MAR Adipic acid production rate. This by-product AGS must be removed to ensure Adipic acid of acceptable quality.

The above two factors; the ability of the converters to process the KA and the ability of the Purge system to remove AGS by-product waste, will be the primary constraints to operation above 1100 MAR Adipic acid production.

It is anticipated that the Area II construction permit will require TRU emissions testing while feeding the maximum KA to the low temperature converters while measuring NOx emissions from the SCR treating the TRU stack gas. This will be a short-term measure of maximum production capacity. The Solutia measure of Adipic acid production rate would be determined from accounting information for the December 31, year end total. An acceptable alternative would be a rolling 12 month total of Adipic acid accounting production information.

DEP Item 1c:

- **Please provide any information supporting Solutia's assertion that a physical production limitation need not be included as a federally enforceable limitation in the permit.**

Solutia Response:
The Area II Nylon Intermediates expansion permit (1100MAR) is expected to fulfill the projected Adipic acid demand through the term of the construction permit, based on the information available at this time.

DEP Item 1d:

- **Please provide information about the percent of hydrogen plant capacity that Solutia will use from the Air Products plant to confirm that Solutia is not the sole user of hydrogen from the plant.**

Solutia Response:
Hydrogen generation, Option A; [a potential Air Products permitting issue, if pursued]
Solutia may utilize about one third of the capacity an Air Products hydrogen plant, that would be constructed on the Solutia Pensacola plant site. Air Products would install a pipeline to transport hydrogen between the Solutia plant and the Air Products Pace plant.

Hydrogen generation, Option B; [A Solutia Const. permit application will be submitted]
Solutia would construct a hydrogen plant on its Pensacola plant site which would produce hydrogen solely for Solutia use. A construction permit application has been prepared and submitted to the Department for this case.

DEP Item 1e:

- **Please provide information about the relationship between Air Products and Solutia to confirm Solutia's representations that it does not have a financial interest in the plant now, nor will it acquire the plant in the future.**

Solutia Response:
Hydrogen generation, Option A;
Solutia would not pursue a financial interest in the Air Products hydrogen plant, now or in the foreseeable future. Solutia will be a customer of Air Products, who will supply other customers from this unit through the Air Products Pace site.

Hydrogen generation, Option B;
Solutia may transfer the hydrogen plant permit to a 3rd party. Solutia may be the owner, the operator or the plant could be owned by a 3rd party, with the possibility the Solutia could purchase the hydrogen plant in the future. Give this uncertainty, the #2 Hydrogen plant emissions have been added to the other expansion projects, for purposes of NSR/PSD determinations.

DEP Item 1f:

- **Please confirm that Solutia will provide backup control for the Area 480 liquid waste if the Air Products plant shuts down, and describe how quickly Solutia can implement its secondary options.**

Solutia Response:
Solutia has a number of options, in the event that the Air Products hydrogen plant cannot burn the liquid waste from the Area 480 process. Some of these options include off-site contract incineration or fuel use in boiler 4. If desired, a permit condition could be written so that prior to startup Solutia would inform the Department that a backup residue disposal option has been secured. Contract disposal is a routine activity at the Solutia Pensacola plant and this option can be implemented in a few weeks if needed. Storage tank capacity for the residue will be designed to allow a minimum of one tank truck volume to be stored for off-site shipment, if necessary.

DEP Item 1g:

- **Please estimate any PM_{10} emissions increase resulting from the firing of liquid waste streams from Areas 471 and 480 in Boiler #4. This should be a past actual to future potential emissions comparison.**

Solutia Response:
There is no expected increase in PM10 emissions from boiler 4 as a result of burning of the liquid residue streams from Areas 471 and 480, based on the emissions that would be expected if the boiler was burning and equal amount of No. 6 fuel oil, for which it is currently permitted. This is because the composition of the residue streams will be comparable to or better than No. 6 fuel oil. The process residue streams will contain relatively low ash, metals, halogens, and sulfur as compared to No. 6 fuel oil.

The total amount of residue burning in boiler 4 should remain relatively constant because the amount of decrease of AGS and Fuel oil burning (1994 basis) is comparable to the expected amount of Area 471 and 480 residue. More recent time periods are not representative of AGS/Fuel Oil burning rates, because the Start-up of the DME process in 1994 began a shift of AGS to away from fuel use to raw material supply for DME manufacture. Additionally it is believed that burning of these residues would not be a modification for PSD purposes because the boiler was equipped to handle residual fuels (No. 6 fuel oil) before January 6, 1975, as addressed in Florida regulation 62-212.400(c)(4).

DEP Item 1h:

- **How will the hydrogen plant manage a residue stream and serve as a backup control for VOC's Solutia.**

Solutia Response:
The construction permit application for the #2 Hydrogen plant does not incorporate residue burning nor does it utilize the hydrogen plant reforming furnace as a VOC control device. Compliance with the applicable HON emissions control requirements for the Area 480 Nylon Intermediates process, will be provided by an enclosed flare, or equivalent. Emissions estimates for this newly proposed control device have been incorporated into the emissions spread sheets for the area 480 Nylon Intermediates Expansion permit application, which are attached.

DEP Item 2:

- **Please provide for each emission unit in Areas 471, 480 and II, the pollutant detail information in the appropriate application form pages for Cyanide compounds (H054), benzene (H017), and Phenol (H144).**

Solutia Response:
This information has been added to the application form pages, which are attached for insertion into the applications. Also included with emission spreadsheets are ambient air modeling results for benzene and phenol. The predicted public access fenceline results are well below the Florida Air Reference Concentrations.

DEP Item 3:

- **Please provide a summary of the expansion schedule including the hydrogen plant and identify all new pollution control equipment and appropriate parameters to insure that the equipment is operating properly.**

Solutia Response:

Summary Table of the Expansion Schedule and Primary Control Devices

Expansion Project	Year of expected start of construction	Year of expected start of 1st phase of operation	Primary Control Device	Expected parameters to be monitored, or equivalent
Area II	1999	2000	TRU with NOx SCR (SCR to be online, prior to production increase)	NOx CEM
Area 471	2000	2001	TRU for HON compliance with OBUD back-up	Furnace temperature, in conformance with 40 CFR 63.114, as applicable
Area 480	1999	2000	Enclosed flare or equivalent for HON compliance	Conform to 40 CFR 63.11b, as applicable, Attached
#2 Hydrogen plant	1999	2000	Low NOx natural gas burners	Initial stack test to confirm NOx performance of burners.

DEP Item 3a:

- **Provide and expansion schedule showing when each pollution control device will be placed in service including the role of the hydrogen plant regarding emissions controls. Pollution control devices must be in service prior to starting area expansion emissions units.**

Solutia Response:
See expansion schedule summary table, above. The hydrogen plant being permitted by Solutia (#2 Hydrogen plant) is not planned for use as a pollution control device, at this time.
Solutia acknowledges the need for the applicable emissions control devices to be in service prior to starting area expansion emission units. This includes
1)Operation of the Area II TRU SCR to achieve no more than 150 ppm NOx in the TRU exhaust gas before operating above 850 MAR production in the Adipic process,
2)Utilization of the TRU, or equivalent, for HON compliance for Area 471 at the time of process start-up and
3)Utilization of an enclosed flare, or equivalent, for HON compliance for Area 480 at the time of process start-up.

DEP Item 3b:

- **We need some conceptual understanding of all the emission control devices and the operating parameters that will be used to provide assurance that the facility is being properly operated to comply with the commitment that emissions are going to be reduced. Please include information for reasonable assurance as to the design, function and effectiveness of the proposed Organic back-up device (OBUD).**

Solutia Response:
See Summary Table of the Expansion Schedule and Primary Control Devices, above.

Additionally, the OBUD will be an enclosed flare, or equivalent. As such HON compliance, which requires 98+% HAP control, will be achieved by conformance with 40 CFR 63.11b.

Additional Solutia notes:

Although the Adipic acid construction permit does not contain any planned dry Adipic acid capacity increase, it should be noted that in the event that business conditions make this necessary, Solutia would expect to offset any new Adipic dryer PM10 emissions by an offsetting reduction in Adipic acid bulk loading facility PM10 emissions. If acceptable to the Department, this would potentially allow a component of dry Adipic acid expansion without triggering any of the PSD review premises or conflicting with any emissions information contained in the Area II Nylon Intermediates construction permit application.

In order to conform to the emission rate estimates in the Area 471, Area 480 and Area II Nylon Intermediates construction permit applications, pollution control devices will be placed in service no latter than the startup of area expansion emission units.

Enclosure 2

40 CFR 63.11b

40 CFR 63.11 Control device requirements.

(a) *Applicability.* This section contains requirements for control devices used to comply with provisions in relevant standards. These requirements apply only to affected sources covered by relevant stan dards referring directly or indirectly to this section.

(b) *Flares.*

(1) Owners or operators using flares to comply with the provisions of this part shall monitor these control devices to assure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators using flares shall monitor these control devices.

(2) Flares shall be steam-assisted, air-assisted, or non-assisted.

(3) Flares shall be operated at all times when emissions may be vented to them.

(4) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in Appendix A of part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22.

(5) Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(6) An owner/operator has the choice of adhering to the heat content specifications in paragraph (b)(6)(ii) of this section, and the maximum tip velocity specifications in paragraph (b)(7) or (b)(8) of this section, or adhering to the requirements in paragraph (b)(6)(i) of this section.

(i) (A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume) or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity V_{max}, as determined by the following equation:

$V_{max}=(X_{H2}-K_1)* K_2$

Where:

V_{max}=Maximum permitted velocity, m/sec.

K_1=Constant, 6.0 volume-percent hydrogen.

K_2=Constant, 3.9(m/sec)/volume-percent hydrogen.

X_{H2}=The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in §63.14).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (b)(7)(i) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 M/scm (200 Btu/scf) or greater if the flares is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$H_T = K \Sigma_{(i=1 \text{ to } n)} CiHi$

Where:

H_T=Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K=Constant=

$1.740 \text{ X } 10^{-7}$ (1/ppmv)(g-mole/scm)(MJ/kcal)

where the standard temperature for (g-mole/scm) is 20 °C.

C_i=Concentration of sample component i in ppmv on a wet basis, as measured for organics by Test Method 18 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946-77 (incorporated by reference as specified in §63.14).

H_i=Net heat of combustion of sample component i, kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 (incorporated by reference as specified in §63.14) if published values are not available or cannot be calculated.

n=Number of sample components.

[§63.11(b)(6) revised at 63 FR 24444, May 4, 1998]

(7) (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (b)(7)(ii) and (b)(7)(iii) of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Methods 2, 2A, 2C, or 2D in Appendix A to 40 CFR part 60, of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (b)(7)(i) of this section, less than the velocity V_{max}, as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the following equation:

$$\text{Log}_{10}(V_{max})=(H_T+28.8)/31.7$$

Where:

V_{max}=Maximum permitted velocity, m/sec.

28.8=Constant.

31.7=Constant.

H_T=The net heating value as determined in paragraph (b)(6) of this section.

(8) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max}. The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation:

$$V_{max}=8.71 + 0.708(H_T)$$

Where:

V_{max}=Maximum permitted velocity, m/sec.

8.71=Constant.

0.708=Constant.

H_T=The net heating value as determined in paragraph (b)(6)(ii) of this section.

[§63.11(b)(8) amended at 63 FR 24445, May 4, 1998]

Enclosure 3

Area II permit application and emissions spreadsheet update

12/18/98

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

Pollutant Detail Information:

1. Pollutant Emitted:
   H054
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 10.1 lb/hour 14.8 tons/year
4. Synthetically Limited?
   ☐ Yes ☒ No
5. Range of Estimated Fugitive/Other Emissions:
   ☐ 1 ☐ 2 ☐ 3 _____ to _____ tons/year
6. Emission Factor:
   Reference:
7. Emissions Method Code:
   ☐ 0 ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5
8. Calculation of Emissions (limit to 600 characters):
   Vent gas analysis and material balance flow rate.
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):
   Reference the Solutia letter to the Department, dated 4/9/98. This letter transmitted emissions estimates and ambient air modeling data.

AREA II NYLON INTERMEDIATES EMISSION ESTIMATES - 12/18/98					
1.1 BAR Adipic Acid case					
EPA AP-42 factors, Adipic mfg. Lb/ton adipic	VOC (1)	CO	NOx	PM	
Oxidation reactor, process offgas	0.55	0.49	14	na	
Nitric acid tank fume sweep, (NOx Comp or equiv,all process fugitives)	0.014	0.28	1.6	na	
Adipic acid refining	0.5	0	0.6	0.1	
Comments: Bar Adipic Acid Case					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(1) TNMOC, total non methane organic compounds					

NOX Emissions:	Actual	Potential			
Adipic annual production rate MAR	**850**	**1100**			
TRU online NOx, tons/yr. Potential includes SCR (3) (9)	575.8	235.8			
TRU downtime NOx tons/yr. (4), (9)	102.4	0.0			
NOx leaks and spills (5)	10.0	10.0			
NOx Compressor or equiv, includes all process fug.emissions (6)(9)	28.3	36.7			
Adipic acid refining NOx (7)	127.5	165.0	**Diff.**		
TOTAL NOx emissions, tons/year	**844.1**	**447.5**	**-396.6**		
Comments: Area II NOx Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(3) See Calculation below, TRU emissions 850 MAR & 1100MAR, No N2O purif., Area 471 not on-line.					
	Adipic A	Area II	Halcon	TRU	NOx
	MAR	k Lb/hr	k Lb/hr	ppm	(tons/yr)
Maxium Emission Rate Authorized in 850 MAR Construction Permit @ 878	850	70	66	878	1196
Maxium Emission Rate Authorized in Consent Order for 850 MAR @ 500 ppm	850	70	66	500	681
Actual Emissions: 681 x (63+52)/(70+66) = 576 tpy	850	63	52	500	576
Potential Emissions at 1,100 MAR: 576 tpy x 150 ppm/500 ppm x (91+66)/(70+66)	1100	91	66	150	236
(4) Actual Emissions (for 1995 through 1997); Adipic Off-gases and NOx Compressor to go to backup SCR when TRU down and/or NOx compressor malfunctions; emission rate will be 150 ppm in either case. Therfore TRU backup emissions accounted for in TRU emissions because TRU calculation basis is 8760 hrs/yr.					
Actual emissions based annual operating reports (AOR) for three years to account for process varaibles and therefore representative: From AORs - 1995 = 59.5 tons; 1996 = 12.9 tons and 1997 = 234.9 tons; Average = 307.3/3 = 102.4					
(5) Leaks and spills not to exceed 1000 lbs per 24 hour period.					
(6) Calculated fugitive NOx using EPA tank fume factor, includes NOx Comp. backup emissions at 150 ppm NOx.					
(7) Adipic MAR X AP-42 NOx factor/2000 = tons/yr NOx					
(8) reserved					
(9) Excess emissions not included (2 hr/24 hr for SU, SD and malfunc); not subject to PSD NSR review					

Particulate, PM10, emissions:	Actual	Potential			
Adipic annual production rate MAR	**850**	**1100**			
TRU Gas Usage (@ 1.8 - 850, 1.1 -1100 scfh/Lb TRU feed-Area II); Kscfh (14)	113.4	100.1			
Emission factor (AP-42; Table 1.4-2; 10-100Mbtu/hr); Lb/Mscf	6.2	6.2			
TRU online Particulate, tons/yr. (10)	3.1	2.7			
TRU downtine Particulate, tons/yr.(11)	0.0	0.0			
NOx Compressor downtime Particulate, tpy (12)	0	0			
Adipic acid refining Particulate, tons/yr.(13)	21.3	27.5	**Diff.**		
TOTAL Particulate emissions	**24.3**	**30.2**	**5.9**		
Comments: Area II Particulate Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(10) TRU gas usage x TRU feed x AP-42 Natural gas factor; 1.8 x 113.4 x 6.2/10^6 x 8,760 / 2,000 = 3.1 tons/yr.					
(11)TRU backup operational,SU, SD and malf. excess emissions not subject to PSD NSR and not included					
SCR or equivalent will have steam heat exchanger if necessary; therefore no fuel combustion.					
(12) No applicable EPA AP-42 factor					
(13) Based on EPA AP-42 factor of 0.1 lb part./ton adipic					
(14) Annual average basis.					

VOC Emissions:					
Fugitive emissions, (valves, flanges, etc.) (15)	5	5			
Adipic annual production rate MAR	**850**	**1100**			
TRU Gas Usage (@ 1.8 - 850, 1.1 - 1100 scfh/Lb TRU feed-Area II); Kscfh	113.4	100.1			
Emission factor (AP-42; Table 1.4-2; 10-100Mbtu/hr); Lb/Mscf	2.8	2.8			
TRU on-line VOC, natural gas AP-42, tons/yr.(16)	1.4	1.2			
TRU downtime VOC, tons/yr.(17),(21)	209.7	22.9			
Process Offgas Oxidation Reaction VOC, (tons/yr) (20)	116.9	151.3			
EPA AP42 "fume sweep" factor for VOC, tons/yr.(18)	3.0	3.9			
Adipic acid refining AP42 factor for VOC, tons/yr.(19)	106.3	137.5	**Diff.**		
VOC from Area 471 (300 Lb/hr); 99+% efficient (22)		13.1			
TOTAL VOC emissions	**442.2**	**334.8**	**-107.4**		

Comments: Area II VOC Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(15) Engineering estimate					
(16) TRU gas usage x TRU feed x AP-42 Natural gas factor; 1.8 x 113.4 x 2.8/10^6 x 8,760 / 2,000 = 1.4 tons/yr.					
(17) See calculation below, 850 MAR=Halcon off-gas 1995-97 VOC emissions when TRU down					
	1995	1996	1997	Average	
Cyclohexane Oxidation Air Vented (off-gas), M lb/yr	49.5	30.6	67.278		
Total Cyclohexane Oxidation Air Used, M lb/yr	514.9	562.8	620.6		
Cyclohexane Oxidation Venting, hours (Air Vented/Total Air x 8,000 hr)	769.1	435.0	867.3		
TRU Downtime, hours	636.1	225.3	589.9		
Cyclohexane venting due to TRU, percent	83%	52%	68%		
Total VOC Vented, tons/yr (from AOR)	329.0	193.0	378.0		
VOC Vented due to TRU Downtime, tons (% TRU down x VOC vented)	272.1	100.0	257.1	209.7	
(18) MAR x AP-42 factor (0.014 lb VOC/ton Adipic) x 8,760/2,000					
(19) MAR x AP-42 factor (0.5 lb VOC/ton Adipic) x 8,760/2,000					
(20) VOC emissions, including HCN, are calculated using AP-42 emission factor of 0.55 lb/ton adipic.					
Solutia will be attempting to document through emissions testing that the oxidation reactors off gas					
contains less than 300 ppm VOC and therefore qualify for an exemption form NSPS Subpart RRR.					
It has not been determined that this will be inconsistent with the AP-42 VOC factor.					
(21) 1100MAR case = Backup afterburner, 90% capture and 99+% VOC destruction of Halcon VOC:					
209.7 x (1-0.90) + (209.7 -20.97)x (1-0.99) = 22.9 TPY					
(22) VOC emissions (TPY) = 300 lb/hr * 0.01 * 8760/2000 = 13.1 TPY					

CO Emissions:					
Adipic annual production rate MAR	**850**	**1100**			
TRU Gas Usage (@ 1.8 - 850, 1.8 - 1100 scfh/Lb TRU feed-Area II); Kscfh	113.4	100.1			
Emission factor (AP-42; Table 1.4-2; 10-100Mbtu/hr); Lb/Mscf	35	35			
TRU online CO, tons/yr.(23)	17.4	15.3			
TRU downtime CO, tons/yr.(24) (27)	252.1	29.7			
Process Offgas Oxidation Reaction CO, (tons/yr) (28)	104.1	134.8			
Adipic Fume sweep CO per AP42 factor, tons/yr.(25)	59.5	77.0			
Adipic acid refining CO, tons/yr.(26)	0.0	0.0	**Diff.**		
CO from Area 471 (600 lb/hr; 98+% destruction) (29)		52.6			
TOTAL CO emissions	**433.1**	**309.4**	**-123.7**		

Comments: Area II CO Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will					
comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
Footnotes:					
(23) TRU gas feed factor x TRU feed rate x Natural gas CO factor (35 lbs CO/M cu ft gas)					
(24) See calculation below, 850 MAR=Halcon off-gas 1995-97 CO emissions when TRU down					
	1995	1996	1997	Average	
Cyclohexane Oxidation Air Vented, M lb/yr	49.5	30.6	67.278		
Total Cyclohexane Oxidation Air Used, M lb/yr	514.9	562.8	620.6		
Cyclohexane Oxidation Venting, hours (Air Vented/Total Air x 8,000 hr)	769.08138	434.968	867.263938		
TRU Downtime, hours	636.1	225.3	589.9		
Cyclohexane venting due to TRU, percent	83%	52%	68%		
Total CO Vented, tons/yr (from AOR)	308.0	217.0	572.0		
CO Vented due to TRU Downtime, tons (% TRU down x CO vented)	254.7	112.4	389.1	252.1	
1100MAR case = TRU backup afterburner, 98+% CO abatement of Halcon CO only (185 X 0.02 = 3.7)					
Potential BTOP CO afterburner emissions offset of (185 - 3.7 = 181.3 tpy CO) for use in BTOP summary					
(25) AP-42 = 0.28 lb CO/ton adipic					
(26) AP-42 factor = 0					
(27) 1100MAR case = Backup afterburner, 90% capture and 98+% CO destruction of Halcon CO:					
252.1 x (1-0.90) + 252.1-25.1 * 0.02 = 29.75					
(28) Process offgas oxidation CO (tpy) = MAR /2000 * 0.49 (AP-Emission factor lb/ton adipic) /2000					
(29) CO emissions (TPY) = 600 lb/hr * 0.02 * 8760/2000 = 52.6 TPY					

AREA II NYLON INTERMEDIATES EMISSION ESTIMATION SUMMARY					
Pollutant	Actual	Potential	Net change	PSD level	PSD
NOx	844.1	447.5	-396.6	40	No
PM10	24.3	30.2	5.9	15	No
VOC	442.2	334.8	-107.4	40	No
CO	433.1	309.4	-123.7	100	No

Comments:

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparision purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.

Enclosure 4

Area 471 permit application and emissions spreadsheet update

12/18/98

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

Pollutant Detail Information:

1. Pollutant Emitted:
   H017
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 1.14 lb/hour 5.0 tons/year
4. Synthetically Limited?
   ☐ Yes ☒ No
5. Range of Estimated Fugitive/Other Emissions:
   ☐ 1 ☐ 2 ☐ 3 _____ to _____ tons/year
6. Emission Factor:
   Reference:
7. Emissions Method Code:
   ☐ 0 ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5
8. Calculation of Emissions (limit to 600 characters):
   VOC emission rate times expected HAP concentration.
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

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

Pollutant Detail Information:

1. Pollutant Emitted:
   H144
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 0.37 lb/hour 1.6 tons/year
4. Synthetically Limited?
   ☐ Yes ☒ No
5. Range of Estimated Fugitive/Other Emissions:
   ☐ 1 ☐ 2 ☐ 3 _____ to _____ tons/year
6. Emission Factor:
   Reference:
7. Emissions Method Code:
   ☐ 0 ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5
8. Calculation of Emissions (limit to 600 characters):
   VOC emission rate times expected HAP concentration.
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

AREA 471 EMISSION CALCULATION SPREADSHEETS - 12/18/98						
LIST OF TABLES AND LOCATIONS						
TABLE NUMBER	DESCRIPTION					
1	AREA 471 TRU OBUD					
2	AREA 471 FLARES					
3	AREA 471 COMBINED TOTAL EMISSIONS					
4	AREA II, 480, and 471 COMBINED TOTAL EMISSIONS					

Table 1: TRU ORGANICS BACK-UP DEVICE (OBUD) EMISSIONS					
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)		
Area 471 TRU Organics Back-up Device (OBUD) - Pilot fuel (1)					
Heat input rate total; MMBtu/hr ;hours/year	0.27		8760		
NOx factor, natural gas, Lb/Btu (4)	0.200	0.054	0.24		
Particulate factor, Natural gas, lb/MMBtu	0.015	0.004	0.02		
CO factor, Natural gas, lb/MMBtu	0.040	0.011	0.05		
VOC factor, Natural gas, lb/MMBtu	0.003	0.000	0.00007		
AREA 471 TRU Organics Back-up Device (OBUD) - Hot Standby (2)					
Heat input rate total; MMBtu/hr ;hours/year	18.75		8030		
NOx factor, natural gas, lb/MMBtu (4)	0.200	3.750	15.06		
Particulate factor, Natural gas, Lb/MMBtu	0.015	0.281	1.13		
CO factor, Natural gas, lb/MMBtu	0.040	0.750	3.01		
VOC factor, Natural gas, lb/MMBtu	0.003	0.001	0.004		
AREA 471 TRU Organics Back-up Device (OBUD) - Assist fuel (3)					
Heat input rate total; MMBtu/hr ;hours/year	187.5		730		
NOx factor, natural gas, lb/MMBtu (4)	0.200	37.500	13.69		
Particulate factor, Natural gas, lb/MMBtu	0.015	2.813	1.03		
CO factor, Natural gas, lb/MMBtu	0.040	7.500	2.74		
VOC factor, Natural gas, lb/MMBtu	0.003	0.010	0.004		
AREA 471 TRU Organics Back-up Device (OBUD) - Process gas					
Maximum Hours of Operation			730		
NOx converted from N20 (assume 15%) lb/hr	1815	272.250	99.37		
VOC destruction efficiency - 99%	0.01				
CO destruction efficiency - 98%	0.02				
CO from Area 471 (5)	600	12.000	0		
VOC from Area 471 (6)	300	3.000	0		
CO from Area I (7)	1404	28.080	0		
VOC from Area I (8)	926	9.260	0		
AREA 471 TRU-OBUD EMISSION TOTALS					
NOx Emissions	NA	313.55	128.35		
Particulate Emissions	NA	3.10	2.17		
CO Emissions (5)(6)(7)(8)	NA	48.34	5.80		
VOC Emissions (5)(6)(7)(8)	NA	12.27	0.01		

Comments: TRU Organics Backup Device (OBUD)

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.

(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.

Footnotes:

(1) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Commercial boilers (0.3 < 10 MMBtu/hr) uncontrolled (lb/MMCF) CO - 40, VOC - 5.8 * 48% . Natural gas 1000 Btu/scf.
Lb/MMBtu = lb/MMCF/Btu/scf. PM emission factor = 0.015 per similar stack tests.

(2) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Small industrial boilers (10-100 MMBtu/hr) uncontrolled (lb/MMCF) CO - (Conservative Estimate) 40, VOC - 5.8 * 48% .
Natural gas 1000 Btu/scf. Lb/MMBtu = lb/MMCF/Btu/scf . PM emission factor = 0.015 per similar stack tests.

(3) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 14-2, 14-3.
Large industrial boilers (> 100 MMBtu/hr) uncontrolled (lb/MMCF) CO - (conservative estimate) 40, VOC (conservative estimate) 5.8 * 48%.
Natural gas 1000 Btu/scf. Lb/MMBtu = lb/MMCF/Btu/scf . PM emission factor = 0.015 per similar stack tests.

(4) NOx emission factor determined from engineering estimate and design criteria.

(5) Area 471 process CO TPY emissions included in Area II TRU online estimates, because TRU calculation based on 8760 hours per year.

(6) Area 471 process VOC TPY emissions included in Area II TRU online estimates, because TRU calculation based on 8760 hours per year.

(7) Basis 1404 lb/hr per permit AC17-247476. TPY emissions accounted for in Area II TRU downtime CO.

(8) Basis 926 lb/hr per permit AC17-247476. TPY emissions accounted for in Area II TRU downtime VOC.

Table 2: AREA 471 FLARES AND VOC FUGITIVE EMISSIONS					
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)		
AREA 471 Pressure Relief Flare - Pilot fuel (1)					
Heat input rate total (MMBtu/hr) - Hours per year	0.27	NA	8760		
NOx factor, natural gas, lb/MMBtu (2)	0.200	0.054	0.237		
Particulate factor, Natural gas, lb/MMBtu	0.015	0.004	0.018		
CO factor, Natural gas, lb/MMBtu	0.021	0.006	0.025		
VOC factor, Natural gas, lb/MMBtu	0.003	0.001	0.003		
Raw Material Storage Tank Flare - Pilot fuel and assist fuel (1)					
Heat input rate total; MMBtu/hr;hours/year	0.54		8760		
NOx factor, natural gas, Lb/MMbtu (2)	0.200	0.108	0.473		
Particulate factor, Natural gas, lb/MMBtu	0.015	0.008	0.035		
CO factor, Natural gas, lb/MMBtu	0.021	0.011	0.050		
VOC factor, Natural gas, lb/MMBtu	0.003	0.00003	0.00013		
VOC destruction efficiency 98%+	0.020				
VOC from store material to flare (lb per hr)	3.00	0.008	0.037		
Product Storage Tank Flare - Pilot Fuel and assist fuel (1)					
Heat input rate total; MMBtu/hr;hours/year	0.54		8760		
NOx factor, natural gas, Lb/MMBtu (2)	0.200	0.108	0.473		
Particulate factor, Natural gas, Lb/MMBtu	0.015	0.008	0.035		
CO factor, Natural gas, Lb/MMBtu	0.021	0.011	0.050		
VOC factor, Natural gas, Lb/MMBtu	0.003	0.00001	0.0001		
VOC destruction efficiency 98%+	0.020				
VOC from store material to flare (lb per hr)	0.23	0.005	0.020		
VOC fugitive emissions (3)	na	0.9	3.8		

Comments: AREA 471 Flares and VOC Fugitive Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies					
will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions					
control performance requirements for this process from raw material handling, through chemical processing to product transfer					
operations. Solutia will conform to the applicable provisions of this regulation.					
Footnote:					
(1) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 1.4-2 and 1.4-3.					
Commercial boilers (0.3<10 MMBtu/hr) uncontrolled (lb/MMCF) CO-21, VOC - 5.8*(48%). Natural Gas 1000 Btu/scf.					
Lb/MMBtu = lb/MMCF /Btu/scf, PM emission factor = 0.015 per similar stack tests.					
(2) NOx emission factor determined from engineering estimate and design criteria.					
(3) Based on SARA 313 Fugitive Emission estimate for Area I Nylon Intermediates of 7600 lbs/yr.					
Emissions from start-up, shutdown and malfunction are not required in the PSD determination					

Table 3: COMBINED TOTAL AREA 471 EMISSIONS (TRU-OBUD, FLARES, VOC FUGITIVES)					
Source		Emission	Emission		
AREA 471 Total Emissions					
NOx		313.82	129.53		
Particulate		3.12	2.26		
CO (5)(6)(7)(8)		48.37	5.92		
VOC (5)(6)(7)(8)		12.29	3.87		
Comments: AREA 471 Total Emissions					
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design					
is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard					
to total emissions increases and offset reductions, as well as PSD/NSR determinations.					
(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations.					
The facility total emissions rates in tons per year are the environmental performance criteria.					
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply					
with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.					
(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance					
requirements for this process from raw material handling, through chemical processing to product transfer operations.					
Solutia will conform to the applicable provisions of this regulation.					
(5) Area 471 process CO TPY emissions included in Area II TRU online estimates, because TRU calculation					
based on 8760 hours per year.					
(6) Area 471 process VOC TPY emissions included in Area II TRU online estimates, because TRU calculation					
based on 8760 hours per year.					
(7) Basis 1404 lb/hr per permit AC17-247476. TPY emissions accounted for in Area II TRU downtime CO.					
(8) Basis 926 lb/hr per permit AC17-247476. TPY emissions accounted for in Area II TRU downtime VOC.					

Table 4: COMBINED TOTAL Emissions: AREA II;Area 480; Area 471; #2 Hydrogen plant

12/18/98

Pollutant	Area II (TPY)	Area 480 (TPY)	Area 471 (TPY)	#2 Hydrogen plant	Net (TPY)
NOx	-396.57	4.38	129.53	41.61	-221.04
Particulate, PM10	5.89	0.33	2.26	6.24	14.72
CO (1)	-123.68	0.46	5.92	25.38	-91.92
VOC (1)	-107.39	10.02	3.87	1.25	-92.26

Net Total Sitewide Emissions Change, (tons/year)	-390

Comments: Combined Total Emissions

(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.

(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.

Footnotes:

(1) Based on 90% capture of Area I offgas when TRU is down and 98% destruction of CO and 99% destruction of VOC in offgas captured by Area 471 OBUD.

12/18/98

Solutia, Pensacola Plant - Area 471 and 480 Construction Permit Applications
Ambient Air Dispersion Modeling and comparison to Florida Air Reference Concentrations for estimated benzene and phenol emissions

Golder Associates (Golder) performed dispersion modeling to evaluate the maximum potential impacts of the proposed production enhancements at the Solutia Pensacola facility. The impact evaluation focused on the potentially toxic air pollutants used or produced in the process; benzene and phenol. The Florida Department of Environmental Protection has developed a toxics permitting strategy that includes air reference concentrations (ARCs) for almost 800 potentially toxic chemical compounds. The ARCs were developed to represent a conservative basis for evaluating the impacts of potentially toxic pollutants. Predicted concentrations at or lower than the ARCs would protect public health from toxic effects of that pollutant and possible additive or synergistic effects from simultaneous exposures to multiple toxic air pollutants and other pathways.

The modeling was performed using the EPA and FDEP approved ISCST3 dispersion model that can estimate concentrations for various averaging times using hourly meteorological data. The meteorological data consisted of 5 years of hourly surface meteorology data from the National Weather Service station in Pensacola. Upper air data from the nearest station was also used. Maximum potential impacts were estimated for averaging times of 8-hour, 24-hour and annual periods over the 5 years of meteorological data. For example, the maximum 8-hour impacts represent the highest of 5,475 8-hour concentrations at any location beyond the boundary of the Solutia Plant. As shown on the attached table, the maximum impacts for benzene and phenol are less than the FDEP ARCs for benzene and phenol.

Maximum Impact of Benzene and Phenol Emissions
(All impacts in ug/m^3)

	Source	Averaging Time 8-hour	24-hour	Annual
Benzene:	All	3.686	1.429	0.098
FARC		30	7	0.12
% of FARC		12%	20%	82%
Phenol:		3.64	1.42	0.11
FARC		190	45	30
% of FARC		2%	3%	0%

FARC = Florida Air Reference Concentrations

Enclosure 5

Area 480 permit application and emissions spreadsheet update

12/18/98

Area 480, amended 12/17/98

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

Pollutant Detail Information:

1. Pollutant Emitted:
   H017
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 0.27 lb/hour 1.2 tons/year
4. Synthetically Limited?
   ☐ Yes ☒ No
5. Range of Estimated Fugitive/Other Emissions:
   ☐ 1 ☐ 2 ☐ 3 _____ to _____ tons/year
6. Emission Factor:
   Reference:
7. Emissions Method Code:
   ☐ 0 ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5
8. Calculation of Emissions (limit to 600 characters):
   VOC emission rate times expected HAP concentration.
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

Area 480, amended 12/17/98

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

Pollutant Detail Information:

1. Pollutant Emitted:
   H144
2. Total Percent Efficiency of Control: %
3. Potential Emissions: 0.17 lb/hour / 0.7 tons/year
4. Synthetically Limited?
   ☐ Yes ☒ No
5. Range of Estimated Fugitive/Other Emissions:
   ☐ 1 ☐ 2 ☐ 3 _____ to _____ tons/year
6. Emission Factor:
   Reference:
7. Emissions Method Code:
   ☐ 0 ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5
8. Calculation of Emissions (limit to 600 characters):
   VOC emission rate times expected HAP concentration.
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

12/18/98						
AREA 480 FLARE AND VOC FUGITIVE EMISSIONS						
Source	Calculation Basis	Emission Rate (Lb/hr)	Emission Rate (Tons/yr)			
Area 480 Flare - Pilot fuel and assist fuel (1)						
Heat input rate total; MMBtu/hr;hours/year	5		8760			
NOx factor, natural gas, Lb/MMbtu (2)	0.200	1.000	4.38			
Particulate factor, Natural gas, lb/MMBtu	0.015	0.075	0.33			
CO factor, Natural gas, lb/MMBtu	0.021	0.105	0.46			
VOC factor, Natural gas, lb/MMBtu	0.003	0.014	0.06			
VOC destruction efficiency 98%+	0.020					
VOC from Area 480 to flare (lb per hr)	100.00	2.000	8.76			
Total VOC from Area 480 control device		2.014	8.82			
VOC fugitive emissions (3)		0.3	1.20			
Total VOC emissions		2.314	10.02			
Comments: AREA 480 Flare(s) and VOC Fugitive Emissions						
(a) Information pertaining to individual spreadsheets line items are estimates only and as the process detailed design is performed, values may shift positively or negatively. However, area wide totals are considered accurate with regard to total emissions increases and offset reductions, as well as PSD/NSR determinations.						
(b) Hourly estimates are shown for comparison purposes only and are not meant to specify actual short term performance limitations. The facility total emissions rates in tons per year are the environmental performance criteria.						
(c) Emission Rates in tons per year are presented as the emissions performance criteria. Actual control equipment efficiencies will comply with the applicable requirements of the HON Rule or NSPS or that necessary to achieve the ton per year criteria.						
(d) This process is regulated by the HON, 40 CFR Part 63, Subparts F, G and H. This regulation specifies emissions control performance requirements for this process from raw material handling, through chemical processing to product transfer operations. Solutia will conform to the applicable provisions of this regulation.						
Footnote:						
(1) Emission factors for natural gas combustion obtained from EPA AP-42 Tables 1.4-1, 1.4-2 and 1.4-3.						
Commercial boilers (0.3<10 MMBtu/hr) uncontrolled (lb/MMCF) CO-21, VOC - 5.8*(48%). Natural Gas 1000 Btu/scf.						
Lb/MMBtu = lb/MMCF /Btu/scf, PM emission factor = 0.015 per similar stack tests.						
(2) NOx emission factor determined from engineering estimate and design criteria.						
(3) Based on SARA 313 Fugitive Emission estimate for Area I Nylon Intermediates of 7600 lbs/yr.						
Emissions from start-up, shutdown and malfunction are not required in the PSD determination						

12/18/98

Solutia, Pensacola Plant - Area 471 and 480 Construction Permit Applications
Ambient Air Dispersion Modeling and comparison to Florida Air Reference Concentrations for estimated benzene and phenol emissions

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The modeling was performed using the EPA and FDEP approved ISCST3 dispersion model that can estimate concentrations for various averaging times using hourly meteorological data. The meteorological data consisted of 5 years of hourly surface meteorology data from the National Weather Service station in Pensacola. Upper air data from the nearest station was also used. Maximum potential impacts were estimated for averaging times of 8-hour, 24-hour and annual periods over the 5 years of meteorological data. For example, the maximum 8-hour impacts represent the highest of 5,475 8-hour concentrations at any location beyond the boundary of the Solutia Plant. As shown on the attached table, the maximum impacts for benzene and phenol are less than the FDEP ARCs for benzene and phenol.

Maximum Impact of Benzene and Phenol Emissions
(All impacts in ug/m^3)

	Source	Averaging Time 8-hour	24-hour	Annual
Benzene:	All	3.686	1.429	0.098
FARC		30	7	0.12
% of FARC		12%	20%	82%
Phenol:		3.64	1.42	0.11
FARC		190	45	30
% of FARC		2%	3%	0%

FARC = Florida Air Reference Concentrations

Enclosure 6

#2 Hydrogen Generation construction permit application

12/18/98

FLORIDA DEP LOGO

246785

Department of Environmental Protection

AC17-D330040-013

DIVISION OF AIR RESOURCES MANAGEMENT

RECEIVED

DEC 21 1998

Northwest Florida DEP

APPLICATION FOR AIR PERMIT - LONG FORM

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and the professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: Solutia Inc.	
2. Site Name: Pensacola Plant	
3. Facility Identification Number: 0330040	☐ Unknown
4. Facility Location: Street Address or Other Locator: 3000 Old Chemstrand Road; City: Cantonment; County: Escambia; Zip Code: 32533	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Permitted Facility? ☐ Yes ☒ No

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Owner/Authorized Representative or Responsible Official

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

Mr. J. C. Ochsner, Site Manager

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

Organization/Firm: Solutia Inc.

Street Address: P.O. Box 97

City: Gonzalez State: Fl Zip Code: 32560-0097

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

Telephone: (850) 968-7000 Fax: (850) 968-7869

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 unit 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 unit.*

John S. Wiley for Joe C. Ochsner 12/18/98

Signature Date

* Attach letter of authorization if not currently on file.

Scope of Application

This application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID	Description of Emissions Unit	Permit Type
1	#2 Hydrogen Generation Unit	AC1C

Purpose of Application and Category

Check one (except as otherwise indicated):

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 air construction permit application. Also check Category III.

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. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

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. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

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: See Title V Applic.for facility permits

☐ 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: $ 4,500 ☐ Not Applicable.

Construction /Modification Information

1. Description of Proposed Project or Alterations:
#2 Hydrogen Generation Unit. Phased construction of a hydrogen generation unit to supply additional hydrogen to support increased nylon intermediates production. Construction completion if all phases will be complete within 5 years of permit receipt.

2. Projected or Actual Date of Commencement of Construction:
Commencement of construction within 12 months of permit receipt.

3. Projected Date of Completion of Construction:
Completion of construction within 5 years of permit receipt.

Professional Engineer Certification

1. Professional Engineer Name: Mr. Bruce P. McLeod
Registration Number: 26956

2. Professional Engineer Mailing Address:
Organization/Firm: Solutia Inc.
Street Address: P.O. Box 97
City: Gonzalez State: FL Zip Code: 32560-0097

3. Professional Engineer Telephone Numbers:
Telephone: (850) 968-8725 Fax: (850) 968-7869

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 pollution 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 unit 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.

B. P. McLEOD CERTIFICATE #26956 STATE OF FLORIDA REGISTERED ENGINEER (seal)

Bruce P. McLeod, 26956
Signature

12/18/98
Date

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:
Mr. Bruce P. McLeod, Fellow Envir. Program Management

2. Application Contact Mailing Address:

Organization/Firm: Solutia Inc.

Street Address: P.O. Box 97

City: Gonzalez State: FL Zip Code: 32560-0097

3. Application Contact Telephone Numbers:

Telephone: (850) 968-8725 Fax: (850) 968-7869

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates:

   Zone: 16 East (km): 476 North (km): 3385

2. Facility Latitude/Longitude:

   Latitude (DD/MM/SS): 30/35/56 Longitude (DD/MM/SS): 87/15/1

3. Governmental Facility Code:	4. Facility Status Code:	5. Facility Major Group SIC Code:	6. Facility SIC(s):
0	A	28	2869

7. Facility Comment (limit to 500 characters):

Facility Contact

1. Name and Title of Facility Contact:
   Mr. John Wiley, Team Leader, Env. Health & Safety

2. Facility Contact Mailing Address:

   Organization/Firm: Solutia Inc.

   Street Address: P.O. Box 97

   City: Gonzalez State: FL Zip Code: 32560-0097

3. Facility Contact Telephone Numbers:

   Telephone: (850) 968-7582 Fax: (850) 968-7869

Facility Regulatory Classifications

1. Small Business Stationary Source?			
☐ Yes	☒ No	☐ Unknown	
2. Title V Source?			
☒ Yes	☐ No		
3. Synthetic Non-Title V Source?			
☐ Yes	☒ No		
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?			
☒ Yes	☐ No		
5. Synthetic Minor Source of Pollutants Other than HAPs?			
☐ Yes	☒ No		
6. Major Source of Hazardous Air Pollutants (HAPs)?			
☒ Yes	☐ No		
7. Synthetic Minor Source of HAPs?			
☐ Yes	☒ No		
8. One or More Emissions Units Subject to NSPS?			
☒ Yes	☐ No		
9. One or More Emission Units Subject to NESHAP?			
☒ Yes	☐ No		
10. Title V source by EPA Designation?			
☐ Yes	☒ No		
11. Facility Regulatory Classifications Comment (limit to 200 characters):			

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See attachment SO-FI-B	

ATTACHMENT SO-FI-B

Regulatory Applicability

FACILITY APPLICABLE REQUIREMENTS

Chapter 4 Permits	
62-4.030	General Prohibition.
62-4.100	Suspensions and Revocation.
62-4.130	Plant Operations - Problems.

Chapter 210 Stationary Sources – General Requirements	
62-210.300	Permits Required.
	(2) Air Operation Permits
	(a) Minimum Requirements for All Air Operation Permits
	(5) Notification of Startup.
62-210.370	Reports.
	(3) Annual Operating Report for Air Pollutant Emitting Facility.
62-210.550	Stack Height Policy
62-210-650	Circumvention
62-210.900	Forms and Instructions

Chapter 213 Operation Permits for Major Sources of Air Pollution	
62-213.205	Annual Operation Licensing Fee.
62-213.400	Permits and Permit Revisions Required.
62-213.410	Changes Without Permit Revision.
62-213.460	Permit Shield.

Chapter 257 Asbestos Removal	
62-257.301	Notification Procedure and Fee.
62-257.350	National Emission Standard for Asbestos.
62-257.400	Fee Schedule.
62-257.401	Enforcement.
62-257.900	Form (1).

FACILITY APPLICABLE REQUIREMENTS

EPA Part 61 - National Emission Standard for Hazardous Air Pollutants.	
Subpart M - National Emission Standard for Asbestos.	
61.145	Standard for demolition and renovation.
61.146	Standard for spraying.
61.148	Standard for insulating materials.
61.149	Standard for waste disposal for asbestos mills; (d) (1)
61.150	Standard for waste disposal for manufacturing, fabricating, demolition, renovation,and spraying operations.
61.152	Air-cleaning.
61.153	Reporting.

EPA Part 82 - Protection Of Stratospheric Ozone	
Subpart C - Ban on Non-Essential Products--Manufactured with Class I Products	
82.66	Non-essential Class I products and exemptions (d)(2)(viii)
Subpart F - Recycling and Emissions Reduction	
82.154	Prohibition.
82.156	Required practices.
82.158	Standards for recycling and recovery equipment
82.162	Certification by owners of recovery and recycling equipment
82.166	Reporting and recordkeeping requirements; (k) and (m)
82.66	Circumvention; (d) (2) (viii)
82.70	HCFC exemption; (a) (2) (v)

Title V Core List Effective:03/25/97

[Note: The Title V Core List is intended to simplify the completion of the "List of Applicable Regulations" that apply facility-wide (see Subsection II.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List. Requirements that apply to emissions units must be identified in Subsection III.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. Applicants must identify all "applicable requirements" in order to claim the "permit shield" described at Rule 62-213.460, F.A.C.]

Federal:

40 CFR 61: National Emission Standards for Hazardous Air Pollutants (NESHAP)
40 CFR 61, Subpart M: NESHAP for Asbestos.
40 CFR 64; Compliance Assurance Monitoring
40 CFR 82: Protection of Stratospheric Ozone.
40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).
40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State:

CHAPTER 62-4, F.A.C.: PERMITS, effective 10-16-95

62-4.030, F.A.C.: General Prohibition.
62-4.040, F.A.C.: Exemptions.
62-4.050, F.A.C.: Procedure to Obtain Permits; Application
62-4.060, F.A.C.: Consultation.
62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.
62-4.080, F.A.C.: Modification of Permit Conditions.
62-4.090, F.A.C.: Renewals.
62-4.100, F.A.C.: Suspension and Revocation.
62-4.110, F.A.C.: Financial Responsibility.
62-4.120, F.A.C.: Transfer of Permits.
62-4.130, F.A.C.: Plant Operation - Problems.
62-4.150, F.A.C.: Review
62-4.160, F.A.C.: Permit Conditions.
62-4.210, F.A.C.: Construction Permits.
62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-103, F.A.C.: RULES OF ADMINISTRATIVE PROCEDURE, effective 12-31-95

62-103.150, F.A.C.: Public Notice of Application and Proposed Agency Action.
62-103.155, F.A.C.: Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 03-21-96

62-210.300, F.A.C.: Permits Required.
62-210.300(1), F.A.C.: Air Construction Permits.
62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.
62-210.300(3)(a), F.A.C.: Full Exemptions.
62-210.300(3)(b), F.A.C.: Temporary Exemption.

62-210.300(5), F.A.C.: Notification of Startup.
62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.350, F.A.C.: Public Notice and Comment.
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.

62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.

62-210.650, F.A.C.: Circumvention.

62-210.900, F.A.C.: Forms and Instructions.
62-210.900(1) Application for Air Permit - Long Form, Form and Instructions.
62-210.900(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 03-20-96

62-213.205, F.A.C.: Annual Emissions Fee.
62-213.400, F.A.C.: Permits and Permit Revisions Required.
62-213.410, F.A.C.: Changes Without Permit Revision.
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
62-213.420, F.A.C.: Permit Applications.
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
62-213.440, F.A.C.: Permit Content.
62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.
62-213.900(1) Major Air Pollution Source Annual Emissions Fee Form, Form and Instructions.

CHAPTER 62-256, F.A.C.: OPEN BURNING AND FROST PROTECTION FIRES, effective 11-30-94

CHAPTER 62-257, F.A.C: ASBESTOS NOTIFICATION AND FEE, effective 03/24/96

CHAPTER 62-281, F.A.C: MOTOR VEHICLE AIR CONDITIONING REFRIGERANT RECOVERY AND RECYCLING, effective 03-07-96

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-13-96

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.
62-296.320(3), F.A.C.: Industrial, Commercial, and Municipal Open Burning Prohibited
62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter

n:\t5permit\canned\core.lst

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Detail Information: Pollutant _____ of _____

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hour)	(tons/year)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

Facility Pollutant Detail Information: Pollutant _____ of _____

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hour)	(tons/year)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for Applications:

1. Area Map Showing Facility Location:			
☒ Attached, Document ID: SO-FL-E1	☐ Not Applicable	☐ Waiver Requested
2. Facility Plot Plan:			
☒ Attached, Document ID: SO-FL-E2	☐ Not Applicable	☐ Waiver Requested
3. Process Flow Diagram(s):			
☐ Attached, Document ID: _____	☒ Not Applicable	☐ Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter:			
☐ Attached, Document ID: _____	☒ Not Applicable	☐ Waiver Requested
5. Fugitive Emissions Identification:			
☐ Attached, Document ID: _____	☒ Not Applicable	☐ Waiver Requested
6. Supplemental Information for Construction Permit Application:			
☐ Attached, Document ID: _____	☒ Not Applicable	

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities:		
☐ Attached, Document ID: _____	☐ Not Applicable	
8. List of Equipment/Activities Regulated under Title VI:		
☐ Attached, Document ID: _____		
☐ Equipment/Activities On site but Not Required to be Individually Listed		
☐ Not Applicable		
9. Alternative Methods of Operation:		
☐ Attached, Document ID: _____	☐ Not Applicable	
10. Alternative Modes of Operation (Emissions Trading):		
☐ Attached, Document ID: _____	☐ Not Applicable	

11. Identification of Additional Requirements:

☐ Attached, Document ID: _____ ☐ Not Applicable

12. Compliance Assurance Monitoring Plan:

☐ Attached, Document ID: _____ ☐ Not Applicable

13. Risk Management Plan Verification:

☐ Plan Submitted to Implementing Agency - Verification Attached, Document ID:_____

☐ Plan to be Submitted to Implementing Agency by Required Date

☐ Not Applicable

14. Compliance Report and Plan:

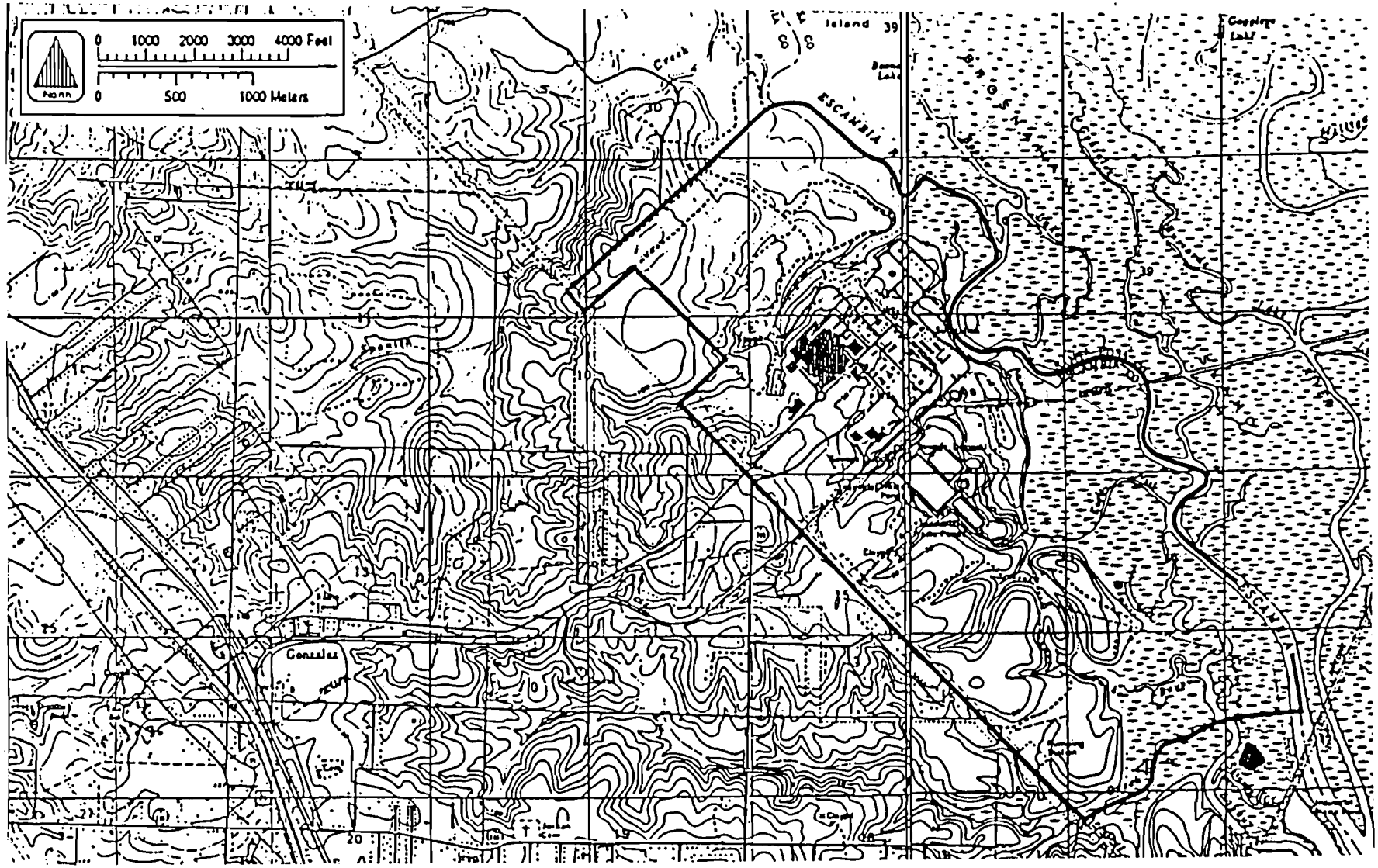
☐ Attached, Document ID: _____ ☐ Not Applicable

15. Compliance Certification (Hard-copy Required):

☐ Attached, Document ID: _____ ☐ Not Applicable

ATTACHMENT SO-FI-E1

Area map



Attachment SO-FI-E2
Facility Plot Plan

Solutia, Inc. - Pensacola, Florida

Drawing: PLOTP1.VSD

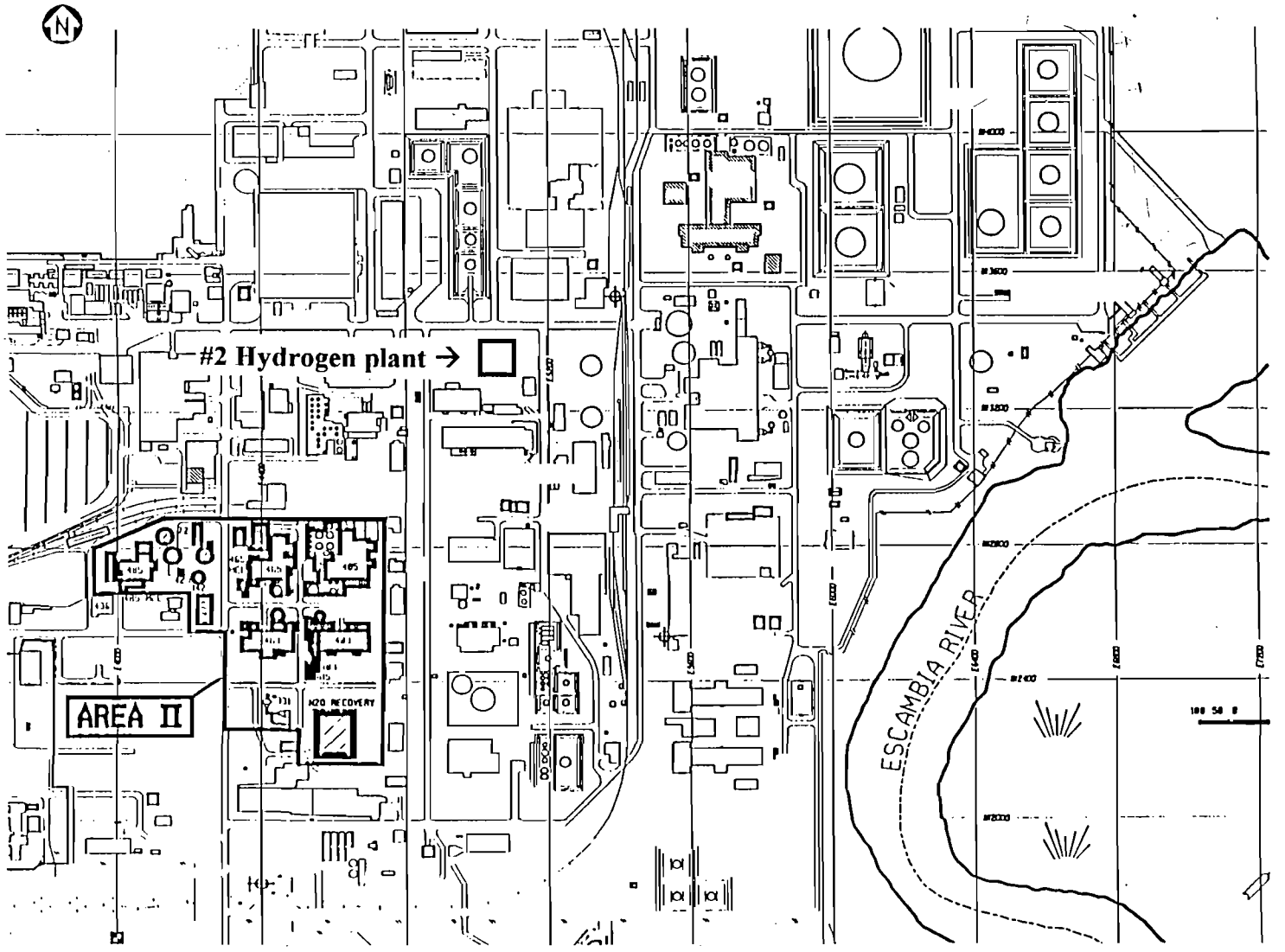
Project #: 9837535Y/F2/BLANKS.VSD

Date: 06/10/98

Golder Associates

ATTACHMENT SO-FI-E2

Facility Plot Plan



Attachment SO-FI-E1
Site Area Map

Solutia, Inc. - Pensacola, Florida

Drawing: SITEMAP1.VSD

Project #: 9837535Y/F2/BLANKS.VSD

Date: 06/10/98

Golder Associates

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Information Sections submitted as part of this as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

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

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

☐ 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 Process, 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.

☐ 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.

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

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
#2 Hydrogen Generation Unit

2. Emissions Unit Identification Number: [X] No Corresponding ID [ ] Unknown

3. Emissions Unit Status Code:	4. Acid Rain Unit?	5. Emissions Unit Major Group SIC Code:
C	[ ] Yes [X] No	28

6. Emissions Unit Comment (limit to 500 characters):
A production unit to supply additional hydrogen to support additional nylon intermediates production.

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters):
Low NOx burners with natural gas fuel.

2. Control Device or Method Code:
024

B.

1. Description (limit to 200 characters):
Lox NOx burners with natural gas fuel.
2. Control Device or Method Code:
024

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

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

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:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		120 mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate: 10M SCFD Hydrogen (long term average)		
5. Operating Capacity Comment (limit to 200 characters): Annual average heat input rate equals 95M Btu/hour.		

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)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

See Attachment SO-FI-B	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:

   #2 Hydrogen Generation Unit Reformer Furnance

2. Emission Point Type Code:

   [x] 1 [ ] 2 [ ] 3 [ ] 4

3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

#2 Hydrogen Generation Reformer Furnace

4. ID Numbers or Descriptions of Emissions Units with this Emission Point in Common:

5. Discharge Type Code:

   [ ] D [ ] F [ ] H [ ] P
   [ ] R [x] V [ ] W

6. Stack Height: 60 feet

7. Exit Diameter: 2-4 feet

8. Exit Temperature: 250-500 °F

9.	Actual Volumetric Flow Rate:	40000-60000 acfm
10.	Percent Water Vapor:	15-30 %
11.	Maximum Dry Standard Flow Rate:	dscfm
12.	Nonstack Emission Point Height:	feet
13.	Emission Point UTM Coordinates:	
	Zone: East (km):	North (km):
14.	Emission Point Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

Heat input for #2 Hydrogen reformer furnance - natural gas

2. Source Classification Code (SCC):

3-01-900-03

3. SCC Units:

million cubic feet burned

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
0.13	1133

6. Estimated Annual Activity Factor:

na

7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
na	na

9. Million Btu per SCC Unit:

1040 MBtu/M cu ft

10. Segment Comment (limit to 200 characters):

Field 9 can range 960-1090 MBtu/Mcuft.
Fields 4 and 5 based upon 120 MBtu/hr reformer furnace heat input.

Emissions Unit Information Section 1 **of** 1

Segment Description and Rate: Segment 2 of 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

Heat input for #2 Hydrogen Generation reformer furnace - purge gas

2. Source Classification Code (SCC):

3-01-900-04

3. SCC Units:

million cubic feet burned

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
0.43	3733

6. Estimated Annual Activity Factor:

na

7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
na	na

9. Million Btu per SCC Unit:

280 MBtu/Mcu ft

10. Segment Comment (limit to 200 characters):

Fields 4 and 5 are based upon 120 MBtu/hr reformer furnace heat input. Under expected operating conditions purge gas is not expected to supply the total fuel to the reformer furnace.

Emissions Unit Information Section 1 of 1

Segment Description and Rate: Segment 3 of 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

Heat input for #2 Hydrogen Generation reformer furnace - ethane rich gas

2. Source Classification Code (SCC):

3-01-900-99

3. SCC Units:

million cubic feet burned

4. Maximum Hourly Rate:	5. Maximum Annual Rate:
0.12	1067

6. Estimated Annual Activity Factor:

na

7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
na	na

9. Million Btu per SCC Unit:

1420 MBtu/Mcu ft

10. Segment Comment (limit to 200 characters):

Field 9 can range from 100-1450 MBtu/Mcu ft.
Fields 4 and 5 are based upon 120 MBtu/hr.

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

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
NOX	024	NA	NS
PM	NA	NA	NS
VOC	NA	NA	NS
CO	NA	NA	NS

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

Pollutant Detail Information:

1. Pollutant Emitted:

NOx

2. Total Percent Efficiency of Control: %

3. Potential Emissions: lb/hour 41.6 tons/year

4. Synthetically Limited?

☐ Yes ☒ No

5. Range of Estimated Fugitive/Other Emissions:

☐ 1 ☐ 2 ☐ 3 _____ to _____ tons/year

6. Emission Factor:

Reference:

7. Emissions Method Code:

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5

8. Calculation of Emissions (limit to 600 characters):

See attachment SO-E01-L8 for calculation methodology.

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

NOX emissions generated from reformer furnace combustion exhaust.

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

Pollutant Detail Information:

1. Pollutant Emitted:

PM

2. Total Percent Efficiency of Control: %

3. Potential Emissions: lb/hour 6.2 tons/year

4. Synthetically Limited?

☐ Yes ☒ No

5. Range of Estimated Fugitive/Other Emissions:

☐ 1 ☐ 2 ☐ 3 _____ to _____ tons/year

6. Emission Factor:

Reference:

7. Emissions Method Code:

☐ 0 ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5

8. Calculation of Emissions (limit to 600 characters):

See attachment SO-E01-L8 for calculation methodology.

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

PM emissions generated from reformer furnace combustion exhaust.

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

Pollutant Detail Information:

1. Pollutant Emitted:
VOC

2. Total Percent Efficiency of Control: %

3. Potential Emissions: lb/hour 1.2 tons/year

4. Synthetically Limited?
☐ Yes ☒ No

5. Range of Estimated Fugitive/Other Emissions:
☐ 1 ☐ 2 ☐ 3 _____ to _____ tons/year

6. Emission Factor:
Reference:

7. Emissions Method Code:
☐ 0 ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☒ 5

8. Calculation of Emissions (limit to 600 characters):
See attachment SO-E01-L8 for calculation methodology.

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):
VOC emissions generated from reformer furnace combustion exhaust.

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

Pollutant Detail Information:

1. Pollutant Emitted:

CO

2. Total Percent Efficiency of Control: %

3. Potential Emissions: lb/hour 25.4 tons/year

4. Synthetically Limited?

☐ Yes ☒ No

5. Range of Estimated Fugitive/Other Emissions:

☐ 1 ☐ 2 ☐ 3 _____ to _____ tons/year

6. Emission Factor:

Reference:

7. Emissions Method Code:

☐ 0 ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☒ 5

8. Calculation of Emissions (limit to 600 characters):

See attachment SO-E01-L8 for calculation methodology.

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

CO emissions generated from reformer furnace combustion exhaust.

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype:
VE20

2. Basis for Allowable Opacity: ☐ Rule ☒ Other

3. Requested Allowable Opacity:
Normal Conditions: 20 % Exceptional Conditions: %
Maximum Period of Excess Opacity Allowed: min/hour

4. Method of Compliance: EPA Method 9

5. Visible Emissions Comment (limit to 200 characters):
General visible emission standard per 62-296.320(4)(b).

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype:
VE99

2. Basis for Allowable Opacity: ☒ Rule ☐ Other

3. Requested Allowable Opacity:
Normal Conditions: % Exceptional Conditions: 100 %
Maximum Period of Excess Opacity Allowed: 60 min/hour

4. Method of Compliance: EPA Method 9

5. Visible Emissions Comment (limit to 200 characters):
Exceptional conditions per 62-210.700 for start-up, shutdown and malfunctions (2 hrs per 24 hr period).

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor_____ of_____

1. Parameter Code: NA	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor_____ of_____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip the remaining statements.

☐ 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 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 Dioxide?

If the emissions unit addressed in this section emits nitrous oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

☐ 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, 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.

3. Increment Consuming/Expanding Code:

PM	☐ C	☐ E	☒ Unknown
SO_2	☐ C	☐ E	☒ Unknown
NO_2	☐ C	☐ E	☒ Unknown

4. Baseline Emissions:

PM	lb/hour	tons/year
SO_2	lb/hour	tons/year
NO_2		tons/year

5. PSD Comment (limit to 200 characters):

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram		Similar to existing H2 plant, AC17-271831.	
☐ Attached, Document ID: _____	☒ Not Applicable		☐ Waiver Requested
2. Fuel Analysis or Specification			
☐ Attached, Document ID: _____	☒ Not Applicable		☐ Waiver Requested
3. Detailed Description of Control Equipment			
☐ Attached, Document ID: _____	☒ Not Applicable		☐ Waiver Requested
4. Description of Stack Sampling Facilities		Will conform to DEP requirements.	
☐ Attached, Document ID: _____	☐ Not Applicable		☒ Waiver Requested
5. Compliance Test Report			
☐ Attached, Document ID: _____			
☐ Previously submitted, Date: _____			
☒ Not Applicable			
6. Procedures for Startup and Shutdown			
☒ Attached, Document ID: SO-E01-L6	☐ Not Applicable		
7. Operation and Maintenance Plan			
☒ Attached, Document ID: SO-E01-L7	☐ Not Applicable		
8. Supplemental Information for Construction Permit Application			
☒ Attached, Document ID: SO-E01-L8	☐ Not Applicable		
9. Other Information Required by Rule or Statute			
☐ Attached, Document ID: _____	☐ Not Applicable		

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation

☐ Attached, Document ID: _____ ☐ Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

☐ Attached, Document ID: _____ ☐ Not Applicable

12. Identification of Additional Applicable Requirements

☐ Attached, Document ID: _____ ☐ Not Applicable

13. Compliance Assurance Monitoring Plan

☐ Attached, Document ID: _____ ☐ Not Applicable

14. Acid Rain Application (Hard-copy Required)

☐ Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

☐ Not Applicable

ATTACHMENT SO-E01-L6

Procedures for Start-up and Shutdown

PROCEDURES FOR STARTUP AND SHUTDOWN

Solutia, Inc. assures that best management practices are employed during startup and shutdown by the use of Specific Practice Instructions (SPIs) and Operating Instructions (OIs). These document are developed and maintained in a computerized document management system for each manufacturing operation at the Pensacola Plant. This document management system assures that the information is available to operations and maintenance personnel as needed. The documents are also available for Department inspection upon request.

The SPIs are written to facilitate safe and efficient startup and shutdown. They detail the sequence and timing of all operational steps to accomplish the intended action. The OIs establish optimum operating ranges, including process operations affecting control of environmental compliance.

ATTACHMENT SO-E01-L7

Operation and Maintenance Plan

OPERATION AND MAINTENANCE PLANS

Solutia, Inc. assures that best management practices are employed during operation and maintenance by the use of Specific Practice Instructions (SPIs) and Operating Instructions (OIs). These document are developed and maintained in a computerized document management system for each manufacturing operation at the Pensacola Plant. This document management system assures that the information is available to operations and maintenance personnel as needed. The documents are also available for Department inspection upon request.

The SPIs are written to facilitate safe and efficient operation and maintenance. They detail the sequence and timing of all operational steps to accomplish the intended action. The OIs establish optimum operating ranges, including process operations affecting control of environmental compliance.

Attachment SO-E01-L8

Emission Calculation Methodology

#2 H2 Plant
Solutia Inc.
Pensacola Plant

12/18/98						
#2 Hydrogen Plant	Calculation Basis	Emission rate, Lb/hr	Emission rate, tons/yr			
Natural gas emissions:						
Heat input rate, average M btu/hr (1)	95.0	na	na			
NOx factor, Lb/Mbtu (2)	0.100	11.400	41.610			
PM10, Lb/Mbtu (3)	0.015	1.710	6.242			
CO factor, Lb/Mbtu (4)	0.061	6.954	25.382			
VOC, fuel factor, lb/Mbtu (5)(6)	0.003	0.342	1.248			
Comments:						
(1) 95 Mbtu/hr heat annual average heat input; Instantaneous 120% of average rate						
(2) Based on low Nox burners						
(3) 0.015 lb/Mbtu used for particulates per comparable stack testing						
(4) (5) Based on AP-42, Table 1.4-1,2,3 Small Industrial boilers, 10-100M Btu/hr						
(6) Non methane Voc = 48% of total VOC = 0.003 lb/Mbtu						
Emissions from start-up, shutdown and malfunction are not required in the PSD determination						