

July 21, 2003

Bruce Mitchell
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road MD 5500
Tallahassee, Florida 32399-2400

**Subject: International Paper Pensacola Mill - Mill Viability Project Phase II PSD
Application Submittal** PSD-FL-335
0330042-008-AC

Dear Mr. Mitchell:

Enclosed are five (5) copies of the Phase II PSD Application for the Mill Viability Project at International Paper Company's (IP's) Pensacola Florida Mill. This permit application is a follow-up to the discussions that we had with you and other Florida Department of Environmental Protection (DEP) staff in December, 2002. This application also takes into account the information presented in the IP April, 2003 Phase I submittal. The permit application addresses the Mill's plans for a multi-year project to upgrade the waste water treatment system and install a pipeline to future wetlands at the head of the Perdido Bay. In support of this project, the Mill will need to produce an additional 150 air dried bleach tons of slush pulp per day (ADBTP/day) to maintain the viability of the Mill.

Please forward three (3) copies of the application to Mr. Cleve Holladay of your office. IP requests that Mr. Holladay forward a copy to Mr. Stan Krivo of the United States Environmental Protection Agency (EPA) Region IV office and forward a copy to the Federal Land Manager, Mr. Bud Rolofson, who is responsible for the Breton Wilderness Area. IP has provided a copy of the application to Mr. Rick Bradburn of the Northwest District of the DEP. IP will submit the requisite application fee under a separate submittal, directly from the Pensacola Mill.

Mr. Jim Spahr from the Pensacola Mill will contact you within the next several days to discuss the permit application and to arrange a time that is mutually agreeable to review the application in detail. Thank you in advance for your continued support and guidance as IP pursues this very important project.

Sincerely,
All4 Inc.



William V. Straub, PE
Principal Consultant

cc: Jim Spahr – International Paper
Glenn Rives – International Paper
Cleve Holladay – Florida DEP
Rick Bradburn – Florida DEP
Stan Krivo – EPA Region IV
Bud Rolofson – Breton Wilderness Area
John Egan – All4



MEMORANDUM

To:	Bruce Mitchell	Date:	July 31, 2003
From:	Bill Straub <i>WS</i>		
Subject:	PE Sealed Pages for the IP Pensacola Mill Viability Project Air Construction Permit – Phase II PSD Application		
cc:			

Enclosed are five (5) copies of the Professional Engineer Statement page and the attached exception page. All of the copies have been sealed. I apologize for any confusion. Please give me a call if you have any questions at 610.933.5246 x 12.

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AUG 01 2003

BUREAU OF AIR REGULATION

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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.

[Handwritten Signature]

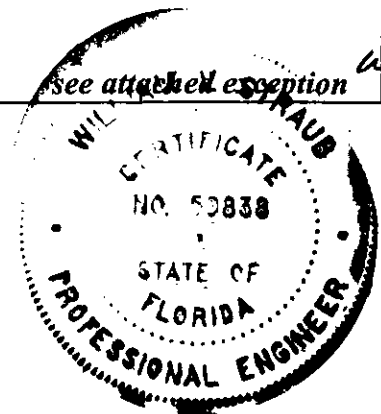
Signature

7/21/03

Date

(seal)


* Attach any exception to certification statement.



As an independent professional engineer and air quality consultant, my responsibilities with this project included the following:

- review and recommendation of air pollution control strategy;
- qualification and quantification of emissions of regulated air pollutants;
- identification of permitting approach; and
- development of the PSD permit application.

IP engineering personnel and emission unit/air pollution control device vendors have lead the design and engineering modifications to the emissions units and associated air pollution control equipment. IP staff are not under my direct supervision. I reviewed the data to the extent that it relates to applicable air quality regulatory and permitting requirements and found it to be in conformity with sound engineering principles applicable to the control of emissions of air pollutants.



Signature

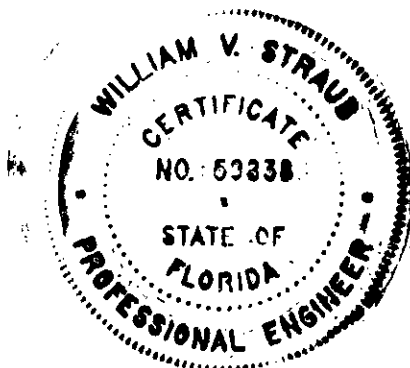
7/21/03

Date

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INTERNATIONAL  PAPER

PENSACOLA MILL
375 MUSCOGEE ROAD
PO BOX 87
CANTONMENT FL 32533-0087
PHONE 850 968 2121

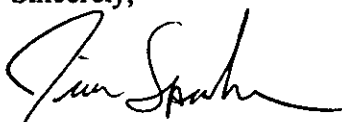
July 31, 2003

**Bruce Mitchell
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400**

Enclosed is check number 1802901296 for \$7,500.00 to cover Air Permit Application Fee for Air Permit Application filed on July 21, 2003.

If you have any questions, please contact me at (850) 968-2121 extension 3833.

Sincerely,



**Jim Spahr
Environmental Engineer
International Paper
Pensacola Mill**

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BUREAU OF AIR REGULATION

Enclosure

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BUREAU OF AIR REGULATION

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[Handwritten Signature]

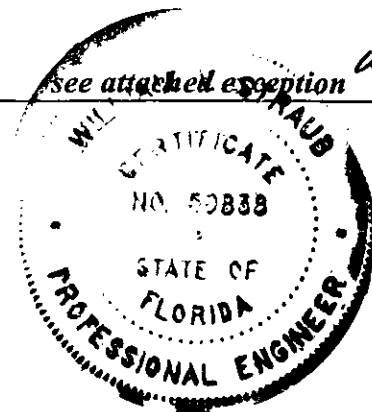
Signature

7/21/03

Date

(seal)

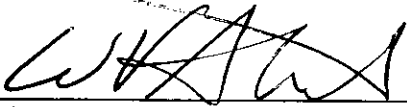
* Attach any exception to certification statement.



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Signature

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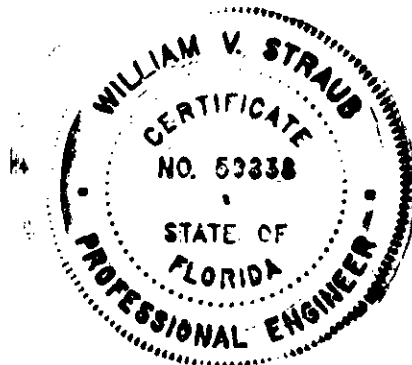


Table D-2
Local SO_x Sources
Meeting 20D Criteria

FACILITY ID	OWNER/COMPANY	SITE NAME	NORTH (km)	EAST (km)	EU ID	EU DESCRIPTION	EU STATUS	STACK HT (ft)	DIAM (ft)	EXIT TEMP (F)	ACFM	DSCFM	VEL (ft/s)	Potential (lb/hr)	Potential (tpy)	Allowable (lb/hr)	Allowable (tpy)	2001 Actual (tpy)	2000 Actual (tpy)
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	2	ADIPIC ACID SYNTHESIS, NOX THERMAL REDUCTION UNIT #1 TRUSCR	A	80.00	4	435	71000	0	194	0.046	0.2	0	0	0	0
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	3	B & W BOILER #8 (STACK #1)	A	125.00	12	230	236943	0	34	0.075	0.33	0	0	0.21552	0.261081
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	4	B & W BOILER #7 (STACK #2)	A	125.00	12	230	236943	0	34	0.075	0.33	0	0	0.226659	0.234144
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	5	#1 DOWTHERM VAPORIZER - NAT. GAS. OR #2 OIL (COMMON STACK W #	A	125.00	2.7	311	6318	0	18	0	0	0	0	0.01524	0.021372
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	7	#2 VAPORIZER - NAT. GAS OR #2 OIL	A	125.00	2.7	311	7198	4029	20	0	0	0	0	0.00813	0.021384
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	8	#3 DOWTHERM VAPORIZER - NAT. GAS. OR #2 OIL (COM. STACK W #5)	A	125.00	2.7	311	7198	4029	20	0	0	0	0	0.01911	0.021384
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	9	#4 DOWTHERM VAPORIZER - NAT. GAS. OR #2 OIL (COM. STACK W #1)	A	125.00	2.7	311	7198	4029	20	0	0	0	0	0.02379	0.030732
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	10	#5 DOWTHERM VAPORIZER - NAT. GAS. OR #2 OIL (COM. STACK W #3)	A	125.00	2.7	311	7198	4029	20	0	0	0	0	0.03111	0.030732
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	11	#6 DOWTHERM VAPORIZER - NAT. GAS OR #2 OIL (COMMON STACK #7)	A	125.00	2.7	311	7198	4029	20	0	0	0	0	0.02016	0.026937
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	13	#7 VAPORIZER (COMMON STACK #6)	A	125.00	2.7	311	9798	5479	28	26	9	0	0	0.03954	0.049102
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	14	CE BOILER #4 (USES STACK #5 IN COMMON WITH CE BOILER #3)	A	150.00	10	360	169664	0	35	610.83	2938.25	0	0	18.613725	0.347672
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	15	CE BOILER #5 (USES STACK #3 IN COMMON WITH CE BOILER #6)	A	150.00	10	360	169664	0	35	610.83	2938.25	0	0	811.965448	196.475678
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	16	CE BOILER #6 (USES STACK #3 IN COMMON WITH CE BOILER #5)	A	150.00	10	360	169664	0	35	610.83	2938.25	0	0	166.488442	28.230309
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	32	COGENERATION PLANT	A	100.00	15	300	799	491	75	3.19	14	0	0	10.225645	13.9722
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	38	RESEARCH & DEVELOPMENT	A	33.00	0.3	200	100	0	23	0	0	0	0	0	0
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	49	HYDROGEN GENERATION FACILITY, PLANT #1	A	90.00	4.6	393	50257	0	46	0	0	0	0	0	0
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	75	VAPORIZER NO.8	A	125.00	2.7	311	9798	5479	26	0.162	0.7096	0	0	0	0
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	76	MALEIC ANHYDRIDE (MA) PLANT-UNCONTROLLED OFF GASES	A	125	3.5	158	0	60000	0	1.132	4.96	0	0	0	0
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	94	AREA 471 ALPHOX, RAW MATERIAL AND PRODUCT TANK FLARES	A	0	0	0	0	0	0	0	0	0	0	0	0
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	85	AREA 471 ALPHOX, SYNTHESIS, REFINING, RAW MATERIAL RECOVERY	A	0	0	0	0	0	0	0	0	0	0	0	0
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	86	AREA 471 ALPHOX, ORGANIC BACK-UP DEVICE (OBLD)	A	0	0	0	0	0	0	0	0	0	0	0	0
0330040	SOLUTIA INC.	SOLUTIA INC.	3384.99	476.01	87	AREA 471 ALPHOX, FUGITIVE EMISSIONS, PRESSURE RELIEF FLARE	A	0	0	0	0	0	0	0	0	0	0	0	0
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	1	Boiler #1 (Phase II Acid Rain Unit)	A	450	18	290	802500	52	633.6	2775	633.6	2775	0.0875	0.1897	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	2	Boiler #2 (Phase II Acid Rain Unit)	A	450	18	290	802500	52	633.6	2775	633.6	2775	0.0965	0.1663	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	3	Boiler #3 (Phase II Acid Rain Unit)	A	450	18	290	802500	52	1069	4770	1069	4770	0.1278	0.3076	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	4	Boiler #4 (Phase I & II Acid Rain Unit)	A	450	18	290	802500	52	6470.5	28341	6470.5	28341	3453.631388	3546.950726	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	4	Boiler #4 (Phase I & II Acid Rain Unit)	A	450	18	290	802500	52	6470.5	28341	6470.5	28341	3453.631388	3546.950726	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	5	Boiler #5 (Phase I & II Acid Rain Unit)	A	450	18	290	802500	52	6470.5	28341	6470.5	28341	3247.337945	4839.133966	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	5	Boiler #5 (Phase I & II Acid Rain Unit)	A	450	18	290	802500	52	6470.5	28341	6470.5	28341	3247.337945	4839.133966	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	6	Boiler #6 (Phase I Acid Rain Unit)	A	450	23.2	320	2462700	97	21858.3	87035	21858.32	87035.85	13019.83968	14134.84707	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	6	Boiler #6 (Phase I Acid Rain Unit)	A	450	23.2	320	2462700	97	21858.3	87035	21858.32	87035.85	13019.83968	14134.84707	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	7	Boiler #7 (Phase I Acid Rain Unit)	A	450	23.2	320	2462700	97	37797.8	165554.2	3525.5	15441.7	17462.11997	24470.47257	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	7	Boiler #7 (Phase I Acid Rain Unit)	A	450	23.2	320	2462700	97	37797.8	165554.2	3525.5	15441.7	17462.11997	24470.47257	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	11	General Purpose Internal Combustion Engines	A			400								0.727	0.5867
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	34	Three Sulfur Recovery Plants (2, 3, & 4)	A	250	3	900				1001	4384	1001	4384	2148	3225
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	35	Flares	A	117	3	1832				1250				182.81	204.83
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	36	Four 1200 HP JCSWD Saturn NG fired Turbines	A	35	2.5	800	6465	22						0	
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	37	JCSWD 3600 HP NG fired Solar Centaur turbine	A	35	2.5	800	17333	58.9						2.19	
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	38	1000 HP Ingersoll Rand Compressor engine with catalytic cnvr	A	30	1	800	3726	79.7						26.7	24.77
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	40	Jay 2, 3, & 4 Process Heaters	A	60	3									13.34	12.36
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	41	Jay 2, 3, and 4, stabilizer bottom heaters	A	60	3									16.49	14.92
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	42	Jay Plant Hot Oil Heater	A	60	2									10.08	5.79
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	43	Two NG fired 14,300 HP Water Flood Turbines	A	30	12.5										
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	44	Six 1,000 HP NG fired Ingersoll Rand Compressor Engines	A	30	1										
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	45	One 5000 HP NG fired Cooper-Bessemer "A" Engine	A	22	3										
1130005	EXXONMOBIL PRODUCTION COMPANY	ST REGIS TREATING FAC AND JAY GAS PLANT	3416.04	482.87	46	One 2500 HP NG fired Cooper-Bessemer "B" Engine	A	22	3										

Table D-1)
Summary of Post Project fugitive PM₁₀ Emissions from Paved and Unpaved Roads
IP Mill
Princeton, FL

Route	Length (m)	Trips	GVWT (lb)			Type*Wgt	Segment																			Total									
			Empty	Full	Average		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S		T	U	V	W					
1	0.182	4	20,000	85,000	52,500	210,000	959.376	323.664	445.104	397.056	257.136	667.392	1763.52	353.76	1021.68	586.03	205.92	454.08	546.48	1198.56	258.72	105.6	1716	997.92	1443.68	2555.52	3168	475.2	1067.68						
2	0.923	85	30,000	80,000	55,000	4,675,000																													
3	0.923	51	30,000	85,000	57,500	2,932,500																													
4	0.839	84	30,000	80,000	55,000	4,620,000																													
5	0.728	164	30,000	85,000	57,500	9,430,000																													
6	0.061	35	35,000	80,000	57,500	2,012,500																													
7	0.671	9	30,000	60,000	50,000	450,000																													
8	0.634	4	20,000	65,000	42,500	170,000																													
9	1.316	11	40,000	60,000	50,000	550,000																													
10	0.294	9	30,000	85,000	57,500	517,500																													
11	0.296	5	40,000	75,000	57,500	287,500																													
12	1.110	9	40,000	60,000	50,000	450,000																													
13	0.534	6	40,000	60,000	50,000	300,000																													
Total RT VMT							715.84																												
W = Mean GVWT (lb)							52,500	57,500	56,400	56,400	42,500	56,256	56,633	56,653	55,000	55,554	55,554	55,938	56,083	54,167	52,623	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000						
Total VMT day							1.45	4.29	64.74	37.4	1.01	259.18	33.23	95.98	18.65	10.92	24.08	28.15	68.1	1.78	1.6	16.9	2.27	11.24	8.71	13.2	3.6	10.46							
Grand Total VMT							717																												
E (lb/hr) PM ₁₀							0.00	0.01	0.10	0.06	0.00	0.42	0.05	0.16	0.03	0.02	0.04	0.04	0.11	0.00	0.00														
E (ton/yr) PM ₁₀							0.01	0.03	0.46	0.26	0.00	1.83	0.24	0.68	0.13	0.08	0.17	0.20	0.48	0.01	0.01														
E (lb/hr) PM _{2.5}							0.01	0.04	0.54	0.31	0.01	2.14	0.28	0.80	0.15	0.09	0.19	0.23	0.56	0.01	0.01														
E (ton/yr) PM _{2.5}							0.05	0.16	2.35	1.36	0.02	9.36	1.21	3.50	0.65	0.39	0.85	1.01	2.45	0.06	0.05														
Pavot							$E = k(L/2)^{0.61} (W/3)^{0.1} [1 - (P/4(N))]$ $k_{pavot} = 0.016 \text{ lb/VMT}$ $k_{unpavot} = 0.032 \text{ lb/VMT}$ $k_L = \text{site specific segment soil loading (g/m}^2)$																												
P							110																												
N - Annual							365																												
Segments A-P							$E = k(L/2)^{0.61} (W/3)^{0.1} (N/2)^{0.1} [(365 - p)/365]$ $k_{pavot} = 2.6 \text{ lb/VMT}$ $k_{unpavot} = 10 \text{ lb/VMT}$ $p = 4 \%$ (Lumber sawmills) $N = 110$ $M = 0.2$ (default) $a = 0.51$ $b = 0.41$ $c = 0.31$																												
Segment Soil Loadings (g/m ²)							5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02			
Values from non IP Mill							4.213E-02	4.213E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02			
Unpaved							$E = k(L/2)^{0.61} (W/3)^{0.1} (N/2)^{0.1} [(365 - p)/365]$ $k_{pavot} = 2.6 \text{ lb/VMT}$ $k_{unpavot} = 10 \text{ lb/VMT}$ $p = 4 \%$ (Lumber sawmills) $N = 110$ $M = 0.2$ (default) $a = 0.51$ $b = 0.41$ $c = 0.31$																												
PM10																																			
PM10																																			
Segments Q-W																																			

Table D-16
 Summary of Baseline Fugitive PM₁₀ Emissions from Paved and Unpaved Roadways
 IP SMI
 Pinellas, FL

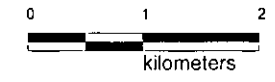
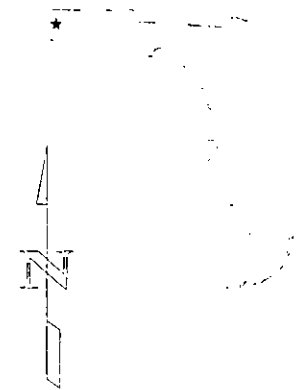
Baseline Conditions							A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W					
Route	Length (mi)	Trips	Empty	GVWT (lb)	Average	Trips*Wgt	959.376	323.664	445.104	397.056	257.136	667.392	1763.52	353.76	1021.68	586.08	205.92	454.08	546.48	1198.56	258.72	109.6	1716	997.92	1483.68	2555.52	3168	475.2	3067.68					
1	0.182	3	20,000	85,000	52,500	157,500																												
2	0.923	78	30,000	80,000	55,000	4,290,000																												
3	0.923	46	30,000	85,000	57,500	2,645,000																												
4	0.839	76	30,000	80,000	55,000	4,180,000																												
5	0.728	149	30,000	85,000	57,500	8,567,500																												
6	0.061	32	35,000	80,000	57,500	1,840,000																												
7	0.671	8	40,000	60,000	50,000	400,000																												
8	0.634	3	20,000	85,000	42,500	127,500																												
9	1.316	181	40,000	60,000	50,000	900,000																												
10	0.296	8	30,000	85,000	57,500	460,000																												
11	0.296	4	40,000	75,000	57,500	230,000																												
12	1.110	8	40,000	60,000	50,000	400,000																												
13	0.534	5	40,000	60,000	50,000	250,000																												
Total RT VMT							648,344																											
W =																																		
Mean GVWT (lb)							52,500	57,500	56,397	56,397	42,500	56,278	56,656	56,656	55,000	55,610	55,610	55,927	56,066	54,500	52,571	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000			
Total VMT/day							1.09	3.92	58.84	33.99	0.76	233.14	30.15	87.08	16.87	9.91	21.84	25.67	61.74	1.47	1.4	14.95	1.89	10.12	7.74	12	3.24	9.3						
Grand Total VMT							649																											
E (lb/hr) _{PM10}							0.00	0.01	0.10	0.05	0.00	0.38	0.05	0.14	0.03	0.02	0.03	0.04	0.10	0.00	0.00													
E (ton/yr) _{PM10}							0.01	0.03	0.42	0.24	0.00	1.66	0.21	0.62	0.11	0.07	0.15	0.18	0.43	0.01	0.01													
E (lb/hr) _{PM2.5}							0.01	0.03	0.49	0.28	0.00	1.94	0.25	0.73	0.13	0.08	0.18	0.21	0.51	0.01	0.01													
E (ton/yr) _{PM2.5}							0.04	0.15	2.13	1.23	0.02	8.50	1.10	3.18	0.59	0.35	0.78	0.92	2.22	0.05	0.05													
Paved																																		
E = k(dL ²) ^{0.44} (W/3) ^{1.1} (1-P)(4N/10)																																		
k _{PM10} = 0.016 lb/VMT																																		
k _{PM2.5} = 0.082 lb/VMT																																		
SL = site specific segment silt loadings (g/m ²)																																		
P = 110																																		
N = Area							365																											
Segments A-P																																		
Segment Silt Loadings (g/m ²)							5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	5.000E-02	
Values from run IP Mail							4.213E-02	4.213E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	9.368E-02	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	1.899E+00	
Mean GVWT (lb)																																		
Total VMT/day																																		
Grand Total VMT																																		
Unpaved																																		
E = k(dL ²) ^{0.44} (W/3) ^{1.1} (1-P)(4N/10)																																		
k _{PM10} = 2.6 lb/VMT																																		
k _{PM2.5} = 10 lb/VMT																																		
s = 8.4 % (Lumber sawmills)																																		
p = 110																																		
M = 0.21 (default)																																		
PM10																																		
a							0.8																											
b							0.4																											
c							0.3																											
PM10																																		
a							0.8																											
b							0.5																											
c							0.4																											
Segments Q-W																																		
Volume Receptors Per Segment																																		
(g/s) _{PM10} for each Volume Receptor							0.00001531	0.0001372	0.00239486	0.0017938	0.00001265	0.00218506	0.00154451	0.00077581	0.00025434	0.00098734	0.00072531	0.00016121	0.00083027	0.00007105	0.00018221	0.01251403	0.00287644	0.00941226	0.00417989	0.00515113	0.01084828	0.06404718						
(g/s) _{PM2.5} for each Volume Receptor							1.53E-05	1.37E-04	2.39E-03	1.73E-03	1.26E-05	2.39E-03	1.54E-03	7.76E-04	2.54E-04	8.87E-04	7.25E-04	1.61E-04	8.30E-04	7.10E-05	1.28E-04	1.25E-02	2.88E-03	9.41E-03	4.18E-03	5.15E-03	1.08E-02	4.10E-03						

Table D-4
Local PM Sources
Meeting 20D Criteria

FACILITY ID	OWNER/COMPANY	SITE NAME	NORTH (km)	EAST (km)	EU ID	EU DESCRIPTION	EU STATUS	STACK HT (ft)	DIAM (ft)	EXIT TEMP (F)	ACFM	DSCFM	VEL (ft/s)	Potential (lb/hr)	Potential (tpy)	Allowable (lb/hr)	Allowable (tpy)	2001 Actual (tpy)	2000 Actual (tpy)		
40	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	21	ADIPIIC ACID SYNTHESIS, NOX THERMAL REDUCTION UNIT #1 TRU/SCR	IA	60	4	435	71000		54	2.81	12.28						
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	31B	31B & W BOILER #8 (STACK #1)	IA	125	12	230	236943		34	0.63	2.75			2.727			
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	41B	41B & W BOILER #7 (STACK #2)	IA	125	12	230	236943		34	0.63	2.75			6.5217			
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	51#1	DOWTHERM VAPORIZER - NAT. GAS OR #2 OIL (COMMON STACK W #	IA	125	2.71	311	63181		18	PM							
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	71#2	VAPORIZER - NAT. GAS OR #2 OIL	IA	125	2.71	311	63181		20	0.17	0.745						
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	81#3	DOWTHERM VAPORIZER - NAT. GAS OR #2 OIL (COM. STACK W #5)	IA	125	2.71	311	71981	40291	20	PM							
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	91#4	DOWTHERM VAPORIZER - NAT. GAS OR #2 OIL (COM. STACK W #1)	IA	125	2.71	311	71981	40291	20	0.17	0.745						
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	101#5	DOWTHERM VAPORIZER - NAT. GAS OR #2 OIL (COM. STACK W #1)	IA	125	2.71	311	71981	40291	20	0.17	0.745						
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	111#6	DOWTHERM VAPORIZER - NAT. GAS OR #2 OIL (COMMON STACK #7)	IA	125	2.71	311	71981	40291	20	0.17	0.745						
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	131#7	VAPORIZER (COMMON STACK #6)	IA	125	2.71	350	168664	54791	28	0.4	1.752						
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	141#8	BOILER #4 (USES STACK #5 IN COMMON WITH CE BOILER #3)	IA	150	10	360	168664		35	9.2	40.3						
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	151#9	BOILER #5 (USES STACK #3 IN COMMON WITH CE BOILER #6)	IA	150	10	360	168664		35	0.37							
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	161#10	BOILER #6 (USES STACK #3 IN COMMON WITH CE BOILER #5)	IA	150	10	360	168664		35	0.31							
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	32	COGENERATION PLANT	IA	100	15	300	799	451	75	3.9	17.1						
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	38	RESEARCH & DEVELOPMENT	IA	33	0.31	200	100		23	PM							
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	49	HYDROGEN GENERATION FACILITY, PLANT #1	IA	90	4.81	333	50257		46	PM					12.6086		
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	50	ADIPIIC ACID-BULK LOADING #1	IA	60	11	86	12000		254	14.97							
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	60	ADIPIIC ACID DRYER BUILDING 485	IA	54	11	136	1000	5180	148	1.31	5.74			0.215	0.27		
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	61	ADIPIIC ACID DRYER A, BLDG 405	IA	25	1.4	80	5000		37	6.9	30			30	3.86		
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	62	ADIPIIC ACID DRYER B, BLDG 405	IA	25	1.4	80	5000		37	6.9	30			1.765	3.87		
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	63	ADIPIIC ACID DRYER A, BLDG 465	IA	25	1.4	80	5000		37	9	39			39	5.9		
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	64	ADIPIIC ACID DRYER B, BLDG 465	IA	25	1.4	80	5000		37	9	39			39	5.9		
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	73	ABRASIVE BLAST FACILITY	IA	25	31	72	19080	19080	44	27	118	4.9	21.5	1.20099	1.20099		
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	75	VAPORIZER NO.8	IA	125	2.71	311	3798	54791	28	PM							
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	76	MALEIC ANHYDRIDE (MA) PLANT - UNCONTROLLED OFF GASES	IA	125	3.5	168		60000		1.18	5.21						
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	79	DRYER	IA	54	7	136		10500		1.35	5.91	1.35	5.91	0.297	0.341		
0330040	ISOLUTIA INC.	ISOLUTIA INC.	3384.99	478.01	85	AREA 471 ALPHOX SYNTHESIS, REFINING, RAW MATERIAL RECOVERY	IA							PM							
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	1	Boiler #1 (Phase II Acid Rain Unit)	IA	450	18	290	802500		52	42	230			230	0.4373	0.9486	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	1	Boiler #1 (Phase II Acid Rain Unit)	IA	450	18	290	802500		52	42	230			230	0.4373	0.9486	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	2	Boiler #2 (Phase II Acid Rain Unit)	IA	450	18	290	802500		52	42	230			230	0.4376	0.8313	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	2	Boiler #2 (Phase II Acid Rain Unit)	IA	450	18	290	802500		52	42	230			230	0.4376	0.8313	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	3	Boiler #3 (Phase II Acid Rain Unit)	IA	450	18	290	802500		52	56	301			301	0.6389	1.5379	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	3	Boiler #3 (Phase II Acid Rain Unit)	IA	450	18	290	802500		52	56	301			301	0.6389	1.5379	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	4	Boiler #4 (Phase I & II Acid Rain Unit)	IA	450	18	290	802500		52	109.7	606	109.67	606	46.162749	45.972368		
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	4	Boiler #4 (Phase I & II Acid Rain Unit)	IA	450	18	290	802500		52	109.7	606	329.01	600	46.162749	45.972368		
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	5	Boiler #5 (Phase I & II Acid Rain Unit)	IA	450	18	290	802500		52	109.7	606	329.01	600	43.541803	60.702917		
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	5	Boiler #5 (Phase I & II Acid Rain Unit)	IA	450	18	290	802500		52	109.7	606	329.01	600	43.541803	60.702917		
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	6	Boiler #6 (Phase I Acid Rain Unit)	IA	450	23.2	320	2462700		67	370.5	1475	188.215964	177.355845				
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	6	Boiler #6 (Phase I Acid Rain Unit)	IA	450	23.2	320	2462700		67	370.5	1475	188.215964	177.355845				
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	7	Boiler #7 (Phase I Acid Rain Unit)	IA	450	23.2	320	2462700		67	640.6	3507.5	1821.9	3507.5	245.766523	306.685981		
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	7	Boiler #7 (Phase I Acid Rain Unit)	IA	450	23.2	320	2462700		67	640.6	3507.5	1821.9	3507.5	245.766523	306.685981		
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	8	Crist Plant Fly Ash Silos(2)	IA	125	23.45	100	5452		0.2	PM					207.2	207.36	
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	9	Coal and Ash Materials Handling	IA							PM							
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	10	Fugitive PM Sources - On-Site Vehicles	IA							PM						0.7806	0.63
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	11	General Purpose Internal Combustion Engines	IA				400			PM						0.452	0.452
0330045	GULF POWER COMPANY	CRIST ELECTRIC GENERATING PLANT	3381.36	478.27	13	Fugitive PM Sources - Sandblasting Operations	IA							PM							
0910031	UNITED STATES AIR FORCE	EGLIN AIR FORCE BASE	3369.61	542.61	612	boilers at Bldg 2825. Rated cap. each = 15 MM Btu/hr	IA	59	21	77				0.4	1.76				0.121	0.24	
0910031	UNITED STATES AIR FORCE	EGLIN AIR FORCE BASE	3369.61	542.61	712	boilers at Bldg 438. Rated cap. each = 11,716 MM Btu/hr.	IA	59	21	77				PM					0	0.15	
0910031	UNITED STATES AIR FORCE	EGLIN AIR FORCE BASE	3369.61	542.61	30	Unregulated Emission Sources	IA							PM					3061.071	3567	
0910031	UNITED STATES AIR FORCE	EGLIN AIR FORCE BASE	3369.61	542.61	33	750 BHP (31.4 MM Btu/hr) gas-fired Cleaver-Brooks boiler	IA	14	2	385	9750	6118	51.7	0.314	1.37						
0910031	UNITED STATES AIR FORCE	EGLIN AIR FORCE BASE	3369.61	542.61	36	Internal Combustion Engines (generators, etc.)	IA							PM							
0910031	UNITED STATES AIR FORCE	EGLIN AIR FORCE BASE	3369.61	542.61	37	Small Unregulated Boilers	IA							PM							



approximate quadrangle location



Source: Base map adapted from USGS 7.5 minute series, Cantonment, FLA Quadrangle, 1994.

**Figure 7-1
Land-Use of Area
Surrounding the IP Pensacola Mill**

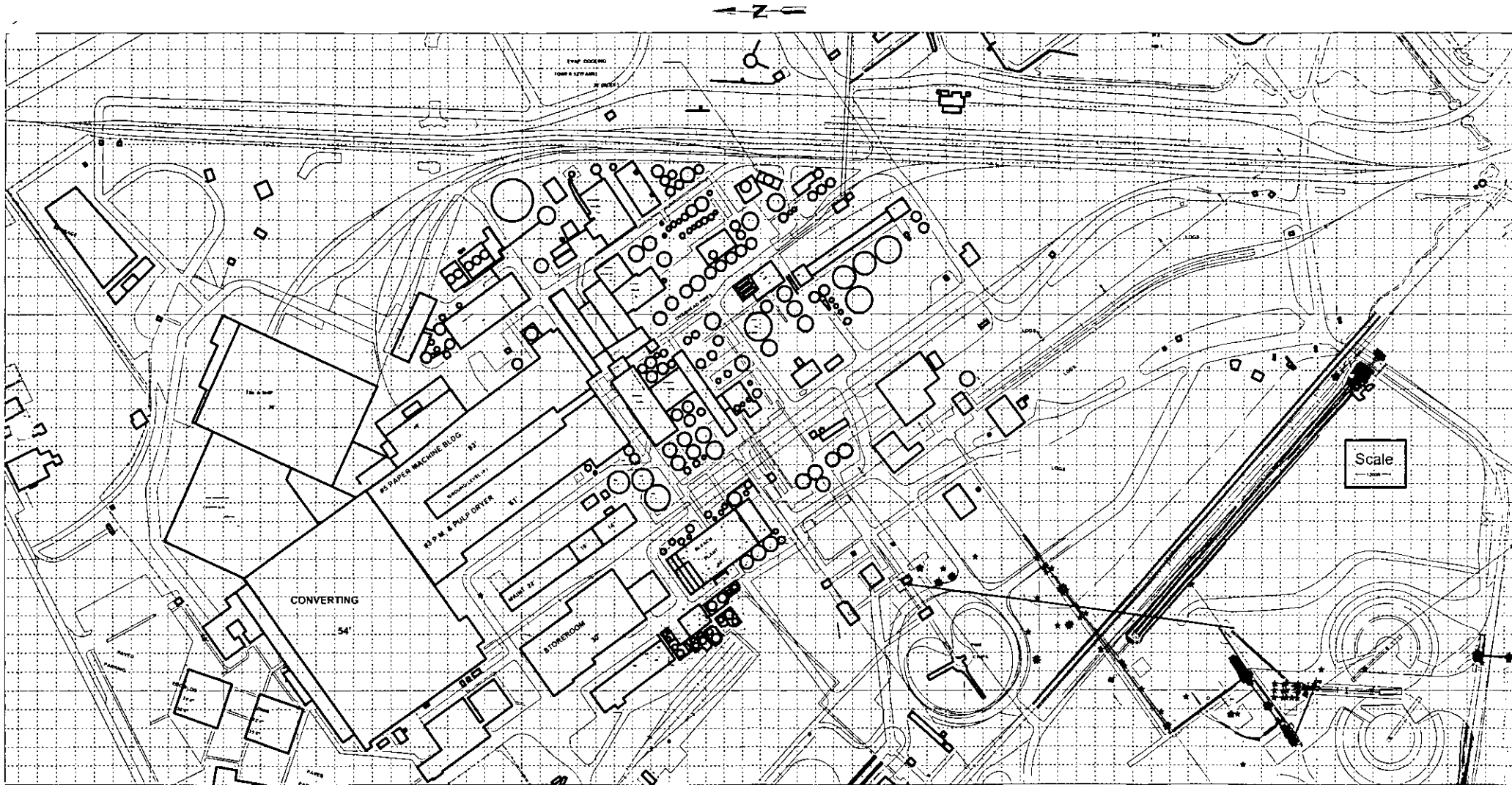

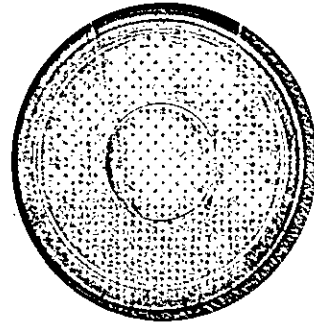


Figure D-2
 IP Pensacola Mill
 Facility Plot Plan

INTERNATIONAL  PAPER
Pensacola, Florida
Air Quality Modeling Files



July 2003

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